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The World Bank and the Gezira Scheme in the Sudan
Political Economy of Irrigation Reforms

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Acronyms and Abbreviations

ABS	Agricultural Bank of Sudan
AT	Advisory Team (on Institutional Reforms in the Gezira Scheme)
BNWPP	Bank-Netherlands Water Partnership Program
CBO	Community-Based Organization
CC	Cost Centers of the Gezira Scheme
FAO	Food and Agriculture Organization of the United Nations
FCB	Farmers' Commercial Bank of Sudan
FIRST	Financial Sector Reform and Strengthening Initiative
GDP	Gross Domestic Product
GFU	Gezira Farmers' Union
IFAD	International Fund for Agricultural Development
IDA	International Development Association
IMT	Irrigation Management Transfer
INPIM	International Network on Participatory Irrigation Management
JAM	Joint Assessment Mission
MAF	Ministry of Agriculture and Forestry
MDTF	Multi-lateral Donors Trust Fund
MFNE	Ministry of Finance and National Economy
MIWR	Ministry of Irrigation and Water Resources
NGO	Non Governmental Organization
O&M	Operation and Maintenance
PIM	Participatory Irrigation Management
SGB	Sudan Gezira Board
TAF	Technical Assistance Fund
TF	Trust Fund
WUAs	Water Users' Associations

Preface

The objective of the assignment leading to this report is to provide strategic options for positioning the Bank, once Bank management decides to re-engage with the Government of Sudan on the Gezira Scheme. The assignment consists of: (i) a stock taking exercise that describes the history of Bank engagement in the Gezira Scheme since the publication of the 2000 “Options” report; (ii) an analysis of the current political economy and an identification of key stakeholders’ interests in the reforms; and (iii) identification of a number of strategic options for Bank re-engagement in the Gezira reforms.

The assignment was undertaken by Salman M. A. Salman, consultant, AFTRD, during the months of May and June 2010 at the Bank headquarters in Washington DC, as well as in the Sudan. At the Bank headquarters reports on the Gezira Scheme, including mission reports and aide memoir, were identified and reviewed. Meetings were held in the Sudan with the key stakeholders: the Sudan Gezira Board, and the Gezira Farmers’ Union, and a field visit was arranged to the Gezira Scheme. A meeting was held with representatives of each of the Ministry of Finance and National Economy, the Ministry of Irrigation and Water Resources, and the Ministry of Agriculture and Forestry. Some reports issued in the Sudan, mainly in Arabic, were also identified and reviewed. This report is based on a study and analysis of these reports, and on discussions held with the representatives of the different stakeholders. Mohamed Osman Hussein and IJsbrand de Jong joined the consultant for part of the mission, and provided substantial input to the structure and content of the report.

Executive Summary

This report is divided into five parts. The first part deals with the history and evolution of the Gezira Scheme since 1925 when it was officially inaugurated, following completion of the Sennar Dam. It traces the developments in the area of production relations between the government, the tenants and the company that initially managed the Scheme, and the Sudan Gezira Board that replaced it a few years before independence of the Sudan. This part also describes the structural organization of the Gezira Scheme. With 2.2 million acres (about 0.9 million hectares), it is one of the largest and most complex irrigation schemes under one management in the world.

The second part of the report deals with the World Bank involvement with the Gezira Scheme since the Sudan joined the World Bank in 1957. It discusses the projects and studies that the Bank financed in the Gezira Scheme before 1993, when lending to the Sudan was suspended because of the arrears. This part then describes in detail the recent Bank technical assistance program (TA Program) that started with the Options Report in 2000. The TA Program, which spanned until 2009 included study tours of some Sudanese officials and farmers to four countries; financing of the workshop that led to the adoption of the Gezira Scheme Act 2005, and the one for planning implementation of the Act; training; and studies, punctuated by a number of missions which included staff with varying expertise.

The third part of the report deals with developments in the Gezira Scheme since 2009 following the last involvement of the Bank, and lists the areas where progress in the implementation of the reforms and the Act has been reported, and the other areas where implementation has stalled. The fourth part deals with the different stakeholders' interests and positions on the reforms, and identifies their differences. Those stakeholders include the Ministry of Irrigation and Water Resources, the Ministry of Agriculture and Forestry, the Ministry of Finance and National Economy, the Sudan Gezira Board, the Gezira Farmers' Union, and the landowners and tenants in the Gezira Scheme.

The last part of the report identifies four strategic options for World Bank in the Gezira Scheme, and the pros and cons for each option. Such options include (i) ending the Bank engagement in the Gezira Scheme institutional reforms, (ii) continuing with the present TA Program, (iii) continuing the support for the TA Program in some selected, targeted areas, and (iv) carrying out a thorough assessment of the reform program and the Bank role, and based on that, decide a course of action for the Bank. The report recommends option (iii) above, if funding can be secured for those areas. The report concludes with highlighting the long engagement of the Bank in the Scheme, the importance of the Scheme to the Sudan's economy, and to irrigated agriculture, and the fact that whatever happens in the Scheme is bound to affect other irrigated schemes in the Sudan.

I. Introduction

A. History and Evolution of the Gezira Scheme

1.1. The Gezira Scheme is situated in the triangular plains between the Blue Nile and the White Nile south of Khartoum where the two rivers meet. It extends southward close to the cities of Sennar on the Blue Nile, and Kosti on the White Nile, about 400 kilometers from Khartoum. In fact “Gezira” is the Arabic word for “peninsular.” The Scheme started in the early years of the Anglo-Egyptian rule of the Sudan with a pilot project for growing cotton as a cash crop in 1911 in the central part of Gezira. A number of reasons helped from the very beginning in the success of the pilot. The flat and featureless plains of Gezira, with a general slope of about 15cm per one kilometer, can be irrigated from the Blue Nile, and drained, by gravity, thus minimizing considerably the cost of irrigation. The impermeable clay and rich soil of Gezira decreased significantly the loss of irrigation water through seepage, and minimized the need for fertilizers. The people of Gezira have practiced rain-fed farming for centuries, and were expected to adapt easily to irrigated agriculture. Moreover, Gezira is close to Khartoum the capital, and to Port Sudan, the major port of the country, through which cotton would be exported.

1.2. Following success of that pilot in 1912, preparations for the larger Scheme started. An agreement was reached with Egypt on the use of the Nile waters for the Scheme through construction of the Sennar Dam on the Blue Nile, for a maximum area of 300,000 feddans.¹ The Anglo-Egyptian administration was able to obtain a loan from the British government to cover part of the cost of the Sennar dam. However, the preparatory work was interrupted by the First World War, and the Dam was finally completed in July 1925, when the Scheme officially came into existence.² The Dam is situated on the Blue Nile about 260 km southeast of Khartoum, with a total storage capacity of 930 million cubic meters.³ The Scheme was intended to be a large farm for growing cotton as a cash crop to provide the Anglo-Egyptian government in Sudan with income for defraying part of the cost of administration of the Sudan, and to help with the economic development of the Gezira area, and the Sudan as a whole.

1.3. An agreement was concluded with the Sudan Plantation Syndicate, a British company registered in London (the Syndicate), to manage the Scheme. The production relationship involved the government, the Syndicate and the cotton growers. The government owned the dam, the irrigation infrastructure and part of the land, initially about half the 300,000 feddans,

¹ One feddan (4,200 square meters) is equal to 1.038 acres, or 0.42 hectares.

² For a comprehensive analysis of the history and evolution of the Gezira Scheme see Arthur Gaitskill, *Gezira: A Story of Development in the Sudan* (Faber and Faber, London, 1959).

³ The total length of the Dam including its embankments is about 3 kilometers, of which the central section is about 600 meters long, with a maximum height of 26 meters. Its storage capacity has decreased over the years because of the heavy silt that the Blue Nile carries from the Ethiopian highlands.

with which the Scheme started. The other half of the land of the Scheme was privately owned, and the government issued in 1927 the Gezira Land Ordinance which gave the government the authority to compulsorily rent the land from its owners for forty years. Both, the government-owned land and that compulsorily leased were in turn rented to the growers, who were officially called “tenants.”⁴ The average size of the farm rented to each tenant, called hawasha, is generally about 20 feddans, although there have been variations up and down. The Syndicate would supervise and provide credit to the tenants for growing cotton, which included land preparation, fertilizers, seeds and pesticide. A few years after the start up of the Scheme, the tenants were given the right to grow sorghum for their own use, as well as Lubia for the use of their livestock and to assist in fertilizing the land, in one fourth of the hawasha, with cotton remaining the main crop of the Scheme. However, financing from the Syndicate to the tenants continued to be provided for cotton only, and did not extend to those two crops which remained the tenants’ crops. The Syndicate would market the cotton, and the income would be divided between the Government (40%), the tenants (40%), and the syndicate (20%). The cost of cotton production would be deducted from the share of the tenants through a joint account, with the remaining balance divided among the tenants. This arrangement continued in place until 1950 when the contract with the Syndicate expired and was not renewed. In that year, management of the Gezira Scheme was transferred to the Sudan Gezira Board (SGB), a financially and legally autonomous body. The distribution of the income from cotton underwent a number of changes, and so did the trilateral relationship between the three actors, as will be discussed later.

1.4. The Gezira Scheme has grown in size and complexity through the years. Following the conclusion of the Nile Waters Agreement between Egypt and Britain in 1929, the share of the Sudan of the Nile waters gradually increased to four billion cubic meters. This allowed a concomitant expansion of the Gezira Scheme from 300,000 feddans in 1925 to close to one million feddans by 1950. Conclusion of the Nile Waters Agreement between Egypt and Sudan in 1959 allowed the construction of the Roseiris Dam on the Blue Nile, about 250 kilometers upstream from the Sennar Dam, and about 106 kilometers downstream from the Ethiopian borders. The Dam is 60 meters in height and has a storage capacity of about three billion cubic meters, more than three times that of the Sennar Dam. As a result, the Sudan was able to irrigate the Managil extension of the Gezira Scheme with a size of 800,000 feddans when the Dam was completed in 1966.⁵ Consequently, the total area under irrigation in the Gezira Scheme reached 1.8 million feddans.

⁴ Although the term “tenants” was used in all official English memoranda and documents during the colonial era, the Arabic translation for the term “farmers” kept cropping up, and being used, in the official and non-official Arabic documents on the Gezira Scheme. As will be discussed later, the association that brought the Gezira tenants together under one organization has been called “The Gezira Farmers’ Union” and not “The Gezira Tenants’ Union.”

⁵ Similar to the Sennar Dam, the Roseiris Dam lost almost half of its storage capacity because of the heavy siltation of the Blue Nile.

B. Structural Organization of the Gezira Scheme

1.5. The Gezira Scheme is currently one of the largest irrigated schemes in the world under one management. It encompasses a command area of about 2.2 million feddans (about 900,000 hectares), with about 130,000 tenants. The tenants and their families comprise about one million inhabitants. In addition there are more than 150,000 seasonal laborers (also called migrant workers) who have settled within the Scheme. With their families, they add another one million to the residents of the Scheme. The seasonal laborers and their families live in camps under very poor housing, health, education and water supply and sanitation conditions. Another one million people of the Gezira State where the Scheme is situated (about one third of the population of the State) rely on the Scheme through provision of goods and services. Thus, about three million people live or rely on the Scheme for their livelihood. The headquarters of the Gezira Scheme is located in Barakat, close to Wad Medani, the capital of the Gezira State.

1.6. For administrative and water management purposes, the Gezira Scheme was divided into 18 Groups, 60,000 to 190,000 feddans each (total of 2.2 million feddans). Each Group is divided into four to eight Blocks, with a total of 114 Blocks. Blocks are divided into Numbers, 90 feddans each; and Numbers are divided into hawashas, each hawasha of about 20 feddans. The over-all management of the Scheme is under the Sudan Gezira Board (SGB) whose members are appointed by the Government. Until recently, the Board was chaired by the Minister of Agriculture and Forestry (MAF). However, under the Gezira Scheme Act, 2005, it is chaired by a full time chairman appointed by the President of the Republic. The day-to-day management of the Scheme is run by the General Manager with staff whose number reached close to 10,000 in the mid-eighties. However, the number of the staff was decreased in the last number of years, reaching 7,000 in 2000; about 3000 in 2005, and by June 2010 the number has dwindled to 85 contracted employees only, with the plan to contract about three hundred regular staff before the end of the calendar year, as discussed later.

1.7. The Assets of the Scheme which include land, irrigation infrastructure, buildings, machinery and cars, and a research station; and until recently, the ginneries, engineering workshops, and a railway system, are owned by the government represented by the Ministry of Finance and National Economy (MFNE). The irrigation infrastructure totals about 150,680 kilometers and consists of (a) two main canals of about 261 km in length; (b) 11 branch canals of about 651 km; (c) 107 major canals of about 1,652 km in length; (d) 1,570 minor canals of about 8,120 km in length; (e) 29,000 watercourses called Abu Ishreen about 40,000 km; and (f) 350,000 field channels called Abu Sitta of a total length of 100,000 km.⁶ The Ministry of Irrigation and Water Resources (MIWR) provides water from the two dams and until recently was responsible for operation and maintenance of the main, branch, major and minor canals of the Scheme.

⁶ For a detailed discussion of the structure of the irrigation system in the Gezira Scheme, see Herve Plusquellec, *The Gezira irrigation scheme in Sudan: objectives, design, and performance* (World Bank Technical Paper No.120, 1990).

1.8. Until the early nineties, the Scheme contributed 3 percent of Sudan's national GDP, produced about two-thirds of Sudan's cotton exports, as well as considerable volumes of food crops and livestock for export and domestic consumption, thereby generating and saving significant foreign exchange. However, by the mid-seventies efficiency of the Gezira Scheme started gradually to deteriorate and by the mid-nineties the irrigation intensity became less than 50 percent. The canals started to get heavily silted, with extensive growth of weeds, as a result of the failure to provide adequate funds for operation and maintenance. Cotton production as well as other crops declined, and as a result most of the 130,000 tenants have not been able to earn adequate income from farming. Consequently, tenants resorted to sharecropping and livestock production to supplement their income, and actually many abandoned farming altogether. The living conditions of the seasonal laborers, already extremely bad, got worse, but most stayed in the Scheme for lack of alternatives. The debts of the Scheme to the government and the private sector continued to escalate. It should be added that the Government had in the past on a number of occasions forgiven and written-off its debt to the Scheme and the farmers.

1.9. The Scheme continued to use about seven to eight billion cubic meters of water annually from the share of the Sudan of 18.5 billion cubic meters under the 1959 Nile Waters Agreement with Egypt. This represents about 40% of the Sudan's share. The crop rotation in the Scheme kept evolving and until 2005 when the new Gezira Scheme Act was adopted, as will be discussed later, the crop rotation consisted of cotton, wheat, sorghum, groundnuts and vegetables, with part of the land left fallow.

1.10. About 1.3 million feddans of land of the total of 2.2 million feddans of the Scheme are owned by the government. The remaining 900,000 feddans are still privately owned and as indicated earlier, have been compulsorily rented by the government from those owners, and in turn leased on annual basis to the tenants under the Gezira Land Ordinance 1927.⁷ Some of the landowners were allocated hawashas, while others chose to rent their whole land and live on the rent. The lease was for forty years, and as such it expired in 1967, and has not been officially renewed. The landowners stopped collecting the rent in the early seventies claiming that the rent, which remained unchanged since 1927, no longer represented even a fraction of the market rent for their land. This issue remains unresolved, and has become more complex as a result of adoption of the 2005 Gezira Scheme Act which mandated the compulsory acquisition of the privately owned land and payment of fair compensation, as will be discussed later.

1.11. Production relations between the tenants and the SGB also kept changing. As mentioned earlier, the share of the Government, the tenants, and the Syndicate was set in 1925 as 40%, 40% and 20%, respectively. When the responsibilities of the Syndicate were passed to the SGB in 1950, the shares were changed to 42% for the Government, 42% to the tenants, and 10% for the SGB. The remaining 6% was allocated equally between social services, local councils and the tenants reserve fund, with 2% for each. The amount allocated for social

⁷ It should be clarified that the privately-owned land needed for buildings and roads was compulsorily acquired and the owners were paid one pound for each feddan acquired. The rent was set and continued to be ten piasters (one tenth of a pound) for each feddan.

services helped in financing basic health and education services in the Gezira Scheme, while the allocation for local councils provided funding for other types of services such as water supply and roads. The tenants reserve fund was meant to help the tenants when cotton prices were low, resulting in a small return for them. In 1964 the share of the tenants was increased to 48% with a corresponding decrease in the Government share to 36%, while the rest remained unchanged. This sharing arrangement was abolished in 1981 when the tenant joint account was replaced by the individual account, as will be discussed later.

II. The World Bank Involvement with the Gezira Scheme

A. Early Bank Involvement in the Gezira Scheme: 1958 – 2000

2.1. The Republic of Sudan gained its independence in 1956, and joined the World Bank in 1957. The first World Bank mission visited Sudan in 1958, and the financing of the expansion of the Gezira Scheme was on the top of the list of the priorities of the Government. Accordingly, the third project to be financed by the World Bank in the Sudan was the Managil Extension Project, with a loan of \$15.5million.⁸ The Project which was approved on June 17, 1960 and closed on June 30, 1964, financed construction works under stages 1 and 2 of the Managil extension of the Gezira Scheme. Following the conclusion of the 1959 Nile Waters Agreement between Sudan and Egypt, the Bank agreed to finance the Roseiris Dam Project.⁹ A Bank loan of \$19.5 million (including \$4.4 million for interest during construction), and an IDA Credit of \$13 million were approved in June 1961 to cover part of the cost of the Roseiris Dam, as well as the works necessary to regulate the release of stored water. The project included also the development of new pump irrigation schemes along the banks of the Nile and extension and intensification of the Gezira-Managil gravity irrigation schemes supplied with water through the existing downstream Sennar Dam canal network. The German Government provided an additional \$19 million dollar equivalent, with the total borrowing for the project reaching \$51.5 million equivalent. As indicated earlier, the Dam was completed in 1966, enabling the commissioning of the Managil extension of the Gezira Scheme in that year.

2.2. In 1964 the Government of Sudan requested the World Bank to undertake a study on the intensification of the cropping patterns of the Gezira Scheme and, more generally, to look into the functions, responsibilities, organization and structure of the SGB, and to make recommendations thereon. That request was perhaps prompted by the impending completion of the Managil extension of the Gezira Scheme, and the expected administrative, financial and technical challenges that the extension could bring. Having already been involved with two projects in the Gezira Scheme referred to above, the Bank responded positively to the request of the Government of Sudan. A World Bank mission started its work in 1965 and issued its report “Gezira Study Mission - Main Report” in 1966.¹⁰ The report highlighted the importance of the Gezira Scheme in the Sudanese economy, and described in detail what it called the impressive size of its contribution to the national income, public finance and balance of payments. For that reason, the report concluded that possible technical or other reforms in the Scheme cannot be considered of limited local concern, because they affect the national interests. The report included a detailed analysis of the main aspects of the Scheme and proposed a series of recommendations in the areas of irrigation, drainage, soil, crop rotation,

⁸ Project ID: P002552.

⁹ Project ID: P002553.

¹⁰ World Bank Report UNN39, dated October 1966. The World Bank mission was headed by Mr. Leonard Rist, and the report is generally referred to as the “Rist Report.”

pattern and intensification, research, and the structure, role and responsibilities of the Sudan Gezira Board.

2.3. In 1979 the World Bank issued the report “Sudan Agricultural Sector Survey” which included detailed annexes on the irrigation sub-sector in the Sudan.¹¹ Issues concerning the Gezira Scheme, including those discussed in the 1966 Report, were widely discussed in the report.

2.4. In 1982 the World Bank completed and issued a report on cotton production in the irrigated areas in the Sudan entitled “Incentives for Irrigated Cotton – Progress Towards Reform.”¹² The report dealt in detail with the problems facing cotton production and marketing in the three primary irrigation schemes in the Sudan (Gezira, Rahad and New Halfa). The report discussed the role of cotton in the Sudanese economy and the causes of production decline. These included problems facing the farmers and the producing corporations, deficiencies in cost recovery, mechanisms and accounting, low producer prices which have discouraged production, and lack of coordination among government agencies involved in cotton production. The report also described a strategy to be employed to revive the cotton subsector and the pricing of cotton, and set forth an agenda for future directions in this field.

2.5. This report was one of the preparatory studies for the Gezira Rehabilitation Project that was approved by the Bank in 1983.¹³ The Staff Appraisal Report for this Project identified a number of problems for the decline in productivity of the Gezira Scheme. The maintenance of existing irrigation schemes has been neglected in favor of new expansion. Crop diversification and intensification in the early seventies placed a strain on delivery of inputs and management. The flight of skilled manpower to neighboring oil producing countries compounded the problems. Perhaps most important, the Government, with its weak fiscal base strained for cash to finance new investments, held the producer price for cotton low so as to maximize short-term budgetary revenues. Cotton ceased to be an attractive crop for tenants, who increasingly devoted more attention to other crops and off-farm activities, while the producing corporations were unable to cover maintenance costs and replace equipment. Declining exports also led to shortages of the foreign exchange needed to buy spare parts and inputs. These inputs were delivered late, cultivation techniques deteriorated, and yields of all crops fell. The objective of the Project was to address those issues and assist in the rehabilitation of the infrastructure of the Gezira Scheme.

2.6. The Project was funded by a number of donors, with the International Development Association (IDA) providing \$80 million, the Arab Fund for Social and Economic Development \$50 million, the Government Japan \$29 million, the Government of Italy \$7 million, and other donors \$16 million.¹⁴ The components of the Project included

¹¹ World Bank Report No. 1836-SU, dated May 18, 1979

¹² World Bank Report No. 3810-SU, dated May 20, 1982.

¹³ World Bank Report No. 4218-SU, May 15, 1983.

¹⁴ Final disbursements for the Project reached approximately \$170 million which included \$71 million from IDA, \$47.8 million from the Arab Fund for Social and Economic Development, \$29 million from a Japanese

rehabilitation, repair and maintenance of the Sennar Dam, the Gezira canal regulators and structures, and the drainage system. They also included provision of agricultural machinery and improved production technology (extension, farmer training and research), and installation of a telecommunications systems. Measures to reduce the prevalence and intensity of schistosomiasis, and to improve and expand rural water supply and sanitation systems within the Scheme were also included and financed under the Project. Furthermore, the Gezira Scheme Act which was adopted in 1960¹⁵ was revised and reissued under the Project as the Gezira Scheme Act 1984 to reflect certain changes in the structure and operating procedures of the Scheme. Such changes included provisions for full cost recovery from the farmers by the SGB, and description of production and financial relationship between the Government of Sudan and the SGB. The project closed in 1991, and soon after that Sudan stopped servicing its debt obligations to the World Bank. This resulted gradual steady increase of the Sudan Government arrears on past debt-servicing obligations, and by 1993 the World Bank suspended all its operations in the Sudan and closed its office in Khartoum.¹⁶

B. Recent World Bank Involvement in the Gezira Scheme: 2000 to Present

I. The 2000 Report on Options for the Sustainable Development of the Gezira Scheme

2.7. Normal financial support from the Bank has remained not possible due to Sudan's outstanding arrears, accumulated since 1993 (some \$600m in 2010). Nonetheless, the Bank began to reengage with the Sudan in the early 2000s, after an absence of nearly a decade. The Gezira Scheme has been one of the first areas where Bank engagement started. Early that year, the Government of Sudan requested the Bank to assist in assessing the main factors which constrained the sustainable development of the Gezira Scheme, and to develop medium to long term plans, as well as short term actions to address those constraints. A joint team from the Government of Sudan and the World Bank was put together and entrusted with the task of undertaking the study and preparing a report. In October 2000 the Report "Sudan: Options for the Sustainable Development of the Gezira Scheme" (the Options Report) was issued.¹⁷ The main finding of the Report was that although the Scheme is one of the largest in the world, it had turned over time into one the least efficient, with irrigation intensity typically less than 50%. Most of the more than 120,000 tenants cannot earn an adequate income for their families from farming, and as a result most had to resort to off-farm income to stay above the poverty line.

grant, \$2.4 million from the Saudi Fund, \$8.4 million from an Italian grant, \$8.2 million from a British grant, and a Government of Sudan contribution of \$24.6 million.

¹⁵ The 1960 Gezira Scheme Act was adopted following addition of the Managil extension to the Scheme. The 1960 Act replaced the 1959 Act that was adopted to enable transfer of the management of the Scheme from the Sudan Plantation Syndicate to the Sudan Gezira Board.

¹⁶ From 1957 to 1993, the World Bank provided funding for 60 projects in the Sudan. Together, the projects total approximately US\$1.52 billion.

¹⁷ World Bank Report No. 20398-SU, dated October 27, 2000. The World Bank team was led by Jack van Holst Pellekaan

2.8. The Report identified five main problem areas facing the Gezira Scheme:

(i) Large Debt Burden: Following many years of unprofitable performance the total debt of the Scheme reached SD8.6 billion at the end of 1998/99 (equivalent to US\$34 million at the then prevailing exchange rate). The Scheme's main creditors are private companies (for example contractors) and various organizations that have provided services. This debt compared at that time with the estimated annual net revenue from Gezira's agricultural activities (excluding livestock and agro-processing), equivalent to about US\$46 million.

(ii) Institutional Weaknesses: Centralized administration and over-staffing of the Sudan Gezira Board (SGB) reduced the managerial and economic efficiency of the Scheme. The Report cited a number of examples:

- Land tenure arrangements did not allow the formal sale of tenancies eliminating the option for existing tenants to retire from irrigation farming and for new entrants to invest.
- Uniform five-course cropping rotation for tenants with a mandatory requirement to grow one-fifth of their land to cotton each year unnecessarily constrained tenants' management choices.
- Centralized decision-making on cotton production management, such as use of herbicides and aerial spraying, affected tenants' costs substantially.
- Uniform administrative charge, equivalent to a land rent, based on a tenant's land use regardless of the quality and location of land, provided no incentive for tenants to improve efficiency.
- Centralized irrigation water management and distribution through the MIRW, and SGB with minimal involvement from water users resulted in inefficient water use.
- Monopoly service enterprises such as the Ginneries, the Agricultural Engineering Department, the Gezira Light Railways and the Telecommunications Unit were not financially sustainable; and even though some earned revenues that exceeded costs, margins were slim and would be negative if they made provision for depreciation of capital stock.

(iii) Infrastructure and Technical Deficiencies: A number of areas were identified, including:

- Irrigation infrastructure is in serious disrepair and the distribution of water is inefficient and wasteful, with low cost recovery for operation and maintenance...
- Irrigation intensity is at, or below 0.5 compared with a possible level of at least 0.75.
- Average crop yields are well below potential based on field trials.

(iv) Uneconomic Production: Because of low average yields, the Gezira Scheme is uneconomic from the national and tenant point of view:

- Research has shown that irrigated agriculture in Sudan, measured through the impact on irrigated wheat and cotton production, generated the smallest income multiplier for rural households compared with two other main sub-sectors in Sudanese agriculture (i.e. semi-mechanized and traditional farming).

- A typical tenancy of 20 feddans of irrigated land with a five course crop rotation (including one course used for cotton) and current average yields does not provide an income above the poverty line for an average family in the Gezira.
- There are no formal credit institutions available to Gezira tenants other than the SGB, which provided short-term credit for cotton production. This is unlikely to change until tenants have the right to transfer tenancy rights to creditors in the event of default on their loans. Informal "sheil" credit provided by private lenders is available but at interest rates that are multiples of the rates charged by formal lending institutions in other parts of the country.

(v) Social Inequities: Differences in welfare between social groups (basically the tenant employers and the migrant employees) have been a feature of the Gezira Scheme since its inception. The poor living conditions of the migrant employees in the camps (housing, health, and education) contrast with those of the tenants, creating tension in some village-camp relationship. The two groups are dependent on each other through labor and sharecropping contracts. The extent of this dependence varies according to the fortunes of tenants and their agricultural production. It is argued that the income-based differences in welfare between the two groups are accentuated by different access to public social services, and that this is one cause of the tension between them.

2.9. The Report included a number of recommendations. These recommendations can be summarized in the following:

Leadership: The Gezira Board of Directors should be steered to provide strong leadership to facilitate the implementation of the reform strategy. The Directors should be augmented in number by the addition of a senior representative from the MFNE and a non-Government lawyer appointed by the Government.

Management Assistance: The Gezira Board of Directors should be supported by a Management Assistance Team (MAT) which would provide expert support to the Directors on their deliberations and provide assistance in respect of the implementation of their decisions.

Bulk Water Delivery: The MIWR should be responsible for delivering irrigation water to the main canals in the Scheme. In the first phase of this strategy the management and distribution of irrigation water in the minor canals and below, would be the responsibility of the SGB. It is anticipated that, following a transition to a second phase of change in Scheme management, and after the piloting of Water Users Groups, such groups would take over the responsibility for water distribution and management through the minor and tertiary canals to meet tenants' water demands.

Stimulus to the Private Sector: The SGB should provide the enabling environment for the private sector (such as traders and agricultural services companies) to be the primary vehicle for the sale of agricultural inputs and services. Obviously, in the short run the SGB is likely to remain the main supplier of services, inputs and credit, but under the changed policy, the SGB

would provide such services without Government subsidy. In other words the SGB could continue its current role of providing services such as plowing, weed and insect control to tenants who expressed their demand to the SGB but these services should be provided under terms and conditions similar to those facing the private sector. During the proposed institutional transition the private sector would increasingly take over the role of the SGB in the provision of agricultural inputs and services.

Cotton Accounts: The individual account system for cotton with the SGB should be abolished but tenants could still avail themselves voluntarily of credit facilities through the SGB at market interest rates, if the SGB is prepared to provide such a service.

Farmer Crop Choice: Freedom of choice should be introduced for farmers (as a group) to grow any crop within the constraints of technology and reasonable agricultural practice.

Ginneries: The ginneries should be offered for sale through international competitive bidding, but not until after a few years into the implementation of the above-mentioned institutional changes so that potential buyers can better assess the long term demand for ginning services in the Gezira.

Cotton Marketing: The Sudan Cotton Company could continue to be the preferred marketing institution for cotton, although private trading in cotton by tenants and the SGB would be allowed and encouraged.

Sale of Tenancies: Tenants should be allowed if they so wish (following appropriate changes in the law) to buy and sell their tenant rights within the Gezira Scheme.

2.10. The Report provided an opportunity for the World Bank and the Government of Sudan to engage on an extensive debate on the institutional reforms of the Gezira Scheme, both knowing however, that lending from the Bank resources for infrastructure projects in the Scheme is not possible until the arrears issue is resolved. However, as the Report was being finalized, the Bank financed, together with the Food and Agriculture Organization of the United Nations (FAO), a study tour of ten Sudanese from the SGB, the MAF, the MFNE, the MIWR, and the Gezira Farmers Union (GFU) to the Office du Niger in Mali. The study tour took place in July 2000, and the Bank funding came from the Bank Netherlands Water Partnership Program (BNWPP). Although far smaller than the Gezira Scheme, the irrigation scheme of Office du Niger underwent highly successful reforms in the 1990s. The purpose of the study tour was to introduce those Sudanese officials to the reforms undertaken at the Office du Niger.¹⁸

II. Aftermath of the Options Report and the Bank Involvement in the Gezira Scheme in 2003:

2.11. Following issuance of the Options Report in October 2000, the Government of Sudan established its own committees to translate the Report into Arabic, and to undertake a

¹⁸ For a detailed analysis of the reforms of the Office du Niger, see Djibril Aw and Geert Diemer, *Making a Large Scheme Work – A Case Study from Mali* (The World Bank, Directions in Development, 2005).

thorough study of the Report and its recommendations. By early 2003 discussions resumed between the Government and the Bank on the institutional reforms in the Gezira Scheme in general, and implementation of the recommendations of the Report in particular. In that year:

- (a) The Minister of Agriculture and Forestry issued decree 32, 2003 which established 18 water users' associations (WUAs) in as many blocks in the Gezira Scheme, and constituting executive Committees for those WUAs. The Abd Al-Hakam Block of the Gezira Scheme (about 13,000 feddans, and close to 700 farmers) was selected for a water users' association pilot, with assistance from FAO. An Irrigation Management Transfer Agreement was signed on August 18, 2003 between the Sudan Gezira Board and the WUA of Abd Al-Hakam block, transferring operation and maintenance (O&M) of the minor irrigation scheme to the WUA.
- (b) The Food and Agriculture Organization of the United Nations (FAO) conducted a very successful pilot project in the Abd Al-Hakam Block on water users' associations in the Gezira Scheme. The Bank followed this pilot with interest and attended the evaluation workshop.¹⁹ The pilot tested greater farmer involvement in water management, maintenance, crop choice, and a revolving credit fund, and provided the basis for scaling up improved water management through WUAs in the Gezira Scheme.
- (c) In decree 42, 2003, the Minister of Agriculture and Forestry established an Advisory Team for Institutional Reforms of the Gezira Scheme (AT) with a mandate to advise on the replication of the Abd Al-Hakam pilot project in eighteen further blocks and on the various actions to be taken to enhance successful implementation of the overall reform of the Gezira Scheme. The AT consisted of representatives from the MAF, MIWR, MFNE, SGB and the GFU. The AT produced an inception report and a draft Policy Paper and became the focal point for discussion and work with the World Bank. By that time, the Bank has established a Task Team for working with the Sudanese Government on the Gezira institutional reforms. The FAO provided logistical support (space for meetings and secretarial support) to the AT in its early years.
- (d) The Minister of Agriculture and Forestry issued decree 61, 2003 dealing with the Cost Centers (CC) of the Gezira Scheme (the Agricultural Engineering Department, the Gezira Light Railway, and the Gineries). The Decree stated that (i) Managers of the CCs were to be appointed Executive Directors under the Sudan Gezira Board of Directors, and (ii) a steering committee for each CC would be established and tasked with the responsibility of separating the CC financially from the Scheme, evaluating their assets, and preparing them to operate on a commercial basis, and eventually for privatization.
- (e) The AT commissioned a report on land reform in the Gezira Scheme. Specific findings of the report included: (i) freehold land within the boundaries of the Gezira scheme to be sequestered, (ii) steps to abolish the Gezira Land Ordinance of 1927, and to amend the Gezira Scheme Act 1984 to legalize ownership of long-term leases, (iii) resolution of the rights of freehold owners with a right to compensation, and (iv) awaiting the above measures, introduction of tradable tenancy rights.
- (f) A World Bank mission visited Sudan from November 30 – December 4, 2003 to follow up on the funding of US\$50,000 approved by the Bank Netherlands Water

¹⁹ The Bank was represented by Jack van Holst Pellekaan and Djibril Aw.

Partnership Program (BNWPP) Trust Fund (TF) to support the Advisory Team, and to agree with the Advisory Team for Institutional Reforms of the Gezira Scheme on a work plan for the implementation of the TF.²⁰ These funds were managed by the World Bank for the support of reforms in the Gezira Scheme, including farmers' training and study tours. An allocation was also made for the organization of workshops, and for technical assistance in the preparation of studies and a draft Gezira Scheme Act.

III. The Bank Involvement in the Gezira Scheme in 2004:

1. Training and Study Tours

2.12. The following activities took place in the area of training and study tours:

a) With support from Bank Budget (BB), and BNWPP TF, training of facilitators of the 18 newly established WUAs at block level was organized by the Water Management and Irrigation Institute of the University of Gezira in June 2004. The training was based on the earlier training provided by the FAO, and consisted of 16 separate events, including training of trainers, training of farmers and field visits. The cost of the training was US\$25,000, and was funded from BB.

b) A follow-up training, focused on the training of WUAs by the facilitators, was financed by the SGB. A total of 24 facilitators were trained, and they started providing training for an estimated 4,000 farmers. It was recommended consequently that WUAs be officially established thereafter, and that the follow-up training of WUAs would continue. It was further agreed that irrigation management transfer agreements (similar to the one between Abd Al-Hakam and the SGB) be signed between the 18 WUAs and the SGB after completion of the follow-up training, and before the start of the next season. The training was financed from the BNWPP funds allocated to the AT.

c) In January 2004 the Bank organized and funded for a total cost of \$20,700 from its budget (BB) a study tour to Egypt for eight persons from the MAF, MIWR, SGB and GFU, and other members of the AT. The purpose of the study tour was to get acquainted with irrigation water management and the role and responsibilities of WUAs, as well as the way in which rural credit is organized for farmers in Egypt.

d) In addition, a study tour to Turkey was organized in June 2004 for eight members of the Advisory Team. The Bank provided \$10,000 from its budget (BB) to defray part of the cost of the study tour, while the MAF covered the remaining cost. Turkey was selected because of the relevance of the experience with WUAs, specifically their focus on the core activity of operation and maintenance of the irrigation infrastructure. Experience shows that these study tours were among the rare occasions where farmers and Gezira staff actually spent time together and had substantial discussions on the way forward. In the opinion of those involved, the study tours contributed in a very important way to finding common ground to the many issues where differences existed.

e) Mr. Raymond Peter, Executive Director of the International Network on Participatory Irrigation Management (INPIM) at that time, visited Sudan from June 22 – 29. Mr. Peter has

²⁰ The mission consisted of IJsbrand H. de Jong, senior water resources specialist, who henceforth became the World Bank Task Team Leader for Institutional Reforms in the Gezira Scheme, and M. Salah Darghouth, the Irrigation Adviser of the World Bank at that time.

extensive international experience in the field of irrigation management transfer. The objective of his mission was to provide technical assistance to the AT on issues related to the institutional set-up of the future Gezira Scheme, in particular the organization and operation of WUAs. He met with the AT and other stakeholders, visited the Gezira Scheme and conducted a one-day workshop hosted by the GFU. The visit of Mr. Peter provided an opportunity to introduce the farmers to some of the broader issues related to participatory irrigation management. Mr. Peter's mission was financed from the BNWPP funds provided for the Gezira Institutional Reforms.

f) In 2004-05, the Bank and the UN co-led a Joint Assessment Mission (JAM) of Sudan's recovery, reconstruction, and development needs.²¹ The JAM report informed a March 2005 Donor Conference in Oslo, at which \$4.5 billion was pledged to cover Sudan's development and humanitarian needs from 2005 to 2008. It was also agreed that the Bank would administer the two Multi-lateral Donors Trust Funds (MDTFs) specified in the Comprehensive Peace Agreement (CPA) concluded between the Government of Sudan and the Sudan People's Liberation Movement (SPLM). About \$600m of the total pledged has been channeled through the MDTFs, including a \$10 million contribution from the World Bank's operational surplus.

2. The First National Workshop on Gezira Institutional Reforms

2.13. With support from the BNWPP TF of \$33,000, a workshop was held on July 11-12 in Barakat, the headquarters of the Gezira Scheme, to discuss the proposed institutional reforms of the Gezira Scheme. The workshop was hosted by the MAF, the AT and the SGB, with substantial support from the GFU. The workshop brought together about 145 participants from a large number of stakeholder constituencies, including the Minister for Science and Technology, the State Minister for Agriculture, the Undersecretary of the MIWR, and representatives from the above ministries, the MFNE, the Ministry of Industry, the Ministry of Livestock and Fisheries, the National Assembly, universities, research institutes, private sector, as well as members of the GFU and staff of the SGB. The Bank was represented at that workshop and provided major contribution for the organization and discussion at the workshop.²² The FAO also attended the workshop.

2.14. The workshop was made possible through a direct transfer to the Gezira Farmers Union of \$13,000 from the BNWPP TF allocated to the Gezira Scheme. The agreement concluded between the World Bank and the GFU on July 9, 2004, was the first financing agreement signed between the Bank and any Sudanese entity since 1993. The objective of the workshop was to identify broad areas of consensus, as well as areas where further discussions on institutional reforms were required. After two days of deliberations, the workshop made a number of important recommendations, including:

²¹ Sudan – Joint Assessment Mission Report (in three volumes) dated March 18, 2005.

²² The Bank was represented at that workshop by IJsbrand de Jong and Salman M. A. Salman. who visited the Sudan between July 8 and 19, 2004.

- (i) WUAs would be established in all 1570 minor canals and at the apex level. These WUAs would become responsible for operation and maintenance of the irrigation and drainage infrastructure at and below the minor canal level.
- (ii) The SGB would be transformed into an agency that delivers extension and contract research services;
- (iii) 50% of the Board members of the SGB would be appointed by the farmers;
- (iv) Land within the Gezira Scheme not owned by the Government would be acquired by the Government, and ownership would be granted to the present users, after payment of fair compensation to the current owners;
- (v) The cost centers would henceforth operate on commercial basis as separate legal and financial entities.

2.15. Important differences remained, however among the participants on a number of issues. In particular, the identity of the Scheme and the role of the Board of Directors as a governmental body, remained as controversial issues during the discussion at the workshop. Some participants recommended that the Board of Directors should provide services and investments on a commercial basis. Others recommended that the Board should provide services on cost basis, while the issue of whether the Board could undertake other commercial activities was also raised.

2.16. Another key issue where consensus was not reached related to the role and functions of WUAs. Specifically, differences in opinion remained on the inclusion of activities not directly related to operation and maintenance, and whether WUAs should be established at all levels. The Bank Team shared with the AT that global experience strongly suggests limiting responsibility of WUAs to technical issues such as operation and maintenance only. Issues related to marketing and financing do not correspond to the non-profit character of WUAs and are not compatible with joint responsibility for operation and maintenance, as expressed in the mandatory membership of WUAs. They should be addressed by specialized for-profit producer organizations that are based on voluntary membership. The Team recommended against expanding what is essentially a water resources technical matter, to the broader agenda related to the functioning and responsibility of representative bodies. Similarly, no consensus was reached on the land issues, particularly on who should pay the compensation for acquisition of the privately owned land: the new owners, the SGB or the MFNE?

2.17. The participants agreed that a second workshop should be held as soon as possible in order to maintain momentum. The workshop would discuss in detail and agree on a new Gezira Scheme Act, provided that the above differences were ironed out before that. Moreover, the Gezira Farmers Union would put in place an appropriate mechanism to seek broad based support for the reforms among farmers. It was agreed that the second workshop would provide a good opportunity to resolve the above issues, and the Bank Team indicated that the Bank would support the second workshop subject to making progress on resolution of the above issues. The Team confirmed, during the workshop, the commitment of the Bank to continue to support the reform process in the Gezira Scheme, but indicated that the Bank remains dependent upon the commitment of the MAF to finalize the design of the reforms.

2.18. It was also agreed that, in the mean time, the draft Gezira Scheme Act needed to be updated. This would include a section on WUAs that would draw on existing legislation on non-profit organizations, but would also incorporate specific provisions relevant to the Gezira Scheme (such as the character of WUAs, their relationship to the SGB and the MIWR). It would also include a section on land tenure, and would address the relationship between SGB, MIWR, and WUAs, in particular during a proposed one-year transitional period of joint management by the WUAs, the SGB and the MIWR of the part of the irrigation system transferred to the WUAs. The proposed Act would also address the issue of the privatization of the cost centers.

IV. The Bank Involvement in the Gezira Scheme in 2005:

(a) The Gezira Scheme Act 2005

2.19. Following the deliberations and outcome of the first workshop held on July 11-12, 2004, the draft Gezira Scheme Act was finalized, with the Gezira Farmers' Union taking the lead on this endeavor. The Act was discussed and adopted by the Sudanese legislature on June 22, 2005, and was signed by the President of the Republic on July 6, 2005.²³ The new Act repealed and replaced the 1984 Gezira Scheme Act that was adopted following the Gezira Rehabilitation Project in 1983. It also repeals and replaces the Gezira Land Ordinance 1927 under which the privately owned land was compulsorily rented to the Scheme. The Act establishes the Gezira Scheme as an economic and social entity with various activities, and states that it enjoys national support as part of the development effort, and as an administratively, financially and technically independent juridical person with a permanent, perpetual character and a public seal. It shall have the right to litigate in its own name. The Act indicates that the State, as represented by the MFNE, shall own the current assets of this Scheme, and may allow future participation of private sector investments, whether in current assets or through addition of new assets to the Scheme.

2.20. According to the Act, the Gezira Scheme is composed of (i) the farmers, (ii) the Government, as represented by its respective units providing basic services such as development, irrigation and public goods, including research, plant protection, technology support, agricultural extension, technical studies, training as well as supervisory management and indicative planning, and (iii) the private sector with regard to provision of auxiliary commercial services. The Scheme aims to utilize its sustainable and stable agricultural production resources and potentials to improve the economic and social standards of farmers and its own employees as well as the area it is located in, and to improve respective services provision. It also aims to contribute to the attainment of national objectives. The Act goes on to state some of its specific objectives, including (i) ensuring farmers' right to freely manage their production and economic aspects within the technical parameters, (ii) ensuring farmers' right to effectively participate, at all administrative levels, in planning and implementation of projects and programs that affect their production and livelihoods, and (iii) ensuring farmers' right to manage irrigation operations at field canal level through water users' associations.

²³ An English translation of the Gezira Scheme Act 2005 is included as an Annex to this Report.

2.21. Based on the above objectives, the Act addresses, and significantly affects, five major areas in the Scheme:

- (i) **Freedom of Crop Choice:** Article 5(e) of the Act establishes the farmers' right to freely manage their production and economic aspects within the technical parameters, and employ technology support to boost production and maximize their respective returns. This aspect of the Act is the most drastic change that the Gezira Scheme has ever undergone. It has simply ended formally the historical tie between the Gezira Scheme and cotton, and has given the farmers the right to grow what they choose "within the technical parameters." It has also reduced the role of the Sudan Gezira Board considerably since the Board's main role consisted of the supervision and financing of cotton growing. It should be clarified that the "technical parameters" to which freedom of crop choice was subjected have not been defined in the Act. It is understood that such parameters would not allow crops that have proven to be problematic to the Scheme through their negative effects on the other crops of the Scheme, or on the soil or on the demand for water. The parameters also include the timing of the delivery of water to each Number within the Scheme, and the amount of such water.
- (ii) **Land Ownership:** The second area where drastic changes have been introduced by the Act relates to land ownership and the right to dispose of the hawashas by the farmers. As mentioned earlier about 1.3 million feddans of the Gezira land is owned by the government while the remaining 900,000 feddans are privately owned. The Act states that all farmers, holding land in freehold, to whom hawashas are allocated under such ownership, shall be allowed to have such hawashas registered in their names as freehold. The Act states further that landowners who have not been allocated any hawashas during distribution, and those who have surplus land, their land title shall be transferred to the Scheme and they shall be fairly compensated for acquisition of such land. The rest of the farmers (meaning those who do not have freehold hawashas in the Scheme) shall have the hawashas they currently possess registered in their names as leasehold for a period of ninety-nine years. The Act goes on to give the farmer the right to dispose of his hawasha by sale, mortgage or assignment in accordance with directions established by the Board of Directors. Briefly stated, the Act confirmed freehold ownership of land for those who currently own and possess and grow such land, while the rest of the farmers are granted the land they grow on leasehold for ninety-nine years. The land of the landowners who have not been granted hawashas will, according to the Act, be compulsorily acquired and transferred to those who are growing it, but those land owners will be fairly compensated. Moreover and more importantly, the Act gives the new owner, whether he holds a freehold or leasehold, the right to dispose of his hawasha by sale, mortgage or assignment in accordance with directions set by the Board. Accordingly, the Act has not only confirmed or transferred the land ownership, whether as freehold or leasehold to the farmers, it has also granted the farmers the right to dispose of the land through sale or mortgage or assignment. However, acquisition of the land is subject to payment of fair compensation to the landowners. Those landowners have been demanding the payment of the accumulated rent for their land, as calculated on the basis of the market value, since 1978, and the

fair compensation for acquisition of their land, as mandated by the new Gezira Scheme Act.

- (iii) **Establishment of Water Users' Associations:** One of the objectives of the Act relates to ensuring farmers' right to manage irrigation operations at the field canal level through WUAs. In pursuance of this objective, the Act states that water users' associations shall be established under supervision of the SGB at the Scheme level. They shall be legal entities representing the farmers' self-management system, and shall undertake actual responsibilities in managing water uses through entering into a contract with the MIWR in the area of supply of water and technical consultation. The Act specifies the responsibilities of each of the MIWR and those of the WUAs. The Ministry shall be responsible for operation and management of the primary irrigation and drainage canals and pumps in the Scheme, and for providing sufficient water for the water users' associations at the mouth of the respective field canals, while the water users' associations shall maintain, operate and manage field canals and internal drainage. The Act states that responsibility for field canals shall be passed, after rehabilitation, to the water users' associations, and indicates that the MFNE shall be responsible for financing maintenance, rehabilitation and operations of the canals in return for water charges to ensure provision of such services. The Act requires the MIWR to establish a separate unit for the Gezira Scheme irrigation.
- (iv) **Composition and Role of the Sudan Gezira Board:** The Act establishes the Board of Directors which will be constituted by a Presidential decree. The Board consists of a chairman to be appointed by the President and fourteen members, at least 40% of them (six members) shall be representatives of the GFU. The Board shall also include the General Manager of the Scheme (who would be appointed by the Board) in ex-officio capacity, and representatives from the relevant Ministries (defined to include the MFNE, MAF, MIWR the Ministry of Technology, the Bank of Sudan, and the State Ministry of Agriculture of the Gezira State), as well as a representative of the employees of the Gezira Scheme. The role of the Board of Directors has been significantly reduced because cotton no longer represents the primary crop which the Board supervises the production, and for which it provides the financing and derives its income. The Board is entrusted with formulating plans and general policies for achieving the Scheme's objectives, including (a) developing scientific parameters for research, economic and social studies required to ensure optimal utilization of the Scheme's resources to achieve the highest possible profit rates, (b) managing and developing basic services of research, plant protection, technology support, agricultural extension, seeds multiplication, training and inner roads, (c) establishing technical parameters for cropping patterns and agricultural cycles, and (d) determining its charges categories of services performed in coordination and agreement with competent authorities, and respective charges to be levied on farmers by water users associations. Thus, the Act converts the Board into research, extension and basic agricultural services provider, and ends its vast authority over the Scheme's farmers, which has, any rate, been affected by the freedom of crop choice and the end of the compulsorily growing of cotton by farmers.
- (v) **Role of the Private Sector:** In addition to the Government and the farmers, the Act specifies the private sector as the third pillar of the Gezira Scheme, with regard to

provision of auxiliary commercial services. The Act calls for providing an opportunity to the private sector to play a leading role in provision of such services in a competitive environment, and for future participation of the private sector investments, whether in current assets or through addition of new assets of the Scheme. It also states that cost centers (the Agricultural Engineering Department, the Gezira Light Railway, and the Ginneries) shall continue to operate until they are privatized.

2.22. The reforms promulgated under the Act are based largely on the recommendations of the 2000 Options Report. That Report basically recommended freedom of crop choice, establishment of water users' associations, selling, buying and mortgaging of tenancies, a wider role for the private sector and reduced role for the SGB. Indeed, the Act went further than the Report on the land issue, putting in place drastic measures for land acquisition and ownership, and for disposing of such land.

3. The Second National Workshop on Implementation of the Gezira Scheme Act 2005:

2.23. Following the promulgation of the Gezira Scheme Act in July 2005, the Government of Sudan requested the Bank to sponsor and fund a workshop on the implementation of the Act. The Bank responded positively and promptly, and a second workshop was held in Khartoum from August 20-22, 2005 in Khartoum. It was financed by the BNWPP TF which also financed the first workshop in 2004. Similar to the first workshop, funding was channeled through an agreement between the World Bank and the GFU. The Bank participated in the workshop by a larger team than the first workshop, and similar to the first workshop, provided significant contribution to the organization and discussion at the workshop.²⁴ The workshop was attended by more than 200 participants, including ministers and high governmental officials, and representatives from the SGB, academics, NGOs, media representatives and more than 40 farmers.

2.24. The participants agreed that the signing of the Gezira Act marked a monumental step in the history of the Gezira Scheme, but it also marked the beginning of a complicated and challenging process of implementation. This was clear by the number of differences that emerged between the different stakeholders during the workshop, and it was agreed that there was the pressing need to discuss and clarify them. There was a general agreement that water users' associations need to be established and their members trained, but their mandate vis-à-vis the Gezira Farmers Union and the MIWR needs to be clarified. Water charges need to be determined and collected, and the functions of the SGB and the MIWR in support of the Gezira Scheme and the Act need to be elaborated and agreed upon. It was also agreed that the SGB, MAF and MIWR staff needs to be trained, cost centers need to be privatized, alternative sources of farm credit need to be identified and established, the debt of the Gezira and of the farmers needs to be resolved, marketing opportunities need to be identified and captured, and responsibilities for agricultural research and extension services redefined. Capacity

²⁴ The Bank Team that participated in the workshop consisted of Messrs. Jack van Holst Pellekaan, IJsbrand de Jong, Derek Byerlee, Salah Darghouth, Salman Salman., and Ms. Yasmin Tayyab.

strengthening, studies and exchange visits continue to be needed in order to maintain the current reform momentum.

2.25. There was consensus that each of these challenges is formidable, and the three days were spent in attempts to narrow the gaps between those different views. At the end of the workshop, the following priority actions for implementation of the new Gezira Scheme Act were agreed upon:

- (i) **Board of Directors:** The Board of Directors will play a fundamental role in the implementation of the new Act. Much of the success of the reforms therefore would depend on the leadership of the chairman of the Board. Support is required to assist the Board and its chairman design and implement appropriate reform measures on a wide variety of issues, and access to high caliber expertise is needed. A functional analysis of the SGB will need to be conducted. The support program proposes technical assistance to the Board through a senior advisor and subject matter advisors in fields such as monitoring and evaluation (M&E), personnel management and employment policies, organizational effectiveness and functional analysis, client responsiveness and service delivery, and communication. The outcome of the support program is a clear set of recommendations to strengthen internal management of the SGB.
- (ii) **Land Issues:** The Gezira Act transfers title and long-term lease deeds to farmers. Implementation of this aspect of the reform requires that land tenure surveys, regularization and registration be conducted; title deeds be prepared and issued, and land tenure offices be established. Moreover, a transparent and fair process for compensation of the current land owners needs to be established.
- (iii) **Water Management:** It was agreed that for the WUAs to take over O&M of each of the 1,570 or-so minor canals, a systematic effort is required to strengthen the capacity of these organizations. This includes preparation of rules and regulations, administration and management of the WUAs, fee collection and financial accountability, and the organization of water allocation, maintenance of minor canals, planning and M&E. In view of the large amount of silt that deposits in the canals annually, additional resources are required to rehabilitate the irrigation infrastructure so as to facilitate satisfactory transfer to the WUAs, and proper O&M by them. To avoid dispersing efforts, an initial one-third of the WUAs would receive support at the beginning.
- (iv) **Privatization of the Cost Centers:** Specific proposals need to be made for the future of the operations of the cost centers of the Gezira Scheme, and technical assistance is required to prepare for and implement privatization of the centers. In addition, a study should be conducted that will explore and identify specific options for attracting private investments in further development and expansion of the Gezira Scheme.
- (v) **Agricultural Research and Technology Transfer and Marketing:** A program needs to be prepared to strengthen extension-research linkages, and help reform the delivery

of agricultural research and extension, as envisaged by the new Act. The program would support the SGB in initiating and implementing demand-driven research and extension services, and restructure the delivery of extension services that are linked to M&E key indicators and client satisfaction. It would also provide specific recommendations to better integrate livestock in agricultural operations, and translate the lessons into extension services. With the SGB no longer responsible for marketing, it was agreed that realistic proposals need to be prepared to organize the marketing of all production in the Gezira. Marketing of all agricultural products should be privatized as soon as possible. Market centers should be developed throughout the Gezira Scheme, and support services to farmers provided by the SGB should be upgraded and refocused on diversification of farming system.

- (vi) **Rural Finance:** The first national workshop identified rural finance as a critical issue for the success of the reforms. It was agreed that crop choice will in practice not be free as long as the only access to inputs requires farmers to enter into a contract with the SGB for the production of cotton. Alternative sources of credit and constraints to improved access need to be identified. Although land tenure reforms under the 2005 Act in theory have provided farmers with necessary collateral to secure credit, experience suggests that only in rare cases are land titles a sufficient condition to credit, the more fundamental requirement being the bankability of the farmers. The program proposes a study into the current availability of commercial credit to farmers, and will make specific recommendations to resolve constraints and improve access. In this connection, the debt of the farmers, and that of the Scheme, needs to be resolved. Financing has been sought through the FIRST Initiative, and has been approved for an initial allocation of US\$100,000.

V. The Bank Involvement in the Gezira Scheme in 2006:

2.26. In December 2006 a Bank mission visited the Sudan.²⁵ The objective of the mission was to review progress in the implementation of the reforms promulgated by the Gezira Scheme Act 2005, and the actions agreed during the August 2005 workshop. Another purpose of the mission was to discuss and agree on the implementation of a number of trust funds (TFs) that had been recently approved, or expected to be approved, for institutional reforms in the Gezira Scheme.

2.27. The mission reconfirmed the commitment and support of the World Bank for the institutional reforms of the Gezira Scheme. It noted that some progress was made in the implementation of the reforms promulgated under the Gezira Scheme Act 2005, including appointment of a new Board of Directors and its Chairman in early 2006, and addressing a number of issues agreed upon during the August 2005 workshop. Also, a total of 1,570 WUAs were established, one for each of the minor canals.²⁶ The SGB established three committees to

²⁵The mission consisted of Messrs IJsbrand H. de Jong and Salman M. A. Salman.

²⁶ At the end of the mission, Mr. Salman conducted a one day training session to about 100 farmers on water users' associations at the headquarters of the Gezira Farmers Union in Medani.

address the key issues of water management in a comprehensive manner: land, credit, and marketing. The mission noted that the process for the recruitment of a new General Manager for the Gezira Scheme was still under way by December 2006, almost a year and a half after adoption of the 2005 Gezira Act. The mission also noted that a number of delicate issues remain to be resolved. Some of these issues related to the relationship under the new Act between WUAs and the MIWR.

2.28. The establishment of a separate unit for the Gezira scheme by the Ministry of Irrigation has been specifically mandated under clause 19 (b) of the Gezira Scheme Act. It was noted that this unit had not yet been established, and that a roadmap for its establishment needed to be agreed upon by the MIWR and the SGB. Issues to be agreed upon included the critical steps that need to be taken in compliance with the Act, a plan for implementation of these steps, key dates, critical assumptions, and responsibilities. Specifically such issues included (i) the level of the Gezira scheme for which the unit would become responsible, and (ii) the institutional set-up of the unit, in particular the selection of its head. It was further agreed that the unit should be financially autonomous entity, and that an annual audit of the department should be conducted to review its finances. It was further agreed by the mission, the SGB and the GFU that the unit should be established as soon as possible, and that full rehabilitation of the Gezira irrigation infrastructure is not a pre-condition for its establishment.

2.29. It was noted, however, that rehabilitation of field canals is a condition for transfer of operation and maintenance (O&M) responsibility to WUAs. The Ministry of Irrigation agreed on the need for a scheme-wide three years rehabilitation program. However, in view of its limited budget and its desire to allocate funds in an equitable way, it ended spreading itself thinly. It was agreed that (i) a priority study needs to be undertaken in the rehabilitation needs of minor canals, and that the outcomes would be translated into a detailed work plan, budget, target dates and responsibilities; (ii) funds should no longer be spread thinly, but allocated with the aim to fully rehabilitate minor canals, even if not all canals can be rehabilitated simultaneously in view of budget constraints. This would help avoid that rehabilitation funds are being used for routine maintenance, and ensure that, progressively, minor canals can be handed over to the WUAs before the end of the three years period. With regard to WUAs signing bulk water delivery contracts with the Ministry of Irrigation, the Bank mission indicated that a trust fund (TF) support has been obtained to help the Ministry, the SGB and WUAs prepare sample bulk water delivery contracts in a participatory, transparent, and symmetrical way.²⁷

2.30. On land tenure issue, it was noted that landowners within the Gezira Scheme are now pressing for resolution of the back rent and the compensation for the land that would be compulsorily acquired under the new Gezira Act. The mission met with the representatives of the landowners, and was briefed on the work and recommendations of the recent committees, and the lack of progress on the implementation of such recommendations. The Bank has been

²⁷ In April 2006 the Bank funded through a BB the attendance of a workshop on participatory irrigation management by a member from the GFU and another from the SGB. The workshop was held in Ouagadougou, Burkina Faso.

involved in the efforts for the settlement of this issue since 2003, and land compensation was discussed and included in the recommendations of the August 2005 workshop which was attended by representatives of the landowners at the invitation of the organizers. However, the Bank realized and made it clear that it had no other role to play on this issue.

VI. The Bank Involvement in the Gezira Scheme in 2008:

2.31. About a year after the December 2006 mission, another mission visited Sudan from February 11-18, 2008.²⁸ The objective of the mission was to review progress in the implementation of the reforms promulgated under the 2005 Gezira Scheme Act, and the action plans agreed upon during the August 2005 workshop, and the 2006 mission. The mission observed that progress was made in the following areas:

- (i) Freedom of crop choice has been widely accepted and has become the reality throughout the Gezira Scheme during the 2007 season. Although there was general satisfaction in achieving this major element of the reforms, concerns were expressed about water availability constraints, and the on-going discussions with the MIWR on this matter.
- (ii) For the first time in the history of the Gezira Scheme, cotton has been delivered by the farmers directly to the Sudan Cotton Company, and has been paid for upon delivery. Thus the role of the SGB in cotton marketing has been eliminated.
- (iii) WUAs have also been established in all 1,570 minor canals. The concept has now received acceptance and has become associated by all stakeholders with water management in the minor canals.
- (iv) A functional analysis of the composition and role of the SGB was also identified as a priority during the August 2005 workshop, and a proposal had subsequently been submitted to and funded from the Technical Assistance Facility (TAF) of the MDTF. A draft final report on the proposed restructuring of the SGB was submitted to the Gezira Board in January 2008. The mission was not able to review the report, as it was still being discussed by the Gezira Board during the mission visit to the Gezira Scheme in February 2008.

2.32. Despite progress in those four areas, the mission noted that overall progress in the implementation of the reforms, as promulgated in the 2005 Gezira Act, has been slow and limited. In particular, a number of action plans agreed during the August 2005 workshop and the December 2006 mission have not carried out or followed up on. These actions include:

- (i) While WUAs have been established, no Irrigation Management Transfer (IMT) has occurred in the Scheme, because little rehabilitation of minor canals has been conducted. The limited funds that MIWR has received for rehabilitation are still spread thinly over the entire scheme, as a result of which rehabilitation is being substituted

²⁸ The mission consisted of Messrs. IJsbrand de Jong, Salman M. A. Salman, Mr. Badre Lanedri, and Ms. Renate Kloeppinger. In April 2007, Ms. Karen McConnell Brooks, Sector Manager, Agriculture and Rural Development, visited the Gezira Scheme to get an overview of the institutional reforms and the progress and challenges facing implementation of the Gezira Act 2005.

with routine Operation and Maintenance (O&M). This is a serious concern, as rehabilitation is a pre-condition to IMT under the Gezira Scheme Act.

- (ii) The Gezira Irrigation Unit, to be established by MIWR as a special department for Gezira Scheme irrigation, continued to be the subject of debate. Specifically, the questions of its precise administrative location, its responsibilities and role, and its financial autonomy and accountability had not yet been resolved.
- (iii) WUAs have not been able to take on minor O&M tasks that have been relinquished by the SGB as a result of the reforms, given the lack of IMT. As such WUAs capacities continue to remain low in all the fields associated with irrigation management and O&M.
- (iv) Training of WUAs was identified as critical for the success of the reforms. The August 2005 workshop therefore rightfully recognized training as one of the priorities. The Bank obtained a TF from BNWPP to prepare training material and conduct training of trainers and WUAs. The amount of the TF approved for this task amounted to US\$153,500. ToRs were prepared for this training program. In addition, the Indian Embassy confirmed its readiness to support four Indian WUAs experts for a period of six months under the Indian Technical and Economic Cooperation program. It was agreed that a proposal would be submitted shortly in view of the start of the Indian budget cycle, and that the Indian specialists be closely involved in the training of trainers.
- (v) Legal support to WUAs was also identified as a priority in the August 2005 workshop. The Bank has received funds from BNWPP in the amount of US\$94,000 to prepare WUAs rules and regulations, an irrigation management transfer agreement and a model bulk water delivery contract between the Ministry of Irrigation and WUAs.
- (vi) The critical role of the MIWR in the implementation of the Gezira reform agenda was noted and highlighted again. Many of the unresolved issues concern the role of MIWR in water management and maintenance at the upper and minor level, the relationship between MIWR and WUAs, and the administrative and financial management of the Gezira Irrigation Unit. The mission recommended providing international expertise in support of the elaboration of an MIWR-Gezira Scheme strategy in accordance with the 2005 Gezira Act, and stated that if preparation of the strategy is agreed, the Bank would explore possibilities for funding.
- (vii) Rural finance was identified as one of the priorities by the August 2005 workshop, as effective free crop choice depends to a large extent on access to credit. Funding was sought and obtained from FIRST Initiative²⁹ for undertaking a rural finance for the Gezira Scheme in the amount of US\$137,000. The objective of the study is to assess the situation in the Gezira as it related to rural finance, and to identify options for

²⁹ The Financial Sector Reform and Strengthening (FIRST) Initiative is a multi-donor grant facility providing technical assistance to promote financial sector strengthening. FIRST was launched in 2002 by the Canadian International Development Agency (CIDA), the Department for International Development for the United Kingdom (DFID), the International Monetary Fund (IMF), and the Ministry of Foreign Affairs of The Netherlands, the State Secretariat for Economic Affairs of Switzerland (SECO), the Swedish International Development Cooperation Agency (SIDA), and the World Bank. The World Bank manages the FIRST Initiative on behalf of the donors. FIRST has been recently extended to 2012 with funding of \$100 million in total, based on its success in the first four years of its operations. See <http://www.firstinitiative.org/>

improving access to credit by smallholder farmers. The study was viewed as a first tranche; subsequent tranches may become available depending on the successful implementation of the first tranche. It was agreed that the consultants hired under this TF would work closely with the MDTF funded rural micro-finance project to ensure that synergies are being captured.

2.33. The study on rural finance funded by the FIRST Initiative was completed in April 2007. The study analyzed the then existing situation on rural finance in the Gezira Scheme, examined the problems, and identified options for improving access to finance in the Gezira Scheme. The mission conducted several meetings to discuss the further steps to be taken with regard to its implementation, including with representatives from the Agricultural Bank of Sudan (ABS) and Farmers Commercial Bank (FCB), both in Khartoum and in regional Gezira State offices and with the manager of one rural branch office of the ABS in Gezira District. The following agreements in relation to rural finance were reached in principle during the mission:

- (i) A pilot program was proposed to be conducted in two to three branches of banks which have a wide rural outreach in the Gezira Scheme. The ABS and possibly the FCB may be logical choices, and both expressed an interest to participate in the pilot project. The pilot branches will be chosen from higher potential agricultural areas, and the final selection of the partner bank(s) and the branches will take place during the implementation planning phase in accordance with the criteria outlined in the FIRST proposal and in cooperation with SGB, SFU and the Central Bank.
- (ii) An application would be submitted for additional support for training and capacity building from the MDTF to support these activities. This will be further developed once the consultants of the pilot project are selected and have commenced their tasks.
- (iii) In consultation with FIRST, it was agreed that the SGB, with the assistance of the Bank, would prepare a second proposal to the FIRST Initiative to provide funding in the amount of \$250,000. The proposal would include the provision of international expertise, training and capacity building, and the funding of a part time, Khartoum-based national project coordinator. SGB would be the counterpart agency in Sudan and would provide secretarial and logistical support, including transportation. However, despite the fact the proposal was prepared in close consultation with FIRST, no funding was obtained from the FIRST Initiative for this proposal.

VII. The Bank Involvement in the Gezira Scheme in 2009:

2.34. The February 2008 mission was the last official visit by Bank staff to the Gezira Scheme.³⁰ In January 2009 one international and one local consultant were engaged under the two BNWPP trust funds referred to above to assist with preparation of the instruments for the

³⁰ In April 2009, the General Manager of the Sudan Gezira Board and two officials from the Rahad and New Half Irrigation Schemes in the Sudan visited Washington for participation in an international conference on cotton production and marketing. Meetings were organized at the World Bank for the General Manager and his companions to discuss the status of implementation of institutional reforms in the Gezira Scheme, and to introduce them to other cases of irrigation reforms.

establishment and operation of WUAs.³¹ The objective of the assignment was to facilitate acceleration of the water management component of the reform process through providing support for the preparation of critical pieces of legal instruments that would underpin the reform process, strengthen the legal position of WUAs, and provide the basic framework for their role and operational relationship with the SGB and the MIWR. Specifically, the assignment included the following:

- (i) Preparation of internal rules and regulations of WUAs and their federations to address, among others, the objectives of the WUAs and the internal working relationship of the members and the executive committee, and provide for the establishment of a federation of WUAs.
- (ii) IMT hand-over agreements: Since responsibility for O&M at the minor-and-below level of the Gezira Scheme will be transferred to WUAs, an irrigation management transfer (IMT) agreement will need to be prepared for signature between the Ministry of Irrigation and Water Resources and the Water Users' Associations.
- (iii) Bulk water delivery contracts between MIWR and SGB/WUAs: According to the new Gezira Act, WUAs are expected to receive bulk water at the minor level from MIWR in accordance with a contract between MIWR and SGB/WUAs. Standard contracts need to be prepared for bulk water delivery that include provisions for areas, pricing, quantities and quality, times and points of delivery, measurement, billing and payment, and provisions for non-performance or non-payment.
- (iv) Technical consultancies contracts between the MIWR and WUAs: According to the new Gezira Act, WUAs shall undertake actual responsibilities in managing water through entering into a contract with the MIWR in the area of water supply and technical consultation. Technical consultation contracts would need to clarify these consultancies, their substance and the way of demanding and providing them.
- (v) A report outlining the options considered and the reasons for the choice of one over the other.

2.35. After extensive work in Khartoum and the Gezira Scheme, and meetings with the stakeholders in the ministries and agencies concerned, the consultants, under the guidance of the SGB, and in close collaboration with the GFU, produced the following instruments:

1. Model bylaws for the Water Users' Associations
2. Model bylaws for federations of WUAs;
3. An irrigation management transfer agreement between MIWR and SGB;
4. An irrigation management transfer agreement between the SGB and WUAs;
5. A bulk water supply agreement between MIWR and SGB;
6. A technical consultation agreement;
7. A report outlining the options considered and the reasons for the choice of one over the other;
8. A report of the assignment.
9. Implementation Plan.

³¹ Dr. Geert Diemer, an institutional specialist on PIM was hired as the international consultant, and Professor Ali Sulieman Fadllah, of the Faculty of Law of the University of Khartoum, was hired as the local lawyer for the assignment.

2.36. Because of the substantial delays encountered in the engagement and completion of the work of the consultants on those instruments, it was not possible to utilize the second BNWPP trust fund of \$153,500 for the training purposes on the legal instruments. By the time the instruments were completed, the closing date for both trust funds was approaching, and was not extended. Thus, the envisaged training did not take place. Instead, a two-day workshop was organized to present to, and discuss with, the national stakeholders the structure and content of those legal instruments. Of the total funding of \$247,500 under both trust funds, only about \$69,000 was disbursed. The remaining balance of \$178,500 was returned to the BNWPP.

2.37. This activity was the last funded and supervised component of the World Bank Program for institutional reforms in the Gezira Scheme. Overall, the contribution of the Bank to the institutional reforms in the Gezira Scheme has varied and extended for close to ten years. It started with the preparation by a joint team from the Bank and the Sudanese Government of the Options Report in 2000. Consequently, the Bank assisted in the funding and work of the Advisory Team and the study tours to Mali, Turkey and Egypt, and in the training of water users' associations. The Bank played a major facilitative role, as well as a funding one, in the two workshops on institutional reforms, one before the preparation of the draft Gezira Act, and the other immediately after the Act was promulgated. The Bank also assisted in the provision of funding, as well as in the preparation of the terms of reference, for the studies on restructuring of the SGB, rural finance and preparation of legal instruments and training of water users' associations. All those efforts were punctuated by missions to review and discuss the progress on, and assist on the efforts regarding implementation of the Gezira institutional reforms.

III. Developments in the Gezira Scheme Since February 2009

3.1. The February 2008 World Bank mission, and the January/February 2009 consultants work on WUAs in the Gezira Scheme, marked the last direct involvement of the World Bank with the Gezira Scheme, and with institutional reforms there. Since that time, a number of developments have taken place in the Gezira Scheme.

I. Report on “The Gezira Scheme: Current Status and the Way to Reform” In March 2009, immediately after the World Bank consultants completed their assignment on water users’ associations, the Minister of Agriculture and Forestry appointed a four member committee to study and evaluate the situation in the Gezira Scheme four years after the adoption of the Gezira Scheme Act 2005.³² The Committee issued its report “The Gezira Scheme: Current Status and the Way to Reform” (the Current Status Report) four months later, in July 2009.³³

3.2. The report was quite critical of the Gezira Scheme Act 2005, and the manner in which it is being implemented, and claimed that a good part of the damage that has resulted to the Scheme from the Act and its implementation is “irrecoverable damage.” The Executive Summary of the report criticized the change that allowed appointment of the General Manager of the Scheme by the Board of Directors, as opposed to being appointed by the President, as was the situation earlier. Specifically, the report called for urgent actions for dealing with what it called the negative aspects and impacts of implementation of the Gezira Scheme Act 2005, and for an immediate halt to the disposition of the assets of the Scheme until clear guidelines are established for such disposition.

3.3. Furthermore, the report criticized the establishment and responsibilities of the water users associations under the 2005 Act, and alleged that they were only meant for water-scarce countries, which is not the case with the Sudan. It claimed that water users associations lack capacity and technical know-how, and described their experience as a total failure.

3.4. The report called on the government to provide, either directly or through the banks, the finance needed by the farmers, as well as all the needs for agricultural production such as

³² The committee was chaired by Professor Abdallah Abdel Salam, former Deputy General Manager of the Gezira Scheme; and currently the head of the UNESCO Chair on Water Resources in the Sudan. The three members of the Committee were (i) Dr. Ahmed Mohamed Adam, former undersecretary of the Ministry of Irrigation and Water Resources, (ii) Dr. Omer Abdel Wahab, former undersecretary of the Ministry of Agriculture and Forestry, and former Manager of the Agricultural Department of the Gezira Scheme, and (iii) Professor Mamoun Daw Elbeit, former Director of the Agricultural Research Corporation, and former senior employee of the Ministry of Agriculture and Forestry; (he was also the chair of the Second National Workshop on the Gezira Scheme Act, held in August 2005, and currently is the Minister of Agriculture in Gedaref State). Thus two members of the Committee held high level positions in the Gezira Scheme at one point in their career, while the other two were directly involved with the Scheme.

³³ The Report has been issued in Arabic and is dated July 20, 2009.

fertilizers, pesticides, and marketing. It suggested that the Gezira Board would meet its administrative costs through a set charge per feddan, whether cultivated or fallow, without unduly burdening the farmers. The report suggested dividing the Scheme into two divisions (Gezira and Managil), or even four divisions, based on the irrigation network, with each division being a separate juridical and corporate personality. It called for the Scheme to open its doors for employment of the widest possible number of employees, as such employment is needed in the Scheme.

3.5. The last section of the report included sixteen specific proposals, many of which were dealt with in the Executive Summary. Those proposals can be lumped in the following areas:

- (i) **Land:** The report highlighted the difficulties encountered with the land issue, and called for amending the Gezira Act to deal with them. It claimed that there was no real added value in transferring ownership of land to the farmers to enable the farmers to sell or mortgage their hawashas as they had not been restricted during the eighty years of the age of the Gezira Scheme from doing so. The report however, called for adjusting the rent to a reasonable level.
- (ii) **Water Management:** The report emphasized the need for the MIWR to manage, operate and maintain the irrigation system from the Sennar Dam to the Abu Ishreen canal, with the farmers being responsible for distribution of water to their hawashas at that level through a legally established water users associations with limited responsibilities, under the supervision of the field inspectors of the Scheme. In addition to the limited responsibilities for water distribution within their hawasha, the report proposed that water users associations be responsible for assisting the farmers throughout the agricultural production cycle by providing inputs and other needs. The report, however, called for the rehabilitation of the irrigation network to enable it to meet the needs and demands of the Scheme, and the expected decrease in the Sudan allocation of the Nile waters due to the demands of other riparians.
- (iii) **Freedom of Crop Choice:** The report criticized the discontinuation of cotton production as the main crop of the Gezira Scheme without substituting it with a reasonable cash crop, and indicated that as a result of this policy Sudan has lost its traditional local and international cotton markets.
- (iv) **Finance and Marketing:** The report called for the state or the Banks to provide the necessary financing, and for the establishment of financing branches close to the farmers throughout the Scheme, and with simple and straightforward procedures. The Report pointed to the large subsidies provided to agriculture world-wide, particularly in Western Europe and the USA, and indicated that Sudan allocates only 3% of its budget for agriculture.

3.6. It is worth noting that this Report is the exact anti-thesis of the Options Report issued in 2000.³⁴ Its recommendations are the opposite to those set forth in the Options Report with regard to water management, land issue, freedom of crop choice, role of the Sudan Gezira Board and finance and marketing. No official public response was issued about the report.

³⁴ The Report did not make any mention of the World Bank in connection with the Gezira Scheme reforms. It mentioned the Bank once in connection with the establishment of WUAs in South East Asia (India, Pakistan, Thailand and Sri Lanka).

However, it underscores the controversies surrounding institutional reforms in the Gezira Scheme, the 2005 Act and its implementation.

II. Developments on Implementation of the Gezira Scheme Act 2005:

3.7. The consultant was briefed by the SGB on the developments that took place in the Gezira Scheme since 2008, as follows:

- a. Review of the Structure of the Sudan Gezira Board:** The Review of the Structure of the SGB was financed through a TAF grant of \$113,000 in January 2007. The draft report was issued in August 2007, and the final report in August 2008.³⁵ The vision of the Report for the SGB is that it would be a nationally and internationally recognized agricultural research organization dedicated to excellence and committed to problem solving, developing new technology and information that serves specific needs of the people of Gezira Scheme as well as people of Sudan, and advancing the science of agriculture and related disciplines. Thus the report essentially transformed the SGB into an agricultural research and extension institution. To attain that objective, the SGB is reorganized in five directorates under the General Manager, consisting of (i) Research and Development, (ii) Extension and Training, (iii) Planning and Coordination, (iv) Accounting and Finance, and (v) Administration and Human Resources. The report provided detailed description of the functions of each directorate and job descriptions for each position within each directorate, concluding that the total number of employees of the SGB under the proposed structure would be 328 employees. After further study and analysis, the Board of Directors of the SGB accepted the report, and implementation of its recommendations started in October 2009. The impact was a substantial change and considerable reduction of the staff. Approximately 4,150 staff was terminated, although 75 were immediately rehired for six months to perform essential tasks in the Scheme. The SGB is in the process of completing the structural changes in the SGB, including the hiring of 325 staff in key positions.
- b. Sell-off and Privatization of the Cost Centers:** As discussed earlier, the Options Report, the AT reports and first national workshop all recommended constituting the cost centers as independent, administrative, financial and legal entities, and preparing them for eventual privatization. In July 2009, the assets of the Gezira Light Railway and the Irrigation Engineering Department were both sold-off, and completely disposed of. The telecommunications department had for years ceased to exist as the mobile phones performed its functions. Ownership of the fourth cost center, the ginneries was transferred to the union representing the former employees of the Scheme. The SGB indicated that the services of the Gezira Light Railway and of the Agricultural Engineering Department could be provided by the private sector at a far lower cost than that incurred in keeping those two units. It further explained that with freedom of crop choice, cotton is no longer grown in

³⁵ Gezira Scheme: Managerial, Staffing and Financial Structure of SGB, prepared by the Turkish Firm G and G Consulting, dated 10/08/08.

quantities to warrant keeping the ginneries. Thus, the issue of the cost centers was finally closed, by selling-off two of them, and by transferring ownership of the third to the union representing the former employees of the Gezira Scheme.

- c. **The Gezira Irrigation Unit:** The debate and controversy over the Gezira Irrigation Unit, its location, responsibilities and relationship with the MIWR continued until early this year, because of different interpretations of the provisions of the Gezira Scheme Act on this matter. Attempts by the World Bank mission to bridge the differences on the views of the Ministry on the one hand, and the SGB and GFU on the other were not successful. On January 27, 2010 the Vice President of the Republic issued a decree transferring all responsibilities for irrigation in the Gezira Scheme from the MIWR to the SGB. That enabled the Board to establish the Irrigation Unit within the Gezira Scheme with full responsibilities over all the system from the mouth of the Sennar Dam to the hawashas. This included the main, branch, major and minor canals, in addition to Abu Ishreen and Abu Sitta. In effect, the MIWR, following the issuance of this Decree, no longer has any role over water management in the Gezira Scheme. The Ministry considered this decision as not consistent with the Gezira Scheme Act which entrusted the Ministry with operation and maintenance of the primary irrigation and drainage canals and pumps in the Scheme, and for providing sufficient water for water users associations at the mouth of the respective field canals. The Act provided for operation and maintenance of the minor canal and field channels by the water users' associations. The SGB and the GFU saw the decision as putting the irrigation infrastructure of the Scheme under one unit, rather than have it split between a Unit under the SGB, and the Ministry. This situation resolved the controversy over the Gezira Irrigation Unit which started immediately after the Gezira Act was adopted.
- d. **Appointment of Private Operators for Water Users' Associations:** The Sudan Gezira Board contracted a private company, Al-Hadf, as a private operator to provide assistance on various tasks to the water users associations. About 1800 such assistants have been assigned for this task. Such assistants report directly to the chairman of the water users' association.

IV. Key Stakeholders, Interests and Positions on the Reform

4.1. Institutional reforms for the Gezira Scheme have always been controversial. The challenges to reform are compounded by the huge size of the Scheme, the large number of people residing in, or relying on the Scheme for their livelihood, and the multiple ministries and agencies playing a role in its management and finances. As we have seen, each aspect of the reform, whether it deals with water management, land ownership, freedom of crop choice, role of the SGB or that of the private sector has, for different reasons, its opponents and proponents. The interests and positions of the multiple stakeholders in the Gezira Scheme have varied all along, and those differences were quite apparent during the two national workshops organized in 2004 and 2005, and in the implementation process thereafter, as discussed earlier and reiterated below.

4.2. **The Ministry of Irrigation and Water Resources:** The MIWR has its history closely related to and tied with the Gezira Scheme. It was established as a department in 1924, a few months before completion of the Sennar Dam, to manage the irrigation infrastructure in the Gezira Scheme. Prior to that there were no major irrigation schemes or works in the Sudan to warrant the establishment of a separate government irrigation unit. Indeed, the offices of the Irrigation Department were established in Wad Medani, the capital of the Gezira State, a few kilometers from the headquarters of the Gezira Scheme in Barakat. They were only moved to Khartoum as a separate ministry about a year before independence of the Sudan in 1956. The authority of the new ministry to oversee irrigation works in the Scheme was expanded and strengthened after the Roseiris Dam was completed, and the Managil Extension of the Gezira Scheme commissioned in 1966. A few years later, the MIWR was managing, or overseeing the management of a vast irrigation network in the Gezira Scheme of about 150,680 kilometers. The number of irrigation engineers and their assistants who were managing, operating and maintaining this system increased over the years. Indeed, their number was the largest of those employed by the Ministry anywhere in the Sudan.

4.3. The Ministry has been opposed from the very beginning to the establishment of WUAs and the transfer of responsibilities for operation and maintenance over the field channels, watercourses and minor canals to such associations. The engineers of the Ministry argued, as the Current Status Report did, that WUAs are meant for water-scarce countries, and the Sudan is not, and that Sudan has no experience at all with participatory irrigation management. They believe that the WUAs that were established in the Gezira Scheme lack the required capacity and knowledge for undertaking this task, and that irrigation water management is too serious to be transferred to farmers. The Ministry voiced this opposition vehemently through its representative in the Advisory Team, and during the two national workshops on the reforms in the Gezira Scheme. The top managers and advisers of the Ministry were opposed to the sections of the Gezira Scheme Act on water management, and the Ministry was not cooperative in the implementation of the part of the Act dealing with the establishment and operation of WUAs and the Gezira Irrigation Unit. The irrigation engineers probably felt that their role in operation and maintenance role, and indeed their jobs, would be threatened by the transfer of that authority to WUAs. The Ministry must have felt that its position was

strengthened and vindicated by the Current Status Report and its strong criticism of the idea of water users' associations. Thus, the impasse over the unit continued and could only be resolved through political intervention. As discussed earlier, the transfer of all the responsibilities over irrigation from the MIWR to the Irrigation Unit within the Gezira Scheme effectively ended any role for the MIWR on water management in the Scheme. It should also be added that all the dams in the Sudan are now under the new Ministry of Dams and Electricity,³⁶ with no role whatsoever for the MIWR. Thus, the role of the MIWR has shrunk considerably, and this should explain their resolve to oppose WUAs.

4.4. The Ministry of Agriculture and Forestry: The Gezira Scheme Act 2005 states that the Scheme shall be under the aegis of the Minister of Agriculture and Forestry. Under the previous Gezira Acts, the Minister was the chair of the Board of Directors. However, this practice was discontinued, and the 2005 Gezira Act stipulates that the Board shall be headed by a chairman appointed by the President of the Republic on the recommendation of the Minister of Agriculture and Forestry. Currently, the chairman is a full time person with no official ties to the Ministry of Agriculture. Aside from this aspect, there is no mention of the Ministry or Minister of Agriculture in the Act. The Act states that the Board of Directors shall include "representatives of the relevant ministries," of which the Ministry of Agriculture and Forestry is one, with one representative for each ministry. With the overall policies and operations set and overseen by the Board of Directors, and the day-to-day work undertaken by the employees of the Sudan Gezira Board, not much is left for the Minister or Ministry of Agriculture to do or oversee in the Scheme. The absence of a specific and clear role for the MAF in the Gezira Scheme under the 2005 Act has resulted in a decline of influence over what is happening in the Scheme, including the current sharp debate on institutional reforms and implementation of the 2005 Act. Although officials in the Ministry indicated that they have no problem with the Act, they expressed concerns that implementation of a number of aspects, such as WUAs, is being rushed and should be done gradually. It seems that whatever role the Ministry may think it still has, such a role can only be exercised through its representation in the Board of Directors, as one of the relevant ministries.

4.5. The Ministry of Finance and National Economy: The 2005 Gezira Act, reiterating what was included in the previous Gezira Acts, states that the State, as represented by the MFNE, shall own the current assets of the Scheme, and may allow future participation of private sector investments, whether in current assets or through addition of new assets to the Scheme. The MFNE is one of the relevant ministries represented in the Board of Directors. The Act also stipulates that the development budget of the Scheme shall be discussed with the Minister of Finance and National Economy to determine the required development support. In addition, the Act requires the Ministry to provide financing for maintenance, rehabilitation and operations of the water canals in return for water charges to ensure provision of such services. After preparing the development and rehabilitation budget for the Board of Directors' discussion and approval, the General Manager of the Gezira Scheme shall then submit the same to the MFNE to attain respective support for the budget's various components, including irrigation, research and technology support.

³⁶ The Ministry of Dams and Electricity was established as part of the new cabinet that was announced in June 2010. The Ministry replaced the Dams Unit that was an independent unit and was not part of the MIWR.

4.6. The last 20 years witnessed the deterioration of the financial situation of the Gezira Scheme, and its reliance on the Ministry of Finance as the source for financial support – loans, grants, subsidies and guarantees. The Ministry had in the past on a number of occasions forgiven and written-off its debt to the Scheme and the farmers. As mentioned earlier, the Current Status Report indicated that the debts of the Scheme for the period 1997 to 2008, reached 317 million Sudanese Pounds, of which 191 million came from the MFNE. This is in addition to direct and indirect subsidies provided by the Government which reached about 150 million Sudanese Pounds for the same period. This debt burden is larger than the one that the Scheme contracted and accumulated in the mid to late-nineties, as discussed in the Options Report. The size of the debt throughout those years indicates the inability of the Scheme to recover its costs from the farmers, and its continuing heavy reliance on the national government for its finances. Indeed, the decision of the SGB to lay off all its employees was based on the lack of funds from the Scheme's own resources, and its reliance on the MFNE to provide the budget for salaries and operating cost of the Scheme. Thus, the immediate concern of the MFNE is that the SGB should be a financially independent entity.

4.7. The Sudan Gezira Board: Since its establishment in 1950 to replace the Sudan Plantation Syndicate in the management of the Gezira Scheme, the SGB has gone through some major changes. Both the Syndicate and the SGB had vast authority over the tenants through cotton production. The SGB supervised the full cycle of the growing of cotton, and provided credit to the farmers for that purpose. Until 1981, its entire income came from the cotton profits. Thus the decline in cotton production and prices and the replacement of the joint account with the individual account in 1981 had immediate effects on the finances of the SGB. Implementation of the freedom of crop choice granted by the 2005 Gezira Scheme Act ended the wide ranging authority of the SGB exercised through supervision of the growing of cotton, and provision of credit to the farmers for that purpose. Consequently, the number of employees had to be cut to respond to the decline in income. The Act also reduced the powers of the SGB and converted it into a research institution. As discussed earlier, implementation of the restructuring study has resulted in the laying off of all the employees of the SGB, and restructuring it into five directorates with a recommended staff level of 328. On the other hand, the Board of Directors of the Gezira Scheme, remains intact, and provides the forum for the relevant ministries represented to have an oversight role on the Scheme.

4.8. The Gezira Farmers' Union: The GFU was established as an association in the late 1940s. It led, immediately after its establishment, a series of strikes against the Syndicate and the Government and forced both of them to negotiate a number of demands including the establishment and operation of a reserve fund to assist the tenants in the difficult times of meager production or low prices. The GFU was able to negotiate in 1950, when the role of the Syndicate was transferred to the SGB, an increase for the farmers share from 40% to 42%, as well as the establishment and the percentages for social services, local councils and reserve fund, discussed earlier. In 1964 in recognition of the role of the GFU in the revolution that toppled the military government of General Abboud, the share of the farmers was increased to 48%, and the chairman of the Gezira Farmers Union was appointed as a minister in the central government. The active role of the GFU in defending and promoting the interests of the

farmers, and in contributing to national issues continued until 1989 when the army took over power and dissolved all trade unions and associations.

4.9. The current executive committee of the GFU was elected in 2002. The Executive Committee of the GFU has been heavily involved with the managerial, financial and technical matters of the Gezira Scheme. It was represented in the Advisory Team from its early days, and those representatives were quite active and engaged. The GFU was the main organizer of the two national workshops on institutional reforms. Indeed the Bank funding for the two workshops was channeled through, and managed by the Union, with the financing agreements concluded between the Bank and the Union. It has been an active supporter of the institutional reforms and has spearheaded the 2005 Gezira Act. As indicated earlier, the Act stipulates that at least 40% of the members of the Board shall be representatives of the GFU. Its representatives were part of the teams that undertook the study tours to Mali, Turkey and Egypt for learning about the experience of those countries in irrigation reform and water management. Through its representation in the Board of Directors, the Union has also been closely involved with both the rural finance and the Gezira Board restructuring studies, and the consultants' work on the legal instruments on water users' associations. Indeed, the GFU exercises wide influence over the Board of Directors where it has six out of the fourteen members of the Board.

4.10. **The Landowners and the Tenants:** As indicated before, about 900,000 feddans of the total size of the Gezira Scheme of 2,200,000 feddans are privately-owned, and have been compulsorily acquired in 1927. Those 900,000 feddans were leased, together with the government-owned land, to the tenants, including those who were landowners. However, most, if not all of the original owners, are no longer alive, and their heirs have multiplied in number. The rent was reasonable in the early years of the Gezira Scheme, and provided a satisfactory level of return to the landowners. However, it started to gradually lose its value due to inflation. As mentioned earlier, the land lease contract was not officially renewed in 1967. In 1978, about ten years after the lease expired, the landowners stopped collecting the rent, because of the loss of its value, and demanded an adjustment indexed to inflation. No payment of rent to the farmers has taken place since that time, and some farmers have stated demanding the return of their land. However, it is widely believed that this demand is unreasonable given that the land is being harvested by a second, or even a third, generation of growers who have no other alternative, and who have been using the land since their childhood.

4.11. As discussed earlier, the Gezira Scheme Act of 2005 addressed the issue of the Gezira land in a separate chapter, and in a comprehensive manner. It mandated the compulsorily acquisition of the privately-owned land, and the payment of a fair compensation, and allowed the new owners to use the land as a collateral, or to sell it altogether. However, thus far there has been no agreement on the amount of rent to be paid for the period since 1978, or the level of compensation for acquisition of the land. Thus, this chapter of the Act has not been implemented, although a process for verification of the landowners has been underway for some time. The total sum for the back rent and acquisition of the privately owned land is

extremely high, and there are questions as to who would pay the latter part – the farmers, the SGB or the Ministry of Finance?

4.12. Thus, the stakeholders include the MFNE that owns the assets, the MIWR that until recently, provided water at, and operate the Sennar Dam, and the MAF whose Minister oversees the Scheme. The SGB which ran the Scheme but which is converted into an agricultural research institution remains the main stakeholder, and it will continue to play a major role through the new structure, and through the Board of Directors. The GFU is no doubt the stakeholder with the most influence, through its considerable representation in the Board of Directors of the SGB. Discussion of the stakeholders can not overlook the landowners, at least until the issues surrounding land in the Scheme are resolved.

V. Strategic Options for World Bank Re-engagement

5.1. The reform process in the Gezira Scheme has been a long, slow and controversial one, dating back to the late 1990s; actually predating the Options Report. The parameters laid down in the Options Report 2000 became the foundations of the Gezira Scheme Act of 2005. Such parameters include freedom of crop choice, establishment and operation of water users' associations, transfer of land ownership to farmers, a reduced and new role for the SGB, and privatization of the cost centers. Freedom of crop choice has been implemented, and now the farmers are generally not restricted to one crop or another, as was the case with cotton from 1925 to 2007. However, concerns were raised that the technical parameters to which such freedom is subjected under the Gezira Scheme Act are not defined, and as a result are not being observed, and that implementation is constrained by water delivery problems due to the poor conditions of the canals, and by finance and marketing problems. The SGB has been completely restructured and converted into an agricultural research and extension organization. The role of the SGB has been focused and its staff decreased considerably. Responsibility for the irrigation infrastructure in the Scheme has been transferred from the MIWR to the SGB, and the Gezira Irrigation Unit has been established. However, the Gezira Scheme Act stipulates that transfer of O&M to WUAs would take place after rehabilitation of the minor canals, which has not yet been done, and there are constant complaints about the poor conditions of the canals. The cost centers were either sold off or privatized, paving the way for a wider role for the private sector to provide the services that used to be provided by them.

5.2. Thus, progress has been made in a number of areas of the institutional reforms, although other important areas, such as land ownership, still remain without a resolution. Transfer of operation and maintenance of the minor canals to the WUAs faces major challenges. Complaints have been voiced about the speedy manner in which the WUAs have been established and about their lack of capacity. After the elapse of about ten years, the Bank may want to consider possible options for engagement with the institutional reforms in the Gezira Scheme. Such options could include:

5.3. **Ending its Engagement in the Gezira Scheme Institutional Reforms:** After ten years of involvement with the Gezira Scheme - acting as a facilitator for institutional reforms, and assisting in providing funding for the TA Program - the Bank may decide that it is time to end its engagement. Arguments in support of this course of action could include the slow progress made thus far in the implementation of the reforms, and the differences thereon among some of the stakeholders. They could include the reputational risks that the Bank may be subjected to as a result of the controversies surrounding some aspects of the reform. The fact that it is not possible for the Bank to provide loans and credits to the Sudan because of the arrears situation could deprive the Bank of any leverage for advancing the reform process, and indeed for financing it. The high transaction cost of supporting and supervising a small technical assistance program such as the one in the Gezira Scheme during the last ten years, and the evolving nature of its components, could also be cited as a reason for ending Bank involvement. It should also be added that as some people in the Bank may consider the

involvement of the Bank as too costly and fraught with risks, there are also officials in the relevant ministries in the Sudan and the SGB who hold similar views. They consider the involvement of the Bank as too limited, and its funding as too meager, to warrant and justify the administrative and financial cost of accepting and implementing it.

5.4. However, this course of action of complete disengagement overlooks the long history of involvement of the World Bank with the Gezira Scheme. As discussed earlier, the Bank was heavily involved with the Gezira Scheme from its early days in the Sudan. It financed the Managil Extension Project in the late 1950s, the Roseiris Dam in the 1960s, the series of studies in the 1960s and 1970s, and the major rehabilitation Project in the 1980s. The Options Report was the first major involvement of the Bank after it decided to re-engage with the Sudan in 2000. Aside from the MDTF, the involvement in the Gezira Scheme is perhaps the largest in the whole country. The Options Report set in motion the reform process, not just in the Gezira Scheme, but also in the other irrigation schemes in the Sudan as well. Indeed, the Gezira institutional reforms would no doubt act as precursor for reforms of the entire public irrigation sector in the Rahad, Suki and New Halfa Schemes, as well as for reforms in other sectors in Sudan. Thus, this report does not recommend this course of action.

5.5. **Continuing with the Present Technical Assistance Program:** Since the year 2000, the Bank has funded, or facilitated the funding for a series of activities related to institutional reforms in the Gezira Scheme. This included the study tours to Mali, Turkey, Egypt and Burkina Faso; and the two national workshops on institutional reforms where the role of the Bank as a facilitator was quite apparent. The program included the training of farmers, preparation of legal instruments on WUAs, and the financing of the rural finance and the SGB restructuring studies.

5.6. One option is to continue with this approach. This would mean that the Bank would proceed in the manner it has been supporting the reforms since 2000. The Bank could build on the areas of success and continue to assist with the other areas where there is limited or no progress. It could be argued that the transaction cost for such a small program is too high, and as mentioned before, the leverage is limited. Moreover, funding for the TA Program depended on TFs that have their own priorities, rules and procedures, and are not a reliable source. The open-endedness of this TA Program poses major problems regarding funding and supervision.

5.7. **Continuing the Support in Some Selected Targeted and Strategic Areas:** This option would mean that the Bank would continue with supporting institutional reforms in the Gezira Scheme, but limit its involvement to some specific areas. The areas considered most strategic, and in demand, include rural finance, the new structure of the SGB, water users' associations, and crop diversification. The Bank has financed or facilitated the financing of three studies on each of the first three areas, and the re-engagement in those areas would simply mean completion of the work started there in the first place, and assisting in achieving the objectives of the studies, as outlined below:

- (i) **Rural Finance:** Freedom of crop choice would depend to some extent on finance to the farmers, now that finance is not available from the SGB, even for cotton. As discussed earlier, as a result of the discussion during the second workshop held in

August 2005, following adoption of the Gezira Scheme Act, a study on rural finance was funded and completed in 2007. Consequently, a proposal was discussed in 2008 to conduct a pilot for rural finance in two to three branches of the Agricultural Bank of Sudan (ABS), and the Farmers' Commercial Bank (FCB) in the Gezira Scheme. Unfortunately, this was not carried out due to lack of funding. As the original proposal is still relevant, a follow-up study would be needed to operationalize and make full use of the results of the first study, and address ways for meeting farmers' demands and needs for finance, now that the freedom of crop choice is fully implemented. Work on the proposed study would need to be closely coordinated with that of the Sudan Micro-finance Development Facility at the Central Bank of Sudan.

- (ii) **The New Structure of the SGB:** A new role for the SGB was envisioned by both, the Options Report and the Gezira Scheme Act 2005. The study on the review of the structure of the SGB was completed in 2007, and implemented in 2009. The result is a new structure for the SGB which has been in place now for more than six months. An evaluation of this structure could be undertaken with the view of addressing any deficiencies or gaps, and ensuring that the right structure and staff skill mix are in place.
- (iii) **Water Users' Associations:** Support under the World Bank TA Program has been provided for the establishment and operation of WUAs. Training was conducted by the University of Gezira Water Research Institute for the trainers and facilitators of water users' associations in 2004, as well as by an international expert and a Bank staff. Funding from the BNWPP was provided in 2009 for preparation of a number of legal instruments including the bylaws of the WUAs, the transfer agreement, and the bulk water supply agreement. However, no training took place on those instruments under the BNWPP funding for the reasons discussed earlier, and about \$178,000 allocated for training was returned to the BNWPP. Capacity building of WUAs has been identified as one major shortcoming for a proper transfer of operations and maintenance to the WUAs. Accordingly, this is an area where further support from the Bank is needed. Such support could include preparation of training modules on different aspects of the work of WUAs. One of the modules would include simple explanations of the bylaws of the WUAs and the relationship between the farmers and their executive committee, as well as the transfer agreement between the SGB and the WUAs. This would be followed by training of trainers on those modules. The establishment of the Gezira Irrigation Unit, its functions, work responsibilities and relationship with the water users' associations could also be an area where the Bank assistance may be helpful. Indeed, requests for World Bank assistance in those areas came from the farmers themselves during the June 2010 mission.
- (iv) **Crop Diversification:** Implementation of the freedom of crop choice has resulted in the selection of a variety of crops by the farmers in the Gezira Scheme. Technical assistance is needed for addressing crop diversification in the Gezira Scheme, and the study of the economy of cropping choice and the economics of alternatives. The study would address other related issues such as the role of the producers' cooperatives, and

the establishment and/or expansion of agri-business in the Gezira Scheme. This option is favored by the Sudan Gezira Board and the Gezira Farmers Union, and specific requests for those studies were made by both of them.

5.8. Carrying out a Thorough Assessment of the Reform Program and the Bank Role:

This option involves carrying out a thorough, multi-dimensional assessment of the reform program and its implementation ten years after the issuance of the Options Report in 2000, and five years after adoption of the Gezira Scheme Act 2005. The assessment would include a careful review of the role of the Bank in this whole process. Based on the results of this assessment, the Bank would decide on the kind of re-engagement and assistance the Bank may provide. The assessment would involve all the areas addressed in the Options Report and reflected in the Gezira Scheme Act 2005, as well as the components of the TA program funded by or through the Bank. Such areas include the new role of the SGB, water management by the Gezira Irrigation Unit and the WUAs, finance and marketing, crop diversification, as well as the land issues. It would provide the Bank with detailed information and analysis for an informed decision. However, the assessment, if undertaken, may raise the expectations for further TA funding, and perhaps even investments, which may not necessarily be available under the current situation involving the arrears of the Sudan.

5.9. Hence, the options for the Bank range from complete disengagement, to continuing with the same approach adopted for the last ten years. In-between lie two other options of engagement in selected targeted areas, and the carrying out of a full assessment of the reform program and the role of the Bank, for an informed decision.

5.10. The SGB and the GFU and some of the farmers themselves favored and requested continuing the World Bank TA support for institutional reforms in the four selected, targeted and strategic areas specified in paragraph 5.07 above. This report also recommends this option because, among other things, it would allow the Bank to stay involved with the institutional reforms in the Gezira Scheme, and to assist and influence such reforms. This option would also keep the Bank fully cognizant of the situation in the Gezira Scheme, as well as the public irrigation sector in the Sudan.

5.11 If this recommendation is accepted, then it should only be undertaken after an explicit request to that effect from the MFNE. The framework for such engagement should be clearly spelled out and agreed with the MFNE as well as the SGB so as to minimize misunderstandings, manage expectations, and confirm that the process is demand-driven. Re-engagement should include adequate funding for the different components of the selected activities, as well as budget for supervision through regularly planned missions, as opposed to the sporadic ones in the last ten years. The framework should also ensure full coordination with the other multi-lateral and bilateral donors who may be interested in the Gezira Scheme, particularly the Food and Agriculture Organization of the UN (FAO) and the International Fund for Agriculture Development (IFAD).

VI. Conclusion

6.1 Sudan's budgetary allocations for agriculture have favored capital intensive agriculture over traditional rain-fed farming. Implementation of the Gezira Act and the reforms that it embodies should reduce budgetary allocation bias to irrigated agriculture, and free some funding for other agricultural projects and programs. In addition, Gezira reforms would no doubt act as precursor for reforms of the entire public irrigation sector, such as the Rahad, Suki and New Halfa Schemes. It is a fact that what happens in the Gezira Scheme has always influenced those schemes.

6.2 The engagement of the Bank in the last ten years has no doubt contributed to the debate on institutional reforms in the Gezira Scheme, and has produced some positive results. It can also contribute to identifying some generic lessons to irrigation reforms that may be useful for the Bank work in other countries. Accordingly, three of the recommendations of this report call for continued engagement with the institutional reforms in the Gezira Scheme, as opposed to ending the engagement altogether. The factors for and against the decision regarding any of those options would have to be weighed carefully. As indicated in paragraph 5.10 above, this report recommends the targeted selected engagement option.

Annex

In the Name of God, The Merciful, The Compassionate

THE GEZIRA SCHEME ACT of 2005

Pursuant to the provisions of the Constitution of the Republic of the Sudan of 1998, the National Council hereby has adopted, and the President has signed the following Act:

Chapter One

Preliminary Provisions

Citation of the Act and Effective Date

1. This Act shall be cited as “The Gezira Scheme Act of 2005” and shall come into effect upon signature.

Rescission

2. (1) The Gezira Scheme Act of 1984 is hereby repealed but all bylaws, orders and regulations issued thereunder shall remain valid and applicable until repealed or amended in accordance with the provisions of this Act.
(2) The Gezira Land Act of 1927 is hereby repealed but all bylaws, orders and regulations issued thereunder shall remain in valid and applicable until repealed or amended in accordance with the provisions of this Act.

Interpretation

2. In this Act, unless the context may otherwise require, the following words and phrases shall have the meanings hereby assigned to them:

Government: Refers to the Federal Government.

Competent Minister: Refers to the Federal Minister of Agriculture and Forestry

Scheme: Refers to the Gezira Scheme with its current command areas or any extension thereof.

Board: Refers to the Scheme’s Board of Directors established pursuant to Article (6) hereof.

General Manager: Refers to the Scheme’s General Manager who is appointed in accordance with Article (15) hereof.

Farmer: Refers to any individual with a hawasha (lot) in accordance with Article (16) hereof.

Employee: Refers to any individual hired within the Scheme’s job structure.

Fiscal Year: Refers to the period of twelve months commencing on July 1 of each year and ending on June 30 of the following year, or any date to be set by the Board of Directors for the beginning and end of the fiscal year.

Field Canals: Refer to irrigation canals called secondary canals, “Abou Ishreenat” and “Abou Sittat” and to water regulators and controllers.

Irrigation Canals: Refer to primary and secondary canals and to major canals and drainages, including regulators and pipes branching out to feed field canals.

Water users’ associations: Refers to farmers organizations undertaking actual tasks with regard to water management, operation and uses.

Chapter Two

Scheme's Identity, Headquarters and Sponsorship

4. (1) The Gezira Scheme, which is an economic and social entity with various activities and enjoys national support as part of the development effort, shall be established pursuant to this Act. It shall be an administratively, financially and technically independent juridical person with a permanent, perpetual character and a public seal. It shall have the right to litigate in its own name.
- (2) The State, as represented by the Ministry of Finance and National Economy, shall own the current assets of this Scheme, and may allow future participation of private sector investments, whether in current assets or through addition of new assets to the Scheme.
- (3) The Gezira Scheme shall be composed of:
- A. Farmers
 - B. The Government, as represented by its respective units providing basic services such as development, irrigation and public goods, including: research, plant protection, technology support, agricultural extension, technical studies, training as well as supervisory management and indicative planning.
 - C. Private sector with regard to provision of auxiliary commercial services.
- (4) The Scheme shall be headquartered in the City of Barakat. The Board of Directors may create branches and offices in or outside the Sudan whenever necessary.
- (5) The Scheme shall be under the aegis of the competent Minister.

Scheme's Objectives

5. The Scheme aims to utilize its sustainable and stable agricultural production resources and potentials to improve the economic and social standards of farmers and its own employees as well as the area it is located in, and to improve respective services provision. It also aims to contribute to the attainment of national objectives. Without prejudice to the foregoing, the Scheme shall aim to:
- a. Achieve optimal and rational utilization of the Scheme's resources and potentials to increase income level, boost agricultural output and maximize benefits and returns.
 - b. Achieve the Scheme's local and national objectives, such as food security, job creation, increased and diversified exports, and introduction of manufacturing industries.
 - c. Achieve citizen's well-being within the Scheme through economic development.
 - d. Preserve the environment within the boundaries of the Scheme.
 - e. Ensure farmers' right to freely manage their production and economic aspects within the technical parameters, and employ technology support to boost production and maximize their respective returns.
 - f. Ensure farmers' right to effectively participate, at all administrative levels, in planning and implementation of projects and programs that affect their production and livelihoods
 - g. Ensure farmers' right to manage irrigation operations at field canal level through water users' associations.
 - h. Promote farmers' effective collective action to ensure efficient provision of services and economic production while maximizing economies of scale.
 - i. Provide an opportunity to the private sector to play a leading role in provision of auxiliary commercial services in a competitive environment.
 - j. Introduce irrigated forestry and livestock in agricultural cycle.
 - k. Provide auxiliary services to the Scheme's activities by competent authorities.

Chapter Three
Board of Directors
Board Composition

6. (1) A Board of Directors shall be established by a Decree of the President of the Republic, upon a recommendation by the competent Minister, and shall be composed of a chairman and 14 members, as follows:
- a. A Board chairman appointed by the President.
 - b. The General Manager in ex officio capacity.
 - c. Farmers' Union representatives who shall form at least 40 % of the Board membership.
 - d. A representative from the Scheme's employees.
 - e. Representatives from the relevant Ministries.
- (2) The positions of Board chairman and General Manager shall not be held by one and the same person.

Conditions for Board Membership

7. A member of the Board of Directors must be:
- a. A Sudanese citizen who is mentally competent.
 - b. A person who has not been convicted of a crime of moral turpitude or a breach of honor.
 - c. A person who has not been declared bankrupt.
 - d. A literate person who meets all eligibility requirements

Declaring a Vacancy and Appointing a Replacement

8. (1) The Board position of any member shall become vacant for any of the following reasons:
- a. Loss of any of the conditions of membership stipulated in Article (7) of this Act.
 - b. Resignation.
 - c. Being relieved of duties or removed by the appointing authority.
 - d. Death of the incumbent.
 - e. Failure to attend three successive meetings without an acceptable justification.
- (2) In the event that a Board membership position has become vacant, a replacement shall be appointed following the same procedures applied in appointing the replaced member.

Board Functions and Powers

9. The Board shall be entrusted with formulating plans and general policies for achieving the Scheme's objectives. Without prejudice to the foregoing, the Board shall have the following functions and powers:
- a. Developing scientific parameters for research, economic and social studies required to ensure optimal utilization of the Scheme's resources to achieve the highest possible profit rates.
 - b. Developing equitable incentive policies in order to carry out the State's strategic policies with regard to agricultural produces.
 - c. Managing and developing basic services of research, plant protection, technology support, agricultural extension, seeds multiplication, training and inner roads.
 - d. Establishing a burden-sharing [social safety] system allowing compensations for earnest farmers in the event of exposure to pests and natural catastrophes.
 - e. Establishing technical parameters for cropping patterns and agricultural cycles.

- f. Approving plans and programs submitted by the General Manager.
- g. Determining its charges categories of services performed in coordination and agreement with competent authorities, and respective charges to be levied on farmers by water users' associations.
- h. Approving employment of workers whom the Board may deem necessary to carry out its functions in accordance with the job structure it approved, and issuing regulations governing their employment.
- i. Approving the annual draft budget for running the Scheme, as well as the development budget to be discussed with the Minister of Finance and National Economy to determine the required development support.
- j. Ensuring optimal use of the Scheme's assets and of moveable and immoveable property owned by the government, and investing the same economically.
- k. Maintaining the Scheme's lands and taking measures necessary to preserve the soil.
- l. Providing information to help farmers market their produces.
- m. Entering into contracts and agreements necessary to carry out the Scheme's objectives.
- n. Carrying out other actions as may be deemed necessary or supportive by the Board to realize the Scheme's objectives.
- o. Forming permanent or temporary committees to assist the Board of directors.
- p. Delegating any of its functions or powers to the General Manager or any of its committees.
- q. Issuing the necessary by-laws to regulate its activities.

Meetings of the Board

- 10- (1) The Board shall hold at least six meetings during a fiscal year. The Board Chairman may call an extraordinary meeting when necessary or at the written request of half of the Board members.
- (2) The quorum for Board meetings shall be met with the simple majority of the members.
- (3) Board resolutions shall be adopted by majority of votes of the members present, and the Board chairman shall have the casting vote in the event of a tie.
- (4) The Board chairman may ask any Board member to chair the meeting in his absence.
- (5) The Board may invite any person to attend any of the Board or committee meetings but the invitee shall not have the right to vote.
- (6) All Board procedures and discussions shall be confidential and no member shall disclose any information about them before they are made public in the manner to be decided by the Board.

Disclosure of Interest

11. Any member of the Board or affiliated committees who has a vested direct or indirect interest in any matter, proposal or topic submitted to the Board or any of its committees for discussion must disclose this interest to the Board or committee. He shall not participate in any discussion or resolution adopted by the Board or committee in this respect.

Remuneration of Board and Committees

12. The Board shall determine the remuneration package of the Board chairman, members and affiliated committees in accordance with financial regulations.

General Secretariat

13. The Board shall have a general secretariat, headed by a Secretary appointed by the Board. The Board shall specify his terms of reference and duties.

General Manager

14. (1) The Board shall enter into a contract with a highly competent and experienced person to be the Scheme's General Manager.
(2) Said contract shall specify a renewable four-year-term as well as terms of employment and remuneration of the General Manager.

Powers and Duties of the General Manager

15. The General Manager shall be the most senior executive officer charged with implementation of the Board's policies, plans and programs. Without prejudice to the above, the General Manager shall oversee and have powers in respect of the following:

- a. Provision of agricultural extension services to enable farmers to apply appropriate technology to increase production and productivity.
- b. Taking measures necessary to provide protective services for crops against pests and diseases.
- c. Taking measures necessary to provide seeds multiplication services.
- d. Carrying out the Scheme's sustainable economic development with regard to its services.
- e. Preparing the annual budget and submitting the same to the Board in a timely fashion before the commencement of the fiscal year.
- f. Preparing the Annual Report, listing what has been accomplished in the previous year and including performance indicators for the following year. The Report shall be submitted to the Board of directors at least one month before commencement of the new fiscal year.
- g. Monitoring the progress of work in the Scheme's facilities and submitting periodic reports to the Board in a timely fashion.
- h. Submitting to the Board recommendations for the appointment and promotion of the Scheme's employees in accordance with the regulations issued by the Board.
- i. Disciplining of employees and transferring them in accordance with regulations issued by the Board.
- j. Ruling on grievances submitted by employees in accordance with applicable by-laws.
- k. The General Manager may delegate any of his powers to any of his assistants.

Chapter Four

Ownership of Hawashas, Irrigation and Drainage

Ownership of Hawashas

16. (1) All hawashas allocated to the farmers in the Scheme prior to the issuance of this Act shall be considered as though they had been allocated pursuant to the provisions of this Act.
(2) The government shall take the following necessary measures:

- a. Farmers, holding land in freehold, to whom hawashas are allocated under such ownership, shall be allowed to have such hawashas registered in their names as freehold in the Directorate of Land Registration.
- b. Farmers who have not been allocated any hawashas during distribution and who have surplus land according to para (a), their land title shall be transferred to the Scheme and they shall be fairly compensated thereof.
- c. The rest of the farmers who do not have freehold hawashas in the Scheme shall have the hawashas they currently possess registered in their names as leasehold for a period of ninety nine years.

(3) The new owners of the Hawashas shall pay charges to be determined by the Board in return for the freehold title registration.

(4) The Board shall have the right to issue regulations governing optimal utilization of hawashas in accordance with public agricultural policies, as well as other regulations necessary for implementation of technical controls for owners.

(5) Utilization of the Hawashas shall be governed by the following conditions:

- a. Using Hawashas strictly for agricultural purposes.
- b. No fragmentation of landholding.
- c. Sale or transfer of ownership shall be governed by the right of acquisition by pre-emption.

Disposing of Hawashas

17. (1) Subject to para. (5) C of Article 16, a farmer may dispose of his hawasha by sale, mortgage or assignment in accordance with directions set by the Board.
- (2) The Board shall have the right to determine the minimum size for ownership of hawasha.

Irrigation and Drainage

18. (1) The Ministry of Irrigation and Water Resources shall be responsible for operation and management of the primary irrigation and drainage canals and pumps in the Scheme, and for providing sufficient water for water users' associations at the mouth of the respective field canals, and the Ministry of Finance and National Economy shall be responsible for financing maintenance, rehabilitation and operations of water canals in return for water charges to ensure provision of such services.
- (2) Water users' associations shall maintain, operate and manage field canals and internal drainage.
- (3) All irrigation operations for any part within the Scheme command area shall have to be approved by the Board.

Water Users' Associations

19. (a) Water users' associations shall be established under supervision of the Board at the Scheme level. They shall be legal entities representing the farmers' self-management system. They shall also undertake actual responsibilities in managing water uses through entering into a contract with the Ministry of Irrigation and Water Resources in the area of supply of water and technical consultation.

(b) The Ministry of Irrigation and Water Resources shall establish a separate department for Gezira Scheme irrigation.

Chapter Five
Financial Provisions
Vesting of Assets and Rights

20. (1) To the Scheme shall be vested with:
- a. All assets and rights that had been transferred to Gezira Scheme pursuant to Gezira Scheme Act 1984.
 - b. All debts and liabilities due from Gezira Scheme pursuant to Gezira Scheme Act 1984.
- (2) a. The assets, rights, debts and liabilities that have been transferred to the Scheme shall be assessed pursuant to Item (1) above, and the net assessed value shall be entered in the records of the Scheme.
- b. The Board may take any measures necessary for privatization of the cost centers.

Capital of the Scheme

21. The capital of the Scheme shall consist of the following:
- a. Accruals to the Scheme pursuant to the provisions of Article (20) of this Act.
 - b. Allocations earmarked by the State for the Scheme.
 - c. Funds and charges earned by the Scheme as a result of its activities or in return for services provided and privileges and exemptions granted to it.
 - d. Grants and technical assistance accepted by the Board of Directors.
 - e. Any other legitimate resources approved by the Board of directors.

Utilization of Scheme Resources

22. The Scheme financial resources shall be used to achieve its objectives. Without prejudice to the above, these financial resources shall be used as follows:
- a. Managing the Scheme and executing its activities, plans and programs.
 - b. Paying the Scheme's financial obligations.
 - c. Defraying the Scheme's expenses, including depreciation and replacement.
 - d. Paying employees' salaries, wages, bonuses, benefits and allowances and retirement benefits as well as remunerations to Board chairman and members.

Budget of the Scheme

23. (1) The Scheme shall have a separate operating budget prepared according to sound accounting principles issued by the Board of directors.
- (2) The General Manager shall prepare the development and rehabilitation budget and forward the same to the Board of directors for discussion and approval. He shall then submit the same to the Ministry of Finance to attain respective support for the budget's various components, including irrigation, research and technology support under the mandate given to the Board of Directors.
- (3) The Board of Directors shall approve the draft annual budget.
- (4) Surplus budget shall be used to develop and improve the Scheme.

Opening Bank Accounts and Maintaining Asset Records

24. a. The Board shall select the banks where the Scheme's bank accounts shall be opened in local and foreign currencies.
b. The General Manager shall determine the persons authorized to handle those accounts.
c. The Scheme shall maintain a regular record of fixed assets, which shall be audited annually.

Depreciation and Replacement Account

25. (1) The Scheme shall maintain a separate account for depreciation and replacement. It shall only be used for the purposes specified therein.
(2) The Board may write off the value of obsolete assets by subtracting the items so designated from the depreciation and replacement account.

Accounts and Audit

26. (1) The Scheme shall maintain proper and accurate accounts in accordance with proper accounting principles.
(2) The Auditor General or any auditor(s) approved by the Auditor General shall audit the Scheme's accounts at the end of each fiscal year.

Balance Sheet and Statements

27. The General Manager shall submit to the Board within three months from the close of the fiscal year a final account statement and the auditor's report on the Scheme's accounts.

Chapter Six **Transitional Provisions**

28. (1) The Scheme's workers shall continue to carry out their mission until the job structure is approved and the terms of their services and employment are determined.
(2) The cost centers at the Scheme shall continue to operate until they are privatized.
(3) Farmers shall continue to hold Hawashas in the Scheme when this Act is adopted until the provisions specified in Article (16) hereof are implemented.
(4) Responsibility for field canals shall be passed, after rehabilitation, to the water users' associations.

Chapter Seven **Final Provisions** **Primacy of the Provisions of this Act**

29. In case of contradictions with any other law, the provisions of this Act shall prevail to the extent that such contradiction is removed.

Authority to Issue Regulations

30. The Board of directors may issue necessary bi-laws and regulations to implement the provisions of this Act.

IN WITNESS WHEREOF, the National Council has hereby passed “GEZIRA SCHEME ACT of 2005” in its meeting No. (18) of its 9th session dated 16 Jumada Al-Awal 1426 H. corresponding to June 22, 2005.

Ahmed Ibrahim El-Tahir
Speaker of the National Council

This Act was assented to by the President of the Republic on 6 July 2005.