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Empowering the rural poor under volatile policy environments in the Near East and North Africa Region

Case study **Sudan**

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Empowering the Rural Poor under Volatile Policy Environments in the Near East and North Africa Region Research Project

Sudan Case Study

Final Report
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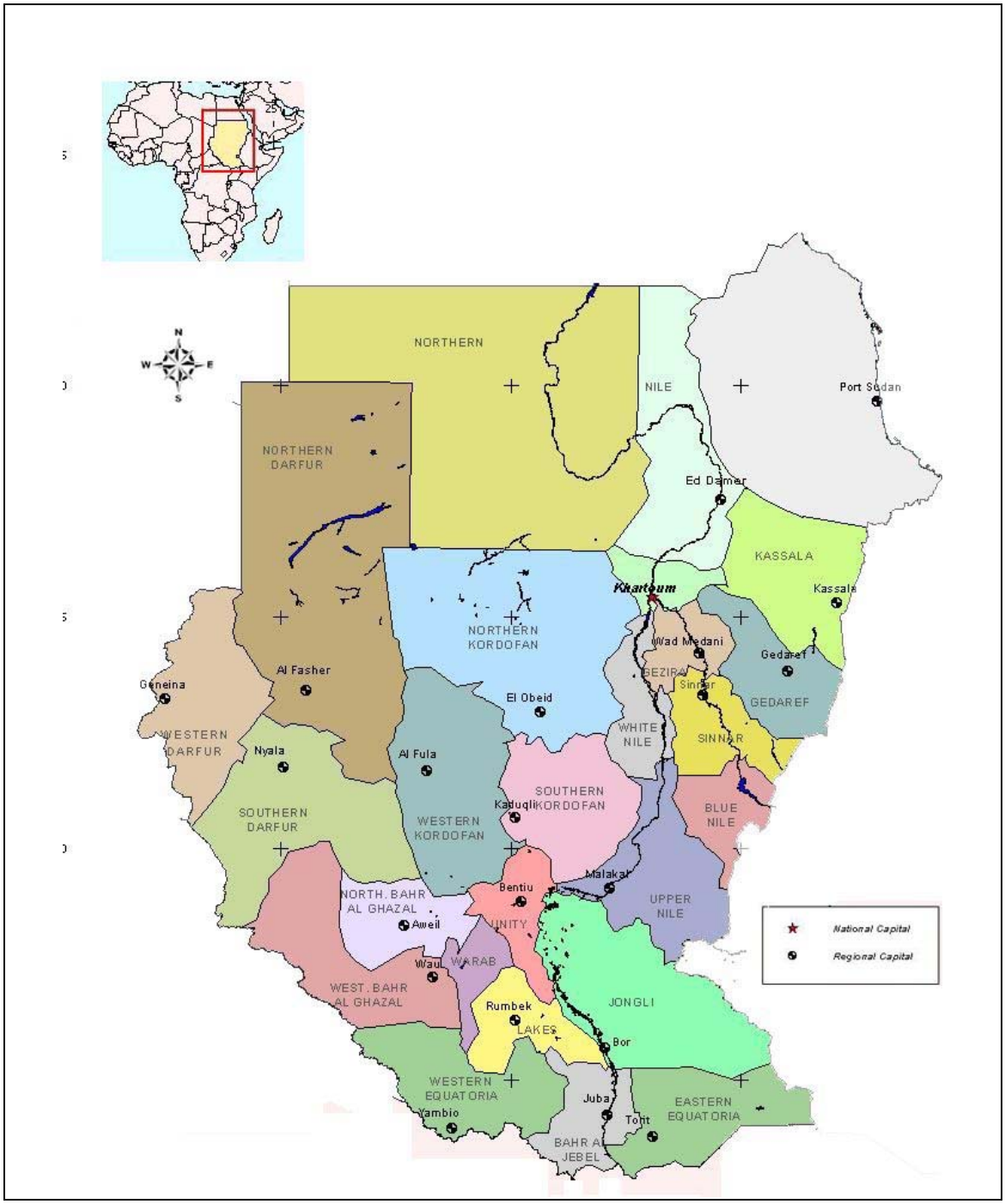
Map 1: Sudan State Boundaries



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Abbreviations and Acronyms

ABS	Agricultural Bank of Sudan
AHA	Animal Health Administration (MAAWI)
ARC	Agricultural Research Corporation
ARD	Animal Resource Department
CCI	Community Capability Index
CPA	Comprehensive Peace Agreement
EU	European Union
FAO	Food and Agricultural Organization of the United Nations
GOS	Government of Sudan
FNC	Forestry National Corporation
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IMF	International Monetary Fund
LGA	Local Government Administration
MAARI	Ministry of Agriculture, Animal Resources and Irrigation
MAAWI	Ministry of Agriculture, Animal Wealth and Irrigation (State)
MARF	Federal Ministry of Animal Resources and Fisheries
MFC	Mechanized Farming Corporation
MEAPP	Ministry of Engineering Affairs and Physical Planning (State)
MOAF	Federal Ministry of Agriculture and Forestry
MOFMP	Ministry of Finance and Manpower (State)
MOFNE	Federal Ministry of Finance and National Economy
MOIWR	Federal Ministry of Irrigation and Water Resources
NA	Native Administration
NGO	Non-Governmental Organization
NKRDP	North Kordofan Rural Development Project
NRM	Natural Resources Management
RBC	Resource-based Conflict
RCC	Revolutionary Command Council
SANU	Sudan African National Union
SKRDP	South Kordofan Rural Development Programme
SPLA	Sudan Peoples' Liberation Army
SPLM	Sudan Peoples' Liberation Movement
SKRDP	Southern Kordofan Rural Development Project
SSF	State Support Fund
SSLM	Southern Sudan Liberation Movement
SWC	State Water Cooperation
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
WADA	Women in Agricultural Development Administration (MOAF)
WSRMP	Western Sudan Resources Management Programme

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Empowering the Rural Poor under Volatile Policy Environments in the Near East and North Africa Region Research Project

Sudan Case Study

I. INTRODUCTION: THE GOVERNANCE OF NATURAL RESOURCES

How to empower the rural poor to get out of poverty? Projects aimed at improving the situation of the rural poor sometimes fail not because they were poorly designed, but because the economic and policy environment in which they were initiated changes in unpredictable ways. In the Near East and North Africa Region (NENA), policy and economic reforms including sector and structural adjustment programs aimed at economic liberalization, privatization of public assets and decentralization, have been proceeding in fits and starts. This has created a volatile policy environment, making it difficult for development institutions to design effective programs.

Recognizing this situation, the International Fund for Agricultural Development (IFAD) has funded a three-year IFPRI study to examine how to create local institutions that empower the poor and give them the flexibility to adjust to an evolving and unstable policy and economic environment.

This research is a study on the governance of natural resources. It focuses on policies aimed at devolving the responsibility for natural resource management from the national governments to territorial communities at the local level. Since governance is the process of decision making and implementation, an analysis of governance necessarily focuses on the formal and informal actors, as well as structures involved in this process. To this effect the research addresses the following issues:

1. How are community capabilities for self-governance of natural resources acquired?
2. How are policies made and enforced?
3. What institutional and policy factors enable and disable the rural poor?
4. What are the pathways towards an improved governance of natural resources?

The search for improved governance regimes is not about change of political regimes or systems. It is about institutional changes that are feasible within a given political structure. Changes in governance structures for natural resource management (NRM) are obtained by changing the current rules of the game, i.e. by reorienting institutional incentives towards enhanced cooperation among stakeholders. Re-designing institutions requires crafting agreements between mutually recognized parties at different levels and scales. Viable

institutional arrangements are those that minimize the cost of reaching and enforcing agreements and adapting them to a continuously changing environment[1].

Agreements can be reached in different ways. They can be imposed more or less violently or enforced relatively peacefully under a social and political order that is strong enough to enforce them. This research demonstrated that in Sudan natural resources cannot be managed this way in a sustainable manner on a large scale. At the other spectrum of action, we find self-governance processes by which the most directly concerned parties reach an agreement through a negotiation process. Theoretical literature on collective action identifies the conditions under which such a process can take place. This research contributes to this debate by measuring community capabilities and identifying their determining factors. A third way of reaching agreements is through a facilitation process by which a third party, not directly involved and perceived as neutral, facilitates and supports a negotiation approach between the parties.

Both direct and assisted negotiations between the parties require a reciprocal recognition of the other interlocutor and/or of its representatives. There are many possible impediments to recognition of these representatives. Lack of self-identification of specific groups, in particular the most destitute ones, unwillingness of dominant groups to recognize the others, low levels of mutual trust, fragmentation of stakeholders' constituency between various organizations, weak organizational capabilities, unclear or limited representative mandates, as well as unsolicited external interference with the representative designation process are examples of such difficulties. The availability of viable, representative grass roots organizations cannot be taken for granted and the accreditation of representatives requires time and resources. Invariably, those groups who have the highest organizational capabilities end-up by being able to shape public policies and programs to their advantage. Developmental programs that place the equity issue high on their agenda, must therefore concentrate on the conditions that would create a more even playfield level. For these programs, increased capabilities are a key to enabling the poor to act as agents of change both at individual and group levels.

The research is conducted simultaneously by three country research teams in Morocco, Sudan and Tunisia with the methodological and material support of the joint IFPRI and IFAD research project. The Sudan case study was launched in a programming workshop that took place in Khartoum in May 2004 during which the conceptual framework of the research was discussed and the research agenda adapted to the Sudanese and Kordofan contexts. As a result, three research modules were identified, namely: community capabilities assessment; analysis of the volatility of policy processes; and an analysis of natural resource based conflicts.

The study area is presented in Chapter 2. Chapter 3 analyzes the evolution of state policies since independence with particular reference to decentralization and natural resource policies. Chapter 4 addresses the issue of policy volatility by analyzing the responses of a sample of prominent policy-makers and well informed observers of the Sudanese policy arena. The analysis of conflicts about natural resources among user communities and also between these communities and the state is conducted in Chapter 5. Both chapters reveal the importance of governance as major contributor to instability and insecurity of policies and property rights

[1] Provisions regarding the mechanisms of monitoring, enforcement and change of the original agreement form part of the deal and greatly influence both the nature of the agreement and the level of commitment to its covenants.

and its tremendous impact on the livelihoods of the most vulnerable people. Chapter 6 introduces a new tool developed by the research team for the measurement of community capabilities for self governance of natural resources and applies it to describe the distribution patterns of community capabilities in Kordofan. Chapter 7 tests the robustness of these measurements and explores more in depth the constitutive dimensions of community capabilities and their determining factors – economic, economic, ecological and/or institutional. The concluding chapter makes a synthesis of the previous findings and describes the main features of the disabling institutional and policy environment that shape the governance of natural resources. This framework is then used to put forward a series of recommendations that would help lift the identified institutional constraints and highlights their implications for future development strategies and programs.

II. OVERVIEW OF SUDAN AND OF THE STUDY AREA

A. General notes on the Sudan: territory, population, and the agricultural sector

Sudan is the largest country in Africa, covering an area of about 2.4 million $km^{2.}$ It lies between latitudes 4^{o} and 22^{o} North and longitudes 24^{o} and 38^{o} East. Its territory borders with several countries, namely Egypt, Libya, Chad, the Democratic Republic of Congo, the Central African Republic, Kenya, Eritrea, and Ethiopia. On its eastern side the country is surrounded by the Red Sea. The river Nile crosses its central-eastern part from south to north.

The population of Sudan is estimated to be between 32 and 34 million, some 70% of whom live in rural areas. The average annual population growth rate is 2.6%, but the rate varies significantly among different regions, as well as between urban and rural areas. Despite the prevalence of rural population, most of the country is sparsely populated, with the exception of riparian areas where most large urban centers (including the capital) are located. Many rural communities live in relative isolation or in remote areas, and despite recent changes this situation is likely to persist into the near future due to difficult environmental and climatic conditions prevailing in many rural areas, coupled with the poor state of rural transportation infrastructure. Urbanization has been a growing phenomenon over the past couple of decades, partly due to labor migration and partly due to population displacement resulting from the recently concluded civil war between the Southern rebels and the Federal Government. Recurrence of severe droughts and environmental degradation in western and northern Sudan have also caused population movement from rural to urban areas particularly during the 1980s and 1990s. In very recent times, some reverse movement from urban to rural areas has taken place, partly as a result of the recent Comprehensive Peace Agreement; however, this phenomenon is not statistically significant.

Despite its rich endowment in natural resources, poverty is a widespread problem in Sudan, particularly in rural areas in the West, East, and South of the country, where the economy relies on subsistence agriculture and traditional pastoralism. Besides environmental and economic factors, a protracted civil war has affected poverty significantly in these areas, where violence and insecurity have led to the serious deterioration of social services, infrastructure, and market networks. Poverty is present both in terms of insufficient economic resources and income (average per capita income is only US$ 310 per year) and is a factor in weak human development. In the 2004 Human Development Index of the United Nations Development Programme (a composite index measuring quality of life and social services), Sudan ranked only 141^{st} among 177 countries and 59^{th} out of 95 countries on the Human Poverty Index. Nevertheless, there has been steady improvement in these indices over the past fifteen years.

Map 2: Country Map

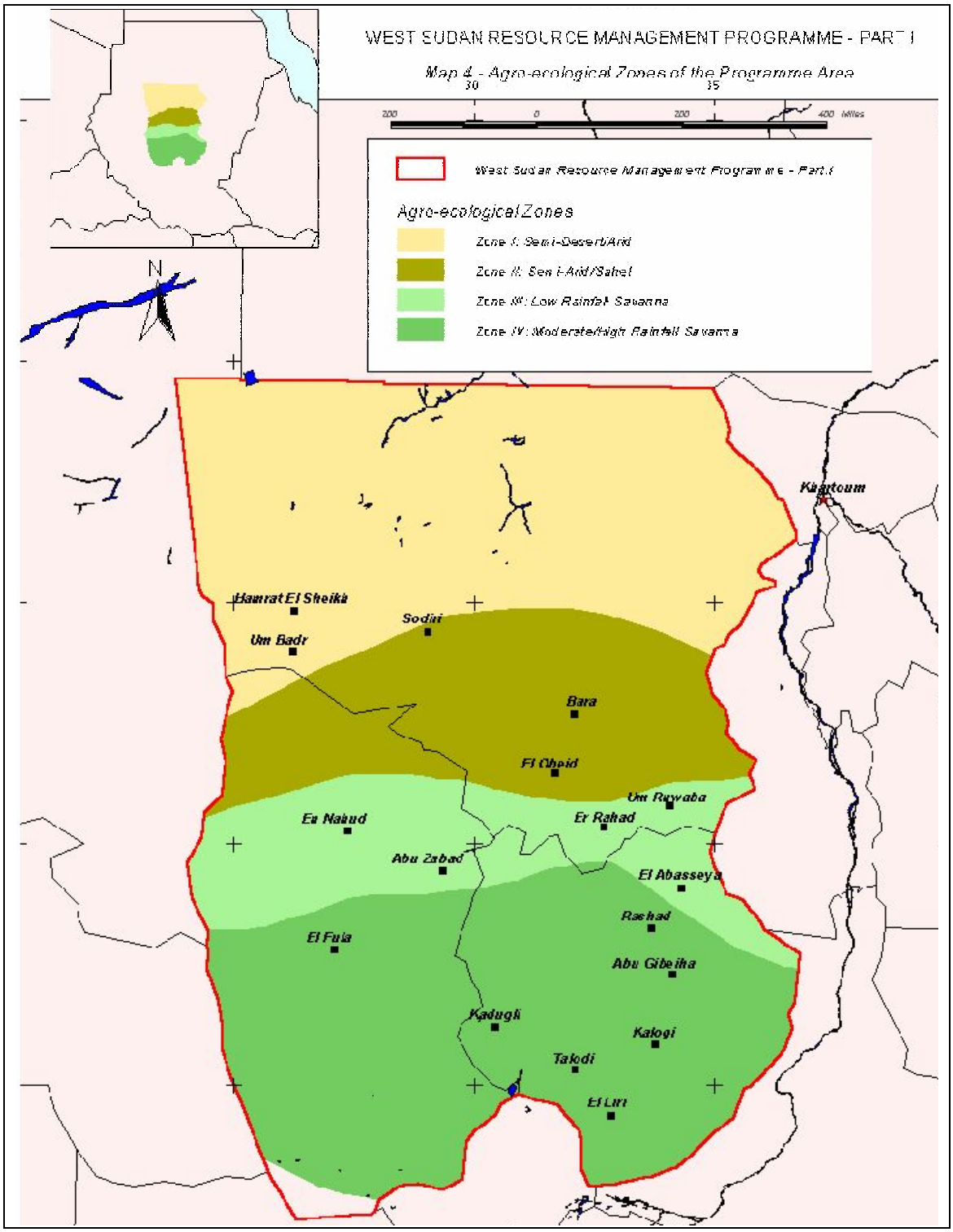
Source: IFAD Appraisal Report, Western Sudan Resource Management Programme, 2004.

Arable land suitable for agriculture in Sudan is estimated at 86 million ha, of which only 16.8 million ha (20%) are currently under cultivation. Rangeland and forest resources are estimated at 117.6 million ha, while reserved forest lands amount to 9.2 million ha; 10.5 million ha are allotted for game reserves. Sudan's water resources are also substantial, although rainfall is limited, ranging between 0 mm in the north and up to 1500 mm in the southernmost parts. One main source of water is the river Nile, of which Sudan benefits along with other countries. In particular, the 1959 Nile Water Agreement between Egypt and Sudan sets Sudan's share from the Nile water at 20.5 billion m^3 per year. Seasonal rivers and streams also supply about 7.0 billion m^3 of water per year, while underground water basins store some 40 billion m^3 with an annual recharge of 4.0 billion m^3. Despite the relative abundance of such sources, significant parts of the Sudanese territory are poor in water sources and therefore vulnerable to droughts. Finally, the national animal stock is estimated at over 120 million heads (47 million animal units) of cattle, sheep, goats and camels, while poultry stocks are estimated at about 40 million. Fresh and marine waters provide about 150,000 tons of fish annually. The country is also endowed with a diverse wildlife, including many species of animals.

Since 1991 Sudan has had a federal government system, which divides the country into states and localities, each of which in turn comprises various rural administrative units. Each state is headed by a governor (Wali) who is assisted by five ministers and is nominated by the President from among a number of candidates recommended by the State legislature. State legislatures (or "state assemblies") in turn include both elected deputies and deputies nominated by the ruling party and by the President in consultation with the state governor. Below the state level, each locality is headed by a Commissioner and by a steering committee made up of appointed members. Under the terms of the current Comprehensive Peace Agreement (CPA), this institutional and administrative set up will evolve in the near future in the direction of a democratization of government at all levels, as well as in the direction of more power-sharing between different levels of government. Furthermore, the CPA envisions an interim phase during which areas formerly under the control of Southern rebel forces (notably the Sudan People's Liberation Movement) will constitute an autonomous unit under the name of Government of South Sudan.

The Sudanese economy has traditionally depended primarily on the agricultural sector, which accounted for as much as 41.9% of GDP in 1996. In recent years this share has decreased by 5-10 percentage points, partly as a result of the growth of other sectors, notably the oil sector. The sector employs some 75% of the labor force, and about 60% of the population depends on agriculture for their livelihood, and the agricultural sector employs some 75% of the labor force. Farming and livestock production are also key from the point of view of food security and of foreign exchange reserves, as they provide most of the country's food needs as well as over 90% of non-oil exports (notably cotton, livestock, and Gum arabic). Moreover, the agricultural sector provides about 50% of the raw materials used by Sudanese manufactures.

Map 3: Agro-ecological Zones



Source: Dr. A. Merzouk, Environmental Assessment Study for the Western Sudan Resource Management Programme , Kordofan States – March 2004, IFAD

The cultivable land is mostly under rain-fed agriculture (15.1 million ha), while only about 1.7 million ha is under irrigation. Four main agricultural systems exist in the country, namely:

1. Irrigated schemes on the Blue Nile and its tributaries (1.7 million ha).
2. Mechanized rain-fed (5.0 million ha) and pump-irrigated schemes (0.2-0.3 million ha, mainly located along the Nile and White Nile).
3. Traditional rain-fed agricultural sector (9.9 million ha).
4. Pastoral and agro-pastoral production systems.

Besides representing different livelihood strategies and forms of natural resource use, these agricultural systems also correspond to different forms and degrees of rural poverty. In irrigated farming areas, the poor are generally those who have insecure land tenure, poor access to markets, and are small holders. Moreover, in these areas poverty tends to be associated with poor maintenance of physical infrastructure, poor water governance, and inefficient mechanisms for water pricing. In traditional rain-fed farming, tenure insecurity tends to be a less significant factor in determining access to land, for access to land and tenure is diversified and individual ownership prevails. In these areas the main causes of poverty tend to be access to water, competition among resource users, environmental degradation, and pest outbreaks.

Traditionally, the Federal Government in Sudan has invested mostly in the irrigated and mechanized rain-fed farming sectors, rather than developing traditional forms of farming and livestock production. Moreover, in 2002 it formulated a 25-year strategy for the agricultural sector with the following objectives:

1. To achieve food security through the steady production of adequate quantities of healthy, nutritious, and affordable food to satisfy the needs of the majority of the population. In particular to attain self-sufficiency in the production of grains and establishing a strategic reserve of food to last up to two years to bridge the food gap.
2. To promote exports by increasing agricultural productivity and enhancing the quality of crops and livestock.
3. To develop natural resources and rationalize their use.
4. To reduce poverty by creating employment opportunities, raising the standard of living, and capitalizing on the comparative advantages of different states.
5. To link the agricultural sector with pre-production sectors (e.g. land preparation and input supply), as well as post-production sectors (e.g. product preparation, storage, processing, distribution, and marketing).

In addition to these general objectives and emphasizing the importance of investing more systematically in research and extension services, the policy also states specific objectives for various sectors, namely:

a. To initially reduce, then halt, and finally reverse the environmental degradation of natural resources that results from current malpractices. This objective is expected to be achieved first of all through a national land use plan that sets aside 25% of the national land for use as range and forests. Secondly, natural resources will be protected from natural and man-made factors of degradation, such as fires, overgrazing, unauthorized hunting and tree cutting, chemical pollution, desertification, gully erosion, and cultivation on marginal lands. The third crucial areas of action are environmental education and awareness raising.

b. To increase the storage capacity of structures on the Nile and on its tributaries, enhance water utilization from seasonal streams and wadis, expand the use of ground water and water harvesting, provide clean potable water for humans and animals, and adopting more efficient irrigation technologies.
c. To increase field crops increasing the irrigated area beyond the present 4 million ha, and of that under rain-fed agriculture to over 21 million ha. This horizontal expansion is to be accompanied by vertical expansion, i.e., by increasing the yield per hectare of cultivated land.
d. To promote a competitive livestock production sector that can meet the requirements of national, regional and international markets. In particular, the objective is to guarantee an equitable distribution of investment opportunities in various states, so as to reduce rural-urban migration and to stabilize the social and demographic situation of rural areas. Essentially, the strategy aims to make Sudan an international centre for the production and marketing of high quality, healthy, and organic meat, with a focus on cattle, camel, and sheep production. The development of poultry production and of the fishing sector is also regarded as important in mitigating poverty and malnutrition. Thereby local consumption of red meat would be replaced as much as possible with poultry and fish consumption, and red meat production for export markets would be increased.

B. Overview of the study area

The study area covers the region of Greater Kordofan, which encompasses the two states of North and South Kordofan (a third state, namely West Kordofan, existed until recently, but its territory has been divided between North and South Kordofan with the Comprehensive Peace Agreement signed by SPLM and Government of Sudan on January 9, 2005). The territory of the region covers approximately 380,552 km^2, and it lies between latitudes 10^o 15'-14^o 30' N and longitudes 29^o 15' – 32^o 30' E in Central-Western Sudan.

The state of North Kordofan is located southwest of Khartoum, almost in the center of the country; it covers an area of 221,900 km^2. The state of South Kordofan covers an area of approximately 158,355 km^2, most of which has been affected by insecurity due to the civil war between the Federal Government and Southern rebels since the mid-1980s. The security situation of the state has improved during the past couple of years, particularly thanks to the recently concluded peace negotiations that have marked the end of the war with the Comprehensive Peace Agreement (31 December 2004). However, the negative impact of the war is still visible, particularly in the region's social fabric but also in its economy and environment. Outstanding problems linked at least in part to the war include high rates of out-migration and population displacement, a relatively high number of female-headed households, and breakdown of physical and social infrastructure.

Administratively, North Kordofan is divided into 17 localities and 5 provinces (Sheikhan, Bara, Um Rowaba, Sodari and Gebret el Sheikh). South Kordofan includes 16 localities and 5 governorates (Abou Jubaiha, Al-Rashad, Dilling, Kadugli and Taloudy).

According to a recent Appraisal Report for the IFAD-co-funded Western Sudan Resource Management Programme, the region of Greater Kordofan contains five main ecological zones. Moving from North to South, these include:

- desert (30% of the territory);

- arid to semi-arid (25% of the territory);
- semi-arid Sahel-savannah transition zone (10% of the territory);
- low-rainfall or dry savannah (15% of the territory);
- wet savannah (15% of the territory).

The climate ranges from that of a desert in the north of the region to semi-humid in large parts of South Kordofan. Temperatures range from 42°C maximum to 24°C minimum in May and 31°C maximum and 13°C minimum in January. Rainfall is highly seasonal. Yearly rainfall averages from over 750 mm in parts of the south to less than 200 mm in the north. The area is also characterized by relatively strong winds and by frequent droughts. In the past couple of decades the average number of droughts in northern areas has increased to three years out of ten, while in the high-rainfall areas in the South, where the average is one year every ten.

From the point of view of its morphology, the study area is composed of flat or undulating plains, interspersed with isolated ranges of rocky hills in the southern and central areas. Desert areas in the north of the region are characterized by extended sand dunes running from north to south.

Three main types of soil prevail in Kordofan, namely:

1- *vertisols*, or heavy cracking clay soils. These have a high potential for cultivation, as they are rich in minerals, but are difficult to work with traditional farming implements due to their hardness. This kind of soil covers in particular large areas of South Kordofan.
2- *gardoud* soils. These are non-cracking clay soils, which are also fertile and have good moisture-holding capacity.
3- *qoz*, or sandy soils. This type of soil characterizes most of North Kordofan and the northern parts of South Kordofan, and it is also suitable for certain kinds of traditional agriculture.

Vegetation is mostly typical of the sub-Sahelian savannah, and includes various types of trees, notably of the acacia species, as well as shrubs and annual grasses. The tree legumes are important to a variety of forms of rural livelihoods as sources of browse, fuel wood, building materials and gums. Other trees also yield edible fruits, which are usually collected by women (who are also mainly responsible for fuel collection). The range resource base is mostly used for grazing by transhumant or sedentary pastoralists.

There are no perennial watercourses in the Kordofan region. Torrential rainfall runoff however forms ephemeral streams that originate in the hills and flow for a short period during the rainy season. In addition, there are natural depressions that provide permanent water sources in the south. An important source of water both for human consumption and for livestock production are man-made ponds (*hafirs)* that are used to store water from ephemeral streams and/or rainfall overland runoff. Most *hafirs* were constructed more than 20 years ago, and due to high rates of evapo-transpiration and seepage they hold water only for a limited period in the dry season. At present, many *hafirs* have lost their water-holding capacity because of silting, and many have also suffered from failed maintenance, pollution, or other damage due to the war or to local resource-based conflicts, notably conflicts between pastoralist and farming groups.

Groundwater is an important source of water supply. Four main geological formations provide aquifers in the study area. Basement complex rock underlies a large part of the south and provides low yielding aquifers that are tapped mainly by traditional wells and tube wells for hand pumps for potable water supply. Recent sediment formations along the ephemeral streams provide shallow aquifers used for human and livestock consumption, as well as to irrigate small horticultural plots. The shallow Bara aquifer is also used for human consumption and to a limited extent for irrigation. It is underlain by a deep aquifer located some 300-500m below the surface, whose water reserves are estimated to be large. Finally, the Baggara basin provides a deep, high-yielding aquifer that is used for water yards in the west of the study area.

The population of Greater Kordofan is approximately 3.9 million, with an annual growth rate of 1.6%. Around 1.5 million of these live in North Kordofan, while an estimated 1.1 million live in South Kordofan (UN Population Fund & Central Bureau of Statistics; Sudan), and the rest in the former state of West Kordofan. The estimated annual population growth rate is around 1.6%. Around 47% of the population is under the age of 15 and 4% is over the age of 60. Women constitute about 53% of the population overall, but there are considerable differences among different parts of the region because of the effects of civil strife and displacement and other social phenomena such as out-migration. Average household size is estimated at 5.5 persons, but actual figures range widely between nomadic and semi-nomadic communities, where household size tends to be larger than the average, and settled communities, where it tends to be smaller.

Poverty is widespread in the rural areas, and primarily linked to the erratic pattern of yields in traditional rain-fed farming, as well as to insecurity of tenure or access to farmland, rangeland, and/or rural markets. Poverty rates average 65.6% in the entire region, but there are significant differences between North Kordofan (where the average is about 59%) and South Kordofan (where it is around 75%).[2] These figures however refer to the time prior to the dissolution of the West Kordofan state, whose absorption into South and North Kordofan is likely to have brought their respective averages somewhat closer to each other. From the point of view of human development indicators, about 48% of men and 71% of women were illiterate at the time of the latest census (which was conducted in 1993). Moreover, around 30% of the rural population in the region does not have access to health services, and about half of them do not have access to sanitation and safe water. Life expectancy at birth is around 52 years for men and 56 years for women. The main causes of death among children under the age of five are pneumonia (26%), malaria (21%), diarrhea (9%) and malnutrition (7%).

The rural population represents about 75% of the population of the region, corresponding to about 2.9 million persons. The majority, about 80%, are sedentary agro-pastoral farmers, while 13% are nomadic or semi-nomadic pastoralists and agro-pastoralists, and 7% are non-farmers. As for secondary occupations, about 40% are traders, 46% laborers, 4% teachers and 9% government employees. The main source of income for 62% of the population is crop

[2] In particular, the already mentioned IFAD report notes that local communities tend to rank themselves as more or less poor based on the following criteria: food self-sufficiency, ownership of land, livestock, and off-farm enterprises, access to potable water, and type of off-farm labor of household members. Based on these criteria, the rural population of Kordofan includes households living at different levels of poverty, from destitute households lacking assets and labor force (20-30% of the population) to asset-poor households with an insufficient labor force (30-45% of the population), to less poor (26%) or even wealthy households (from zero percent in South Kordofan to 20% in North Kordofan).

production, while livestock production is the main occupation for 33%. The average size of land holding per household is about 30 ha, while land under actual use is about 11 ha or 37% of the region.

As already noted, the majority of rural households in the study area depend to varying degrees on crop production. The average size of cultivated areas depends on the climatic zones and ranges from less than four feddans in the sub-humid zone to more than 50 feddans on sandy soils in the arid zone. Male migration in search of off-farm employment in urban areas is also a common strategy to overcome food shortages and low income in poor rural households. As a result, a substantial number of households engaging in subsistence farming and livestock production are female-headed. These are generally smaller and poorer than male-headed households.

The main types of livelihood systems are nomadic and semi-nomadic pastoralism, sedentary agro-pastoralism, and horticulture. Most consist of subsistence farming, the exception being horticulture, which is market-driven to varying degrees. Within these main categories of livelihood, there are sub-categories that vary depending on the characteristics of different agro-ecological zones as well as of different tribal groups.

a. *Nomadic Pastoralism.* This type of livelihood is characteristic of two main groups, namely:

    1. The *Abbala* nomads, who include a number of tribes that raise camels and/or sheep and do not significantly engage in crop production. Their livelihood system is based on seasonal mobility, following a pattern of movement from north to south during the dry season, i.e. from November to May. Many of these groups however maintain bases in their homelands or areas of origin, generally in North Kordofan, and only some members may actually engage in seasonal movement.
    2. The *Baggara* nomads, who are principally cattle herders and move into the central areas from the south in the wet season, i.e. from July to October, returning then to southern and western Kordofan during the dry season. Some of these groups move along routes that go further south into Bahr Al Arab, and even into the Upper Nile and Bahr Al Ghazal States in Southern Sudan. Their main source of livelihood also comes from livestock production, though they also engage in crop production.

b. Agro-pastoralism

This type of livelihood system can be divided into sub-systems, depending on type of land and degree of rainfall in different areas.

1. The northern arid zone produces staple crops like grains (notably millet) and cash crops and water crops, such as watermelon. Livestock production consists of camels and goats.
2. In the semi-arid zone, where clay and qoz soils are located, agro-pastoralism may take different forms. In general, crop production consists of millet and sorghum as staple grains and of watermelon, sesame, karkade, groundnut and cowpea as cash crops. Livestock production consists of goats, cattle and sheep, and it often targets export markets like Saudi Arabia and other Gulf states.

3. Agro-pastoralism in the dry savannah and wet savannah is characterized by crop production based on sorghum as a staple grain and sesame as a cash crop. Livestock production consists of cattle and goats (non-Muslim communities living in these areas, notably around the Nuba mountains, also raise pigs).

   In addition to these specific features, all agro-pastoral areas are characterized by house gardens, where women cultivate early-maturing grains, pulses, and vegetables, both for household consumption and as cash crops for local markets.

c. Horticulture

In the north, horticulture is practiced on gardoud and sandy soils, and the main crops are market vegetables such as tomatoes, peppers, and onions. Farmers also grow fodder crops (millet, sorghum or berseem) for their livestock. Fruit trees, such as mangoes and citrus, are grown in the south, mostly near watercourses where groundwater is available at shallow depth.

d. Forestry

In general, many rural communities depend to varying degrees on forests for fuel wood, building materials, edible fruits, and livestock browse. In some areas, however, access to forests constitutes not only a complement to people's main livelihood, but also a primary component of their livelihood. In particular, the cultivation or harvesting of Gum arabic trees (*Acacia senegal*) and luban trees has traditionally been an important source of income for some groups of rural poor, and in recent years a growing market for fuelwood has also increased the economic significance of wood collection and tree felling.

Social relations in different livelihood systems vary to some extent. In general, however, rural society is organized around economic, tribal, and gender lines. In relation to gender, in particular, it should be noted that until recently men dominated decision making in all public settings in the region, even with respect to women's issues. Women thus had a weak presence, though they enjoyed and cultivated important social networks, notably through saving and credit groups. Moreover, women have traditionally featured prominently in the rural economy by playing key roles in crop production (notably, but not exclusively, in home-gardens and on their own farming plots), livestock production (notably near homesteads), local marketing, and water and fuel collection. At present, decisions affecting communities as a whole still tend to be made by male elders; however women are acquiring a more public voice, particularly as a result of their inclusion in village committees involved in donor-sponsored development projects.

III. GOVERNANCE OF NATURAL RESOURCE IN THE SUDAN: A HISTORICAL REVIEW OF KEY INSTITUTIONS

This chapter gives a succinct overview of the governance framework of natural resource management in Sudan in general and in Kordofan in particular, with a focus on formal and informal institutions that affect natural resources supporting the livelihood of the rural poor, namely farmland, rangeland, forests, and water. Another key natural resource, namely oil, is also worthy of mention, since oil-related policies have a significant impact on the livelihood of some poor rural communities, notably because oil investments and oil-related infrastructure often threaten their access to land and water. Nonetheless, the focus of the overview will be on policies and institutions that target resources of primary necessity for the livelihood of the rural poor, and place such policies within the framework of Sudanese political history.[3]

The goal of this overview is twofold: first, it aims to lay out the key aspects of the natural resource policy environment in Sudan in a diachronic fashion, highlighting in the process its problematic and volatile aspects. Secondly, it intends to look at this environment from a perspective that takes into consideration the role played by natural resource policies in the process of elite-driven state-building. This serves to pave the way for the subsequent discussion of the political and socio-economic "rationale" behind policy volatility and resource-based conflict in Sudan, especially in Kordofan. Neither policy volatility nor resource-based conflict can be understood in isolation from the interplay of political, social, economic, and environmental factors that govern natural resource policies and non-state institutions in rural areas that may be deteriorating or in the process of evolving. In other words, such volatility or conflicts around natural resources that are key to rural livelihoods can be understood without reference to the historical unfolding of a particular governance environment that is characteristic of Sudanese politics in general, and of the domain of management in particular. The main features of this environment are as follows:

1. *A constant interplay of (broad-based) developmental and (narrow) patron-client rationales behind natural resource policies*: At least since the 1970s, the Government of Sudan has adopted policies to strengthen the hold onto power of certain social groups, and to relatively insulate the state financially and politically from broad sectors of society, notably the rural poor. Such policies have by and large been adopted in a top-down fashion, with little or no consultation of primary stakeholders, such as local communities (whether settled or nomadic). Indeed, their primary objectives have not been the promotion of the welfare of local communities and the social, economic, and environmental sustainability of their livelihood systems. On the contrary, partly as a reflection of the relatively narrow, generally non-rural social base of the various governments that have ruled Sudan since independence, they have often fostered patron-client ties between ruling elites and private interest groups, notably urban traders and investors, civil servants, and the army.

2. *A hesitant and partial process of de-concentration/decentralization of natural resource management*: Recent policy developments suggest that there is a decided orientation towards decentralization in government plans for Sudan's future development. This is not an entirely

[3] See in this regard the "Policy chronology" table in the Annex, where major political events are listed side by side with major policy decisions.

new phenomenon, since the Native Administration system already represented an early initiative of decentralization of natural-resource-related authority and responsibilities. However, after the weakening and quasi-demise of Native Administration during the early post-independent years, a novel process of decentralization has taken place in recent decades. This process consisted mainly of the creation of a series of local institutions with relatively unclear or overlapping authorities, which were often linked to the Central Government by patron-client ties and, unlike Native Administration, rarely penetrated effectively into the social and economic fabric of the countryside. Even today, local government agencies rarely reflect their constituencies or local livelihood systems, and are generally little responsive and accountable to local resource users. This partly stems from certain decisions of the Federal Government, which often hesitated to proceed to a robust devolution of authority to the states and localities, despite the federalist orientation of the current government and the provisions of the 1998 Constitution.

3. *Weak capacity of the natural resource governance institutions*: Partly as a result of the above, but also due to misguided fiscal policies undercutting their capacity, state-level and local formal institutions often suffer from understaffing, lack of information, narrow technical focus, and inability to sort through conflicting policies and legislation concerning natural resources. These problems are not limited to state and local agencies and institutions, but these are particularly affected because of their lack of political and financial autonomy, the deteriorating quality of civil service notably outside the capital city, and the low human, technical, and enforcement capacity of local government agencies.

This broad picture can be illustrated by two main components of natural resource governance in Sudan, namely its legislative and administrative/political basis, with cross-cutting attention to the issue of decentralization of natural resource management.

A. The legislative basis of natural resource governance

The legal framework governing access to natural resources is crucial not only for natural resource management, but also to the determination of the respective entitlements of different resource users and their capabilities to access resources that are important to their livelihood systems. These entitlements and the degree to which they can be upheld vis-à-vis formal institutions are important to prevent, contain, or resolve potential conflict among different stakeholders – individuals or groups, local or non-local resource users, and the state. Similar to most other post-colonial states, in Sudan the legal framework governing the access and use of natural resources has evolved largely against the background of pre-existing norms. Some of these took the form of colonial legislation, while others, i.e. those that are most relevant for rural areas in non-riverian Sudan, were mainly based on custom. Though these may have been formally recognized or integrated into some kind of formal body of laws at some point, as in the case of Native Administration, were in practice mostly upheld by social consensus within individual communities and larger social formations (e.g. tribes) and in their interactions, including conflict situations.

In sum, independent Sudan confronted from the very beginning a situation of institutional/legislative dualism with respect to natural resources, in that state elites, aiming to build a unified system of natural resource legislation, were almost inevitably bound to take decisions defining access and user rights that would alter established equilibriums, violate existing entitlements, and possibly pave the way for unprecedented forms of competition

within and among communities. To paraphrase Paul de Wit, the problem that Sudan faced was not only one of "legislative dualism," but also one of actual or potential conflict between stakeholders whose interests were catered to either by norms of customary "legitimacy" (e.g. holders of communal tenure rights) or by those of formal "legality" (notably private land owners and the state). In such a situation, people's perception of what was rightfully theirs ran the risk of not only remaining distinct from the letter of state law in areas so far ruled by customary institutions, but also of entering into open conflict with the holders of entitlements sanctioned by state law, including the state itself.[4] This problem was compounded by the fact that, unlike colonial powers, post-independence elites faced the challenge of regulating natural resource entitlements in such a way as to make legitimacy and legality coincide not merely for the sake of institutional uniformity, but rather as a precondition for a "modern," development-oriented and well-integrated system of natural resource access and use. At least according to the stated intentions of successive governments, including the current one, this system would enable the Sudanese economy to stand, as it were, on its own feet both internationally and domestically, bringing even rural areas so far characterized by traditional, subsistence-oriented livelihood into the mainstream of modernization and socio-economic growth.

Given the challenge of legal/institutional natural resource dualism, the development of a unified legal framework for land tenure has perhaps been the most complex domain of natural resource legislation and governance in Sudan so far. This is partly because land is vital for a variety of livelihood systems in rural areas, and partly because already prior to independence there existed a relatively well-developed and semi- codified system of land ownership and user rights. During the colonial period this system was rather effective and enabled the preservation of relatively stable, largely "traditional" and subsistence-oriented livelihood systems in rural areas that were not involved in the colonial cotton production enterprises. Colonial authorities had a vested interest in maintaining a dual policy system concerning land tenure, whereby the government would directly control land located in riverian and Northern Sudan and would only codify and discipline customary practices in other rural areas, thereby consolidating tenure and use patterns that had been previously negotiated with great fluidity by tribal leaders, notably sheikhs, nazirs, and 'umdas (or mandoubs).

The cornerstone of colonial legislation concerning land tenure were two documents: the first was the 1899 Title to Land Act, which recognized private property in the cultivated areas of extreme north and central riverian Sudan, and disregarded the situation of land tenure in the rest of the country. The second document was the 1925 Land Settlement and Registration Act, which defined criteria for land registration and declared that all land not claimed for registration was to be considered as government property. To this effect, section (c) of the document stated that: "All waste, forest, and unoccupied land shall be deemed to be the property of the Government until the contrary is proved." Most of the land of Sudan was thus effectively declared to be government property. In practice the Act was essentially meant to affirm government claims to urban and agricultural land around the Nile and in the north of the country. Communities holding customary rights to land were, however, given a chance to register such rights, whether as individuals or as villages and even tribes. In this respect, the Act simultaneously affirmed government entitlements over "unoccupied" land and the desire of colonial authorities to give legal basis to the possibility of codifying customary entitlements, so long as these could be demonstrated in "visible" ways, such as through

[4] Paul de Wit, "Legality and Legitimacy: A Study on Access to Land, Pasture, and Water," Draft study prepared for the IGAD Partner Forum Group, June 2001.

continuous cultivation, infrastructural investments, or continued occupation. In practice, few communities and tribes were able to take advantage of this opportunity to "demonstrate" their land entitlements, partly due to lack of information about the legislative process and of mechanisms by which registration was possible, and partly due to the difficulty of demonstrating entitlements for communities that often practiced mobile forms of land use, as in the case not only of pastoralist groups but also of farmers practicing shifting cultivation. Hence, the 1925 Act, together with the 1899 Act, did not formally recognize customary land rights, but was most important in that it formed the legal basis for subsequent claims by the state that the government could "own" all Sudanese land not registered as private property. However, the primacy of government entitlements was not limited to land; with the 1932 Central Forest Act and the 1933 Royalties Act it extended to forests, in order to facilitate the government's access to wood to fuel a functional transportation system (including a railway and steam ferry boats) for extractive industries and exports.

After independence, the primacy of state entitlements vis-à-vis natural resources (notably land) was included in several legislations so that a process of state building could be carried out together with building a modern development-oriented national economy. The most important and perhaps the best-known among such legislation is the 1970 Unregistered Lands Act, which declared that all unregistered land in all regions of Sudan was to be state property, which the government could dispose as it saw fit. The Act aimed to facilitate Nimeiri's plan to boost the production of food crops through a massive reorganization of the agricultural sector, so as to turn the country into the "bread basket of the Arab world," notably of food-dependent Gulf countries that were benefiting from the oil boom of 1973. Despite progressively abandoning his "socialist" orientation and turning towards a relatively market-driven politics and to the Islamic *shari'ah* as a key institutional referent, this policy lasted more or less through Nimeiri's rule. It resulted from a number of factors including pressure from the World Bank and USAID. In line with contemporary thinking on development, these agencies encouraged Sudan to undertake ambitious programs of technological transformation in the agricultural sector, including large-scale investments in irrigated areas and the introduction of extensive mechanization in rain-fed areas, such as Kordofan. Such programs required the Government of Sudan to radically transform the existing patterns of tenure and resource use particularly in rain-fed areas, i.e. in most of Sudan's farming territories away from the Nile. These areas were until then mostly characterized by a combination of rain-fed subsistence farming and pastoralism, and had been based on customary institutions, such as communal holdings, shifting cultivation, and land allocation in the form of usufruct by village sheikhs, rather than on property rights, which were allocated by tribal authorities to a hierarchy of users, beginning with entire tribes (most of which had their own consensually recognized homeland, or *Dar*) and reaching down to local communities. Such arrangements were generally functional to a subsistence economy in a changing and often unfriendly environment, thanks to the adaptability of user patterns that recognized the need for mobility and were mindful of the complementary needs of herding and farming groups. Moreover, particularly since the codification of some customary institutions in Native Administration under the British rule, such arrangements had proven rather effective in preventing and managing potential conflicts among resource users. However, they could hardly be regarded as being capable to sustain an organized, large-scale effort to exploit natural resources through modern technologies for increased food production, nor did they stabilize tenure sufficiently to encourage the necessary investment in land resources to achieve that goal. Consequently, government elites were able to deploy a discourse of development and "public interest" to justify their introduction of legislation that confirmed pre-existing laws from the

colonial period (notably the two Acts mentioned above), and led to the legitimization of state takeover of land in areas held under customary arrangements.

The 1970 Act granted no transitional period during which customary stakeholders could register their land entitlements under the 1925 Act. On the contrary, its section 7.1 stipulated that all registration processes pending completion at the time of the Act would cease upon its becoming effective. Furthermore, the Act did not provide any compensation for customary title-bearers, nor did it provide any legal basis to support their claim that they should be regarded as legitimate stakeholders in any future agricultural projects that the government may undertake on land they had thus far been occupying and/or using. On the contrary, the Act authorized the state to use a "moderate degree of force" if customary users needed to be evicted from unregistered land, as was sometimes the case in areas taken over by the state to establish mechanized rain-fed schemes. Thus, the Act was more disempowering than any piece of colonial land legislation for stakeholders whose entitlement to land was not formally registered or could not be so because of overly complicated and lengthy registration procedures, poor dissemination of information and awareness, and the sheer difficulty of translating complex usufruct arrangements into exclusive property rights. Hence, the 1970 Act empowered the state, at least formally, to take control over land in rain-fed areas, and the state indeed proceeded to do so wherever it found environmental conditions favorable to the establishment of mechanized farming schemes (e.g. in Southern Kordofan). Although most of the population did not look upon the state as the legitimate owner of unregistered land , the Act has very significant effects, since during the same period the state proceeded to abolish Native Administration and to strip tribal and customary authorities of their functions concerning allocation and management of natural resources and management of potential conflict among resource users, both within individual communities and at the level of inter-group and even inter-tribal relations.

In its early years the "bread basket policy" had allocated land to the Khartoum supporters of the government. But the policy was a failure for the process of agricultural transformation, since the early 1980s brought the oil crisis and in 1983-84 there was the Sahelian drought. As a result the Government of Sudan introduced significant legislative changes, the major one being the turn to the Islamic *shari'ah* as the basis of state legislation.[5] This turn is considered as being one of the key factors behind the resumption of a civil war that was to last for over two decades, pitting an increasingly Islamist federal government against rebel groups, notably the Sudan People's Liberation Army, representing a mostly non-Muslim Southern population. Regarding natural resources, one of the last initiatives of the Nimeiri government, which ended in 1985, was the 1983 Act attempted to reinstate Native Administration to regulate relations among resource users and prevent or manage small-scale disputes over natural resources. A particularly significant piece of legislation in this regard is the 1983 Civil Transaction Act. It was subsequently amended in 1990 under the Al-Bashir government. The Act reaffirmed that the state is the legal owner of all non-registered land. It acknowledged, at least in theory, the value of customary usufruct rights and re-opened the possibility of registering these rights, as British rule attempted to do in 1925. Perhaps most important of all, the Act formally recognized the status of registered usufruct rights as having

[5] Note that although this turn became apparent only in 1983, when the *shari'ah* was formally adopted as the basis of Sudanese legislation, the political and ideological process that led to this decision started in the mid-1970s, possibly under the influence of the oil-producing countries, notably Saudi Arabia, that were the intended market for the bread-basket policy. The ideological influence of Saudi politics over Sudanese politics continued through the 1980s and 1990s, though with significant discontinuities between successive Sudanese governments.

comparable legal weight comparable to that of ownership rights proper. This was a particular key provision for the vast majority of resource users in rain-fed areas, given that the customary system of land tenure, and indeed the whole customary system of natural resource management, largely rested on relatively flexible relations between users and resources, as well as on the possibility that customary authorities may revoke individual or household entitlements under certain conditions. Reasserting that the state was not only the pre-eminent owner but also the highest manager of Sudanese land constituted the Act's dominant feature and confirmed that the state was legally entrusted with assets and responsibilities for which it lacked the legitimacy to bear effectively. Despite being formally superseded by the new Act, the by-rules of the 1970 Act by and large continued to be applied by courts even after 1983, resulting in procedural confusion.

In addition to affirming the land rights of the central government and thereby enabling it to maintain a practice of allocating land to private investors in mechanized rain-fed schemes, the 1983 Act also attempted to provide a legal framework to regulate access to pastureland, despite the state's general preference for development strategies focused on farming. In its section 565, it stated that although the state could place restrictions on grazing in any particular circumstance, fallow land in general should be considered as pastureland, and the state could allocate further land to pastoral communities for grazing if so needed. Moreover, the Act made it possible to register pastureland as a communal holding, rather than an individual one, and thereby acknowledged the prevalence of communal modes of access to natural resources among pastoralists. Unfortunately, as in 1925, pastoral groups rarely took up the opportunity to register communal entitlements, for there were a variety of practical obstacles, including bureaucratic constraints and insufficient information. This failure to seize the opportunity had lasting consequences, since in the following decades the state made no significant efforts to regulate and even to acknowledge the specific needs of pastoral groups vis-à-vis land resources, even the droughts of the 1980s and the resumption of fighting between government and Southern rebels placed unprecedented stress on the livelihood systems of pastoralist communities particularly in Western Sudan. Indeed, despite great changes in the natural and social bases of both sedentary and nomadic livelihood systems in many parts of the country during the 1980s and 1990s, enacting laws did not form part of a comprehensive policy on pastoralism and its role in the economy of changing rural eco-systems. Rather this remained until 2002 the prerogative of local councils in collaboration with tribal authorities.

The 1996 Range Protection and Pasture Resources Development Bill was the first attempt of the state to come to terms with this changing reality and with the growing vulnerability of traditional rural livelihoods, notably subsistence pastoralism. The bill was enacted at a time when the current government's interest in decentralization initiatives was growing. It attempted to define different types of pastureland and pasture management. Moreover, it also proposed some form of popular participation in resource management, which would give the management of pastoral reserves to communities under the supervision of the Range and Pasture Departments at the state level. But the Bill was not ratified, and it was only in 2002 that the Government of Sudan passed a Forest and Renewable Natural Resources Bill, which addressed the key question of how to prevent conflicts between pastoralist groups and other stakeholders in forest management. For this purpose it laid out a system of sanctions and enforcement mechanisms to ensure sustainable practices in the use of forest resources. Though recognizing the grazing and passage rights of pastoralists, at least in principle, the Bill subjected the rights to the discretionary power of Forestry Corporation authorities. In so doing it ostensibly aimed at sustainability and environmental conservation. However, given

the particular set-up and political and economic clientele of the Forestry Corporation, it ended up being perceived by pastoralists in affected areas as an instrument to affirm the rights of sedentary communities, including gum arabic tree owners, over their own, which limited its popular legitimacy and also the success of its enforcement mechanisms. Indeed, many saw the Bill as a confirmation of an apparent preference of the federal government for supporting sedentary livelihoods over mobile or semi-mobile livelihoods. Whether or not this holds for all of Sudan is debatable, especially considering the important role that the livestock sector has played in Sudanese exports during certain periods of its history, particularly during the 1990s. Whatever the case, several efforts to establish sustainable mechanisms to harmonize different livelihood systems have been made at the state level, particularly in areas, such as Kordofan, where pastoralism represents an important component of the rural economy. In these areas, state legislation has sometimes made a clear effort to integrate elements from customary institutions into formal regulations and management institutions, so as to accommodate the peculiar forms of resource access and systems of entitlements that characterize mobile and semi-mobile pastoralism. In the past few years, state authorities in Greater Kordofan have issued a number of state laws to organize the management of farm and pasture lands. For instance, the North Kordofan state issued a Law of Stock Routes in 1999 (amended in 2003) and the South Kordofan state issued a Law Organizing Agriculture and Pastoralism in 2002. Laws define stock routes, lay out the respective duties and responsibilities of farmers and pastoralists, and establish penalties for trespassing or for committing other violations, such as stealing animals or polluting water points. However, neither law has been adequately enforced so far, due partly to the lack of clear enforcement mechanisms and partly to the lack of adequate investment by the state in water points, adequate grazing land, markets, and veterinary services along the newly demarcated stock routes. As a result, since such routes do not correspond to the needs and preferences of farmers and pastoralists, and given the current environmental conditions, the pastoralists have little incentive to follow the proposed routes.

In addition, the poor legislative framework of water governance, particularly in rural areas, reflects the weakness of formal governance institutions concerning both farm-based and pastoral livelihood systems. Actually this legislative framework is quite clear, not unlike the framework of land legislation based on the overarching notion of state property over non-registered land. In fact, according to the 1998 Constitution, all surface and subterranean resources, including water, are a public good, whose utilization must be regulated and managed by the Federal Government and used by citizens in conformity with government laws. The legislative cornerstone of water governance is, however, the 1995 Water Resources Act, which affirmed government ownership and regulatory rights over groundwater and entrusted the federal Ministry of Irrigation with the responsibility to oversee national water resources, and state governors with that over state resources. The 1996 State Water Corporation Act regulated the management of water resources at the state level with the Ministry of Irrigation delegating de facto responsibility to State Ministries of Engineering Affairs. State Water Corporations, set up under the 1996 Act, are responsible for policy setting, planning, use and development of water establishments, setting tariffs, and generally all management initiatives concerning groundwater (including that which is formally national property, given the lack of a clear definition of boundaries between state and interstate waters). However, the authority of these corporations often overlaps with that of localities and provinces. For instance, the 2002 Local Government Act empowered localities to manage the development of local water resources; specific laws and agreements also exist at the regional level to control water usage and protection. There are also duplications of

responsibilities at the higher level, e.g. between the Higher Council for Environmental and Natural Resources and the National Council for Water Resources.

In planning water management, a National Water Policy was formulated in 2000 with a view to improving water governance through devolution of water management responsibilities via a series of principles including subsidiarity, a demand-driven approach to water development, participation of all stakeholders in water management, and efficient and transparent institutional arrangements. Such policy, however, has not yet been translated into a unified legislative framework that may facilitate coordination among the various agencies that have responsibility over water resources, and ideally also grant a voice to local stakeholders in the definition of appropriate legislation. Conversely, in the realm of environmental conservation the Environmental Health Act of 1975, repeated in 1997, addresses in a comprehensive way environmental problems that may affect natural resources including water. However, local and state-level agencies entrusted with environmental assessments and conservation rarely work in consultation with groundwater authorities or include groundwater specialists. Moreover, despite the 2002 Regulations for the Protection of the Environment in the Petroleum Industry, oil drilling is conducted without competent supervision or involvement of groundwater authorities. In practice this amounts to a weak, fragmented legislative and policy framework for water governance, which does not provide a solid basis for the organization of viable livelihood systems among various resource users in rural areas.

In sum, while a variety of laws and regulations have been passed both by the federal state and by regional states to regulate natural resource management, many of them suffer from weaknesses that make them precarious foundations for sustainable resource use, and sometimes even competition among users. In particular:

1. Post-independence legislation has affirmed a system of rights and management mechanisms vis-à-vis natural resources based on state ownership and on the almost exclusive value of registered property as the normative modality of access to resources, notably land. This weakened the entitlements of a large number of stakeholders whose access to natural resources, traditionally based on unregistered entitlements and non-exclusive property, was transformed into one of negotiated, flexible (at times mobile) individual usufruct and of various forms of communal tenure. Moreover, in some cases the legal affirmation of a particular system of rights enabled the state to distribute access rights to groups other than traditional stakeholder. Examples in this regard include urban merchants and civil servants gaining lease-holding rights over mechanized farming schemes particularly in the 1970s and 1980s, and oil investors gaining similar rights in more recent times.

2. Despite its affirmation of the primary (and in many areas *de facto* exclusive) rights of the state over natural resources, existing legislation does not reflect the state's actual ability to access and manage such resources in a viable, effective, or equitable way. In part this is a problem of incomplete or slow development of certain government institutions pertaining to natural resource management. In part, however, it is also a problem of crisis in development, in that the state's recourse to ownership claims over natural resources in support of particular development policies (notably the bread-basket policy and the more recent food security policy) has often supported patterns of resource management without heeding the socio-economic needs and potential of local resource users, including the needs and potential of rural markets. Finally, legislation has formally invested a range of state actors with overlapping or conflicting responsibilities for defining and implementing by-laws, regulations, and management mechanisms, thereby creating an inefficient and sometimes

overly bureaucratic institutional environment for resource management. The result of these combined factors has been wastage of resources, weakening of local and customary management capacity, and inefficient and inequitable natural resource use notably in rain-fed areas.

3. Existing legislation has generally undermined or openly delegitimized the authority of "traditional" institutions for the management of natural resources and of resource conflict, notably the *Dar* system and Native Administration. It also has not established clear references for conflict management, nor is it easily accessible by local stakeholders in need of arbitration. The recurrence of duplications, conflicting responsibilities, and lack of clarity in existing legislation has created a legal system that is liable to political manipulation. As a result, local stakeholders often regard the establishment of patron-client relations with the ruling Party or with urban merchant elites as the only way to have access to the legal and judicial systems. When that is not possible, the occurrence of competition or incidents at the local level can easily escalate into conflict or link up with broader existing conflicts.

B. The administrative and political basis of governance

Similar to the case of its legislative, in Sudan, the administrative and political aspects of natural resource governance is characterized by two contradictory tendencies, namely that of affirming the control of the central state over resources while at the same time diversifying and multiplying agencies and institutions entrusted with practical responsibilities for resource management. As noted above, this phenomenon is not novel in Sudan, where colonial administration had also attempted to centralize political authority while nurturing local administration mechanisms that would enable the government to control a very large territory without being directly present in peripheral areas. This phenomenon has remained typical of the Sudanese state up until efforts were made to promote devolution of authority, which has important implications for natural resource management. Hence, a brief historical overview of the development of governance mechanisms and state administration from the colonial period to recent times is useful to understand the current processes that underlie policy volatility and resource-based conflicts.

Native Administration and customary authorities from the colonial time until today

As stated earlier, the creation of Native Administration resulted from the colonial state's the desire to assert authority over vast parts of rural Sudan where it had neither the ability nor the strategic incentive to establish a direct presence. Hence the frequent contention that NA was merely an indigenous ("native") veneer by the colonial authorities. Indeed, Native Administration initially focused on nomadic communities; it was subsequently followed by similar legislation that extended it to sedentary communities all over rural Sudan. The most comprehensive legal sanction of the system came with the 1932 Native Administration Ordinance that recognized tribal authorities as part of Native Administration and granted them formal judicial powers to manage natural resources and conflicts through a parallel court system.

Its setup varied somewhat from area to area, but Native Administration essentially consisted of a series of local and regional authorities linked to tribal groups, with some variations in names and responsibilities depending upon whether they were sedentary or nomadic (or semi-

nomadic). In general, its main figures included the *sheikh* at the level of villages or small nomadic units, the '*omda* or *mandoub* at the level of a group of villages, tribal clans, or large encampments, and the *nazir* at the head of the tribe. All these figures were generally chosen based on tribal norms that predated the constitution of Native Administration. These norms were hereditary transmission and consensus among tribal elders. Colonial authorities intervened in some cases to support the appointment of one or the other figure, particularly to positions of intermediate authority, such as that of the '*omda;* however, in general Native Administration authorities followed local norms of allegiance and relatively stable lines of tribal power.

The responsibilities of Native Administration during the colonial period coincided partly with those of tribal institutions up until that period. [6] These had traditionally included the negotiation of stock routes, passing and grazing rights, and farming and grazing calendars among sedentary and nomadic groups, support to allied tribes in conflict situations, and resolution of disputes both within and among tribes. All this was done on a relatively unstable, constantly negotiated basis during the pre-colonial period and resulted, among other things, in frequent occurrence of conflicts among tribes. Under colonial authority the exercise of the authority of Native Administration became more stable. With the relatively stable definition of the contours of various tribal homelands, or *Dars*, as well as of main stock routes, the territorial definition of the National Authority system became clearer. Moreover NA authorities also took on the role of tax collectors, which made them into agents of the state and part of its formal system for resource extraction. A certain percentage of collected taxes were kept by Native Administration itself and provided it with some financial autonomy to be able to perform its functions.

Native Administration managed resources on the basis of a customary system that evolved through many centuries of negotiation and adaptation, particularly during the time of the Islamic Kingdoms that preceded colonial domination. This system devoted much attention to the flexible definition of patterns of use and access rights to natural resources. Since traditional farming in many parts of Sudan is based on shifting cultivation and since pastoralist groups need to move across large expanses of territory, depending on the type of livestock they raise and on changing environmental and climatic conditions, negotiations were on different forms of mobility locally as well as on significant distances. Hence, management of mobility was the key element in the management of resources.

At the village level, customary arrangements upheld by Native Administration today give the *sheikh* the leading role in managing land resources among farmers. The *sheikh* also has the power to distribute land for temporary settlement to outsiders, who cannot settle in a village without his permission and without paying him a percentage of their farm yield (usually one tenth). The *sheikh* also manages communal grazing by the members of small units of pastoralist herders; however, grazing agreements are made at the higher level of tribal *nazirs.*[7] At the level of the *Dar*, population changes resulting from resettlement of groups from other territories must also be negotiated with the relevant *nazir*, and newly settled groups must comply with the customary norms of the *Dar* in which they settle. In particular, these can set up villages and choose their own *sheikhs*, but must remain under the authority of local *'omdas*. With respect to the relations among farmers and pastoralists, the latter can graze their animals both in pastureland and on crop stubbles during specific times, depending

[6] Ahmad Adam Youssef, "Al-'Idarah al-Ahliyyah: Dawruha wa Taf'iluha wa Tatwiruha," unpublished paper presented at a "Workshop on Darfur," Khartoum, Qa'at al-Sadaqah, 29-30 November 2004.

[7] In the original National Administration system this required formal acknowledgement by the state.

Unlike the formal judicial system, on the calendar of cultivation as well as on the alternation of rainy and dry seasons. While moving along stock routes from their dry and rainy season sites, pastoralists cannot encroach on farmland, and conversely farming is not allowed along and within stock routes, as well as in designated resting and watering areas.

No doubt, such norms were often violated either willingly or by accident both during the pre-colonial times and under Native Administration, and they continue to be today. However, many of the tribal and Native Administration institutions that were set up to manage possible conflicts with a series of prevention, arbitration, and punishment mechanisms, remain today, at least potentially. The legal instruments that were available to Native Administration for resource management included annually issued Local Orders that set the calendar and direction of pastoral movements, as well as the latest date of harvest after which pastoralists were free to enter the cultivated areas to graze on crop stubs. Moreover, the settled leaders of Native Administration had the authority to open and close water points to influence the timing and path of nomads' movement in order to prevent conflict in situations of environmental or social fragility. Native Adminstration authorities, such as the *mandoub* (similar to the *'omda*) had the responsibility to plan seasonal movements of the pastoralists by evaluating the availability of forage and water among a previously defined route, so as to prevent problems and, if necessary, adjust movement patterns to avoid conflict. At the local level, examples of conflict prevention mechanisms from the Sudanese Baggara pastoralists include the construction and management of livestock enclosures, or *zara'ib al-khadar*, where stray animals that have caused damage to farmland can be confiscated by a *mudir* until they are reclaimed by their owners or otherwise sold at an auction. If the owners do reclaim their livestock, they must pay the cost of both temporary stabling of their animals in the *zariba* and of the arbitration that the *mudir* offers between them and the owners of the damaged fields[8].

Native Administration authorities had various instruments to manage conflicts and resolve them. They confiscate the arms of tribe members, patrolled grazing areas to resolve small-scale conflicts on the spot, and offered arbitration at various levels, based on the principle of subsidiarity[9]. In case the conflict escalated to the level of whole tribes, frequently tribal conferences (*Zufur*) were organized to negotiate agreements on resource access among tribal groups and to settle outstanding disputes requiring arbitration, blood compensation, and so forth. They served to reestablish trust and a sense of equity, which provided an incentive for people to abide by negotiated rules and avoid a perpetuation of tensions and cycles of revenge and counter-revenge over various grazing seasons. Similarly, conflict management and resolution at lower levels within and between tribal groups aimed mainly to maintain social trust and confidence in the validity of norms and negotiated agreements.

customary principles upon which conflict management and resolution rested revolved around mediation as an instrument to re-establish social harmony; they did not reflect the desire to

[8] Ulrich Braukaemper, "Management of Conflicts over Pastures and Fields among the Baggara Arabs of the Sudan Belt," *Nomadic Peoples*, Vol. 4, Issue 1, 2000.

[9] Note that conflict resolution mechanisms at different levels of NA hierarchy had different degrees of formal legal recognition. When conflicts took place within the same tribal group the state administration rarely interfered, and customary un-written arrangements and arbitration mechanisms were enough to solve problems. When the intervention of the highest tribal authority, i.e. the *nazir*, was required, state courts may be involved, generally to support the pronouncements of the *Nazir*. The government authorities were and still are frequently involved in inter-tribal conferences either as observers or as sponsors (though they may fail to respect or to give practical support to the resolutions and recommendations issued in these conferences).

establish the truth about a particular incident, to allocate specific responsibilities, or to mete out punishment or compensation somehow "equal" to the damage. This does not mean that fixed norms for punishment and compensation do not exist in customary law. For instance, in case of theft the Baggara leave it up to the local s*heikh* and village elders (or *ajawid*) to fix the adequate compensation (or *gharama*) for the lost asset, which is usually twice its value. More generally the principle that dominates conflict management and resolution in customary law in Sudan is not one of retribution, but rather one of arbitration, mediation, and adjudication. In the words of Adam Azzain Mohamed this often made the role of the tribal and Native Administration institutions one of conflict transformation rather than resolution, whether through inter-tribal conferences (where Native Administration authorities were directly involved) or through local *judiya,* or mediation (where Native Administration authorities may or may not be involved)[10].

According to Mohamed, the *judiya* is a primary mechanism for managing conflict based on the mediating role of volunteers recognized as wise men or elders (*ajawid*) by their community. It can operate at different stages of conflict, from preventing the declaration of hostilities between individuals, families, or larger groups to containing violence once it has begun, to addressing its causes and promoting conflict transformation. Prior to the establishment of Native Administration, the *ajawid* were usually local elders, rather than recognized authorities, and their pronouncements as mediators carried weight mostly out of customary respect for elders. After the establishment of Native Administration, however, its leaders came to be regarded by the state and gradually also by communities as the primary *ajawid*, thus taking on more conflict resolution functions than tribal leaders had in the past. Moreover, after the establishment of Native Courts in the 1930s the role of informal *ajawid* was gradually integrated into their work, hence into an indirect process of state building and administration, without entailing an abandonment of the principle of the *judiya* and of its distinctive character vis-à-vis formal judicial law. Contrary to the latter, the *judiya* did not in fact aim at establishing material evidence, allocating blame, and meting out punishment, but simply facilitated a reconciliation (or *sulh*) even in the absence of material evidence. Such principles were taken up by Native judicial institutions, sometimes with the added element represented by tribal leaders being invited as outside mediators, which generally gave positive results.

The period of Native Administration gave positive results in the performance of inter-tribal dispute management mechanisms in comparison to previous years as well as to the post-independence period. This suggests that the integration of customary norms and tribal authorities into the administrative fabric of the state did not weaken customary institutions, thanks to the state's recognition of the relative autonomy of Native Administration authorities and to its practical – financial, operational, and even military – support of their administrative role. The situation, however, changed greatly with the creation of an independent state in 1956, and particularly with the formal abolition of Native Administration and its re-creation as a hollowed out, politicized system in the 1980s. Nationalist urban elites regarded Native Administration as a tool of colonial domination and as the main cause for the social and economic backwardness of rural Sudan, whose population maintained livelihood systems and forms of socio-political organizations very far from the vision of modernity upheld in particular by the Nimeiri government. Hence customary institutions were weakened.

[10] See Adam Azzain Mohamed, "Al-'Idarah al-Ahliyyah wa Bina' al-Salam al-Ijtima'i bi 'Isharah Khassa 'ila 'Iqlim Darfur." Unpublished paper presented at a "Workshop on Darfur," Qa'at al-Sadaqah, 29-30 November 2004.

Some attempts to do away with Native Administration. But starting with the government that took power after the popular uprising of 1964, the Nimeiri regime repealed the 1932 Native Administration Ordinance in 1970, and a People's Local Courts Act was passed whereby tribal courts were integrated into the formal judicial system as subordinates to the authority of the judiciary. At the same time, the socio-economic basis for the authority of Native Administration and other tribal institutions was also undercut through the 1970 Unregistered Land Act, which declared *de jure* null land tenure arrangements sustaining the *Dar* system, as well as the role of Native Administration authorities in managing resources in this system. The affirmation of exclusive state authority over natural resources and conflict management was not reflective of the state's authority and capacity on land; hence the Native Administration institutions, particularly at the lower levels of its hierarchy, continued to play similar functions after 1970[11]. However, the explicit delegitimization of their authority by the state paved the way for the erosion of Native Administration and tribal institutions, the effects of which are visible today not only in Kordofan but also in neighboring regions such as Darfur. When reinstating the legality of Native Administration in 1987 with the Native Administration Bill, and most importantly with the 1998 Local Government Act that enabled the states to enact National Administration Acts, the federal state did not so much seek to revitalize Native Administration institutions, but rather to turn them into instruments to maintain patron-client ties in rural areas.[12] The result has been a politicization of Native Administration elites (many of them have been urbanized since the 1970s, hence gradually moved from their constituencies both physically and culturally), culminating in the replacement of the *nazirs* with *amirs* under the current government and the redefinition of the boundaries of territories under the authority of these "tribal" authorities, most of whom are actually political appointees chosen on the basis of their loyalty to the ruling party.

This progressive politicization of Native Administration authorities provoked a lasting crisis for customary natural resource and conflict management mechanisms in rural areas, despite the recognition by the 1987 Act that Native Administration should have judicial as well as security powers, at least among pastoral groups. Many groups do not recognize the legitimacy of authorities appointed by the government and are wary of using the modern judicial system, which they view as expensive, lengthy, complicated and biased towards political supporters of the ruling party.[13] However, it is not just the politicization that led to the reduction of the authority of Native Administration leadership. A new educated leadership emerged from the expansion of education in rural communities and many youth got involved in the conflict between North and South, either directly (for instance, as members of militias armed by the state or as SPLA supporters) or indirectly (through the ethnic polarization the conflict gave rise to). The large amounts of weapons carried by individuals in rural communities rendered the keeping of security very difficult and made it easy for disputes to evolve into violent confrontations. The very process of decentralization of authority in certain realms undermined the power of Native Administration. In particular,

[11] Indeed, according to the IFAD Appraisal Report of the Western Sudan Resource Management Programme, the temporary formal delegitimization of the NA by the state from 1970 to 1987 only served most of the rural population to forget the colonial origins of the Administration and turned NA into a "genuine grass roots type of structure well able to be an effective link between the formal modern administrative structure of government, and the more or less isolated local people" (Western Sudan Resource Management Programme, op. cit, Working Paper 6: "Community Development and Extension," p. 2).

[12] Conversely, the 2003 Local Governments Act does not mention Native Administration.

[13] For instance, in the case of Al Gagror in North Kordofan the village community could not afford the expensive lawyer fees, hence has been unable to defend its rights. On another front, the case of Aradyah in North Kordofan shows how adjudication in the absence of deep rooted traditional considerations turned a conflict over land into an ethnic problem (see case studies in appendix).

the creation of Popular Committees to assist local governments resulted in many cases in conflicts and differences between the Committees and the National Administration. This weakened Native Administration and it was not replaced with other effective institutions either at the local level (e.g. the Popular Committees) or at the government level.

Finally, one key factor behind the weakening of Native Administration, and indeed of customary institutions, over the past twenty years is the socio-economic transformation of Sudanese society even in remote rural areas. The combination of environmental changes, including the effects of the droughts in the 1980s, with the growth of local and regional markets, changed the livelihood systems significantly in regions relatively peripheral in the political economy of Sudan, including Western Sudan. In particular, these changes have encouraged growing sedentarization of formerly mobile groups; groups devoted to mobile pastoralism turned to agro-pastoralism, abandoned their various forms of mobility (including shifting cultivation) and settled in communities. Growing demographic pressure and market demand for certain agricultural products (notably horticultural produce) also played a role in encouraging the progressive abandonment of livelihood strategies based on communal tenure and in transforming individual or household-based usufruct rights into private property, particularly in fertile areas of Kordofan as well, as in neighboring Darfur. This combination of socio-economic changes are partly related to the government policy of privatization and market orientation formally declared in 1992, and have been an added factor in the hollowing out of customary institutions governing the livelihood systems based on flexible usufruct rights and relative mobility. Since such changes are likely to continue in the foreseeable future, prospects for the revitalization of the Native Administration mechanisms for natural resource management are limited, but not negligible, as implicitly recognized by the signatories of the 2004 Comprehensive Peace Agreement, which envisions, among other things, some initiatives to revamp customary laws and practices concerning land tenure.

Formal state authorities and the current process of devolution of authority[14]

As has been noted repeatedly, both colonial and post-independence politics in Sudan have been marked by two simultaneous drives, one to centralize authority and control over resources and the other to allocate as much as possible the burden of administrative responsibilities to local institutions. During the colonial period, this led to the creation of the Native Administration and local councils (in the late 1930s) and provinces headed by commissioners (in the early 1950s). All of these served to facilitate the administration of rural Sudan at the minimum possible cost for the central government, building on the local relations of the clientele and ascriptitious affiliation. After independence, a similar policy was pursued, leading to the 1971 People's Government Act, which divided provinces into districts and urban and rural councils endowed with rather weak authority and lacking an organic tie to their respective territorial bases.

The legal foundation for the present federal system lies in the 4th Constitutional Decree of 1991, which established the current system of states (with modifications, such as the

[14] Devolution is here meant as the reallocation of responsibilities and capacity at lower levels of government or to non-state actors, with the understanding that "the devolved unit shall enjoy a substantial amount of autonomy and discretionary powers, both legislative and executive, that enable it to pursue its self-defined objectives for matters that are recognized of its exclusive competency under the control of the people who elect it" (Khalid El-Harizi, *Empowering the Poor under Volatile Policy Environments: Project Report No. 1, "A Model of Empowerment."* Washington, DC: IFPRI, 2003 – p.20).

incorporation of West Kordofan into South and North Kordofan), including their subdivision into provinces and local councils. Article 2 of the 1998 Constitution of Sudan also refers to the country as a federal republic, whose supreme authority lies at the federal level, while states and local governments are entrusted with the government and administration of the law in a way that ensures popular participation and equitable distribution of power and wealth. The system is thus three-tiered – a national government, states, and localities – but ultimate authority rests both formally and financially at the federal level.[15]

At each level of government below the national one, authority is based partly on suffrage and partly on the power of the highest federal authorities to select and appoint candidates. According to the Article 97 of the 1998 Constitution at the state level, legislative authority is held by an assembly that is partly elected, partly nominated by the People's Congress and by the President. Executive authority is held by a governor, or *Wali,* who is chosen from a list of at least six candidates presented to the President of the Republic by a nomination college composed of National Assembly members from the state, members of the state council, and presidents of the local councils. The President of the Republic selects three candidates from the list who then run for election in the state, based on a simple majority system. Hence the *Wali* is formally accountable to the President rather than to state constituencies, though in practice there is much room for discretionary behavior on the part of the *Wali,* as well as of state authorities vis-à-vis the Federal Government.[16] Similarly, in localities there are elected legislative councils, but executive power is held by a Commissioner appointed by the *Wali* in consultation with the President of the Republic, together with a locality steering committee whose members represent National Administration and Village Popular Committees. The Commissioner is formally accountable to the legislature; the latter, however, can recommend his removal from office to the *Wali* with a two thirds majority vote, while removal itself can only be decided by the *Wali* in consultation with the President. Furthermore, administrative responsibility at the locality level is held by an Executive Director appointed by the *Wali* at the Commissioner's recommendation. The state government can also dissolve local councils together with the state legislature, which in turn can veto the councils' decrees within 15 days from the date of their deposit at the state legislature chamber.

This intersection of local and top-down sources of authority of government institutions is particularly evident in the system of financial resource generation and allocation at various levels of government. This is an essential aspect of any governance system, since the source of funding and degree of financial autonomy of any institution inevitably affects not only its capacity to plan and implement its programs but also who the institution will ultimately be accountable to. Literature on the political economy of state-building suggests that

[15] Recently the peace agreement introduced a new level in Southern Sudan, namely the Government of Southern Sudan (GOSS), which stands one level above the states located in the South. The implementation of the Comprehensive Peace Agreement will in time lead to the adoption of a new constitutional structure for the Sudanese federation, which is likely to involve a more robust system of decentralization and the adoption of mechanisms ensuring greater accountability of political institutions.

[16] It should be noted in fact that despite the patron-client relationship that prevails between federal and state-level authorities, and indeed at all levels of government in Sudan including the relationship between state-level and locality authorities, principal-agents problems are also built into these relationships. This is due to the relatively weak capacity of government authorities at various levels to gather and process reliable information about the effectiveness of individual and institutional performance at lower levels of government. This problem mirrors in a way the gap between government assertion of overall control over natural resources and practical inability to manage such resources partly due to lack of knowledge and of knowledge-generation mechanisms to support natural resource management. One of the consequences is that resources channeled by the federal governments to the states in support of specific policies may actually be diverted towards other objectives or wasted in the form of private patron-client rents.

government institutions may be more likely to be held accountable for the extraction of resources from their constituency, contrary to institutions based on rent. This argument is particularly common in the literature on rentier states, namely states whose GDP depends to a significant percentage (usually the agreed upon figure is 40%) on resources whose market value reflects only minimally the result of productive activities. Rents supporting such states may be derived from the extraction of oil or other natural resources (if these are directly owned by the state), but also from money granted to the state by external parties, such as patron states, and any other form of revenue that can be collected directly by the government without taxation. In the case of Sudan, the rentier label can to some extent be applied to the Federal Government in light of the oil sector's significant contribution to the federal budget, but also to individual states in light of their dependence on financial transfers from the federal government.

This is not to say that states do not have the right to extract revenue from their constituencies; on the contrary, states raise certain taxes, stamp duties and other fees and charges, and even localities can raise revenues from livestock taxes, fees and charges. However, the resources that accrue to states through these forms of taxation are far from sufficient to sustain their operations. Moreover, the recent trend has been in the direction of increasing dependence of states on intergovernmental transfers. For instance, excise and sales taxes, which used to be collected by the states, were replaced by a federal value added tax in 2000 (which is to be redistributed among the states by the Federal Government). An agricultural tax, which used to be a major source of revenue for agricultural states, such as those of Greater Kordofan, was abolished by a Presidential Decree in March 2001 and replaced by an intergovernmental transfer by way of vastly insufficient compensation.

Overall, direct income of the states has become smaller and more unpredictable from year to year, while their responsibilities have increased due to the transfer of many services to the state level. As a result, total expenditures of states have remained very low over the last three years, amounting to only 2-3% of GDP as compared to 13.5% for the federal government. In each of these years, actual expenditure of the states has remained about 40% below budgeted expenditure, due to the unavailability of funds to implement planned activities and policies. To make matters worse, an increasing percentage of these expenditures has been on administrative expenses, such as salaries (from 41% in 1999 to 60% in 2002), leaving very limited resources for operational expenses and development activities.[17] Moreover, it is impossible to calculate how much of the amount of resources channeled to states by the Federal Government is actually diverted to other uses, notably rewards given by individual policy-makers at the state level to their clientele, for instance through preferential service contracting than the ones stated in federal and state budgets,. The situation is more critical at the locality level, when even paying staff salaries is often a challenge without state support. Non-federal authorities thus heavily depend on funding channeled through the State Support Fund (SSF), which enables the Federal Government to allocate funds to individual states on terms that many observers regard as highly discretionary, and liable to foster patron-client relations between the ruling party and peripheral elites. Conversely, such dependence does not eliminate an outstanding principal-agent problem,[18] whereby the Federal Government

[17] Source: El Fatih Ali Siddig, Bettina Prato, and Khalid El Harizi, "Managing conflict over natural resources in Greater Kordofan, Sudan." Unpublished working paper, Washington, DC: IFPRI, 2005.

[18] The notion of "principal-agent problems" is used in economic theory as a game-theoretical representation of situations in which there is asymmetric access to information between agents/contractors and principal/employees concerning the outcomes of the agent's performance. In this particular case, the term points to the fact that state-level officials (i.e. government "agents") have a comparative advantage in terms

does not possess sufficient resources to monitor the effectiveness of state and locality government performance in the use of funds channeled through the SSF. As a result, states and localities are either unable or lack incentives to perform effectively and develop a strategic vision for necessary investments in various domains of administration, including natural resource management. Moreover, this system discourages the accountability of state and locality authorities regarding their local constituencies or higher levels of government. Rather, much of the time and energy of state and locality authorities is devoted to cultivating clientele ties with federal elites who spend time in Khartoum and lobby to obtain resources that are needed to keep their administration in operation and to maintain their own clientele at the state and local levels.

This problematic situation has not changed significantly with recent decentralization reforms, such as the most recent Local Government Act, which renamed provinces as localities and former localities as administrative units, reduced the number of localities from 543 to 137, and merged many rural and urban localities, ostensibly to reduce bureaucracy and to improve services in poor areas. In reality, the provisions of this Act have not increased the amount of resources available to localities, nor have they altered the distribution of resources among localities in the direction of greater equity. On the contrary, in newly merged localities the allocation of public resources tends to favor the group that constitutes the majority or has better access to decision-makers (i.e. generally urban groups). The merger has not resulted in a significant reduction in the costs of maintaining bureaucratic machineries at the locality level, because redundant staff has generally been retained.

This situation directly undermines the capacity of government institutions to manage natural resources, particularly because lack of autonomy and of financial and human capacity is compounded by authority overlaps at different levels. As already mentioned, the Federal Government has legal ownership of all unregistered land and other natural resources. However, states also have direct competence over state lands and other natural resources, based on the 2001 Presidential Decree 68, which gave state Ministries of Agriculture, Animal Resources and Irrigation (MAARI) jurisdiction over natural resources. The Constitution stipulates the establishment of councils representing federal and state executive authorities to allocate responsibilities among concurrent powers. However, in relation to assets, such as water, it is not always clear where the dividing lines can be set between the domain of one state and another, or between individual states and the federal state. Moreover, the 2003 Local Government Act also gives localities some responsibilities in natural resource conservation and protection, including improving and demarcating pastoral areas in consultation with concerned authorities, forest protection, and maintenance of water sources in rural areas.

In Kordofan, several agencies are responsible for natural resource management at the state level. For instance, the Ministry of Finance and Manpower is responsible for development planning and fund allocation, as well as supervision of projects funded by international donors. Its financial basis lies primarily in the SSF, though the Ministry can also derive revenue from land sale fees and commodity price differentials. Agencies concerned with environmental and resource protection include the State Ministries of Health, Engineering

of access to information about the outcomes of their own performance, while federal government officials are unable to acquire adequate knowledge about those outcomes. As a result, federal government officials/principals find themselves in a situation in which they must devise appropriate incentives to ensure that state officials/agents act according to their own (i.e. the principals') interests, without thereby having equal access to information about the outcomes of such actions.

Affairs, and the State Water Corporation, along with federal institutions, such as the Higher Council for Environmental and Natural Resources. The Ministry of Agriculture, Animal Resources and Irrigation (MAARI) is the main agency responsible for agricultural and extension services, as well as for development and conservation of land, forestry, and animal resources. Its activities are generally conducted with autonomous human and technical resources, except for those related to plant protection, animal epidemic disease control, forestry, and research. All of the latter are carried out through the staff of federal agencies, such as the Federal Ministry of Agriculture and Forestry, the Federal Ministry of Animal Resources, the Agricultural Research Corporation and the National Forestry Corporation.[19] Hence, though the state MAARI is responsible for most activities pertaining to natural resource management in both North and South Kordofan, in reality it lacks autonomous technical and staff capacity to undertake all these activities, and depends on federal institutions in the key areas of its work. Moreover, and similar to the MOFM, the MAARI also suffers from limited financial resources, which makes its ability to plan and implement development and conservation projects precarious. As a result, both the Ministry of Finance and Manpower and the MAARI are unable to maintain institutional autonomy vis-à-vis the Federal Government and to focus their efforts on planning and implementation, rather than on keeping financially afloat.

The institutional weakness that results partly from financial dependence and partly from lack of sufficient technical and staff capacity is evident in the work of some MAARI departments, such as the Animal Resources Department (ARD), where veterinarian services offered to stock owners are scant and irregular both in the field and in the Department centers. The consequences are not just poor veterinary care, but also poor animal health education among herders, which creates enabling conditions to smuggle inappropriate and/or expired drugs and vaccines for livestock on local markets. Another example of poor capacity and performance of the MAARI is given by the Range and Pastures Department in South Kordofan, where staff lacks the capacity to implement the Farming and Herding Organization Act brought into force in 2000 as a tool for conflict management.

One sector in which resource management has been characterized by problems of weak governance, but also by positive dynamism is that of water management. At the level of formal government, key roles in this realm are played by the Ministry of Engineering Affairs and Physical Planning (MEAPP), which has overall responsibility for state civil works, including rural roads and water supply, and by State Water Corporations (SWC), which are responsible for water provision including operating boreholes and maintaining pipelines and hand pumps in rural areas. SWCs also issue licenses for water facilities, set water prices, and arbitrate conflicts with users. However, neither SWCs nor MEAPP are supported by clear legislative mandates and adequate financial and technical resources. Groundwater legislation allocates responsibilities to various ministries and government agencies with little integration of their mandates. Moreover, water management institutions have been in a state of flux for years. In 1969 the Rural Water Corporation became part of the Ministry of Rural Development and Community Services, but in the following decade it evolved into a national corporation under the Ministry of Energy. Today, SWCs are part of a national corporation that is also responsible for urban water under the Minister of Irrigation and Water Resources.

[19] Western Sudan Natural Resource Management Programme, Appraisal Report, Working paper 1: Socio-Economic Characteristics and Targeting., p.4.

Despite several efforts to re-engineer and reform formal water management institutions, the capacity of these agencies remains limited, water-related research is weak and little attention is given by policy makers and administrators to the socio-economic dimensions of water management. Overlap and fragmentation of responsibilities for water provision have led to the deterioration of many rural water facilities particularly along traditional stock-routes, creating a situation of relative water scarcity that is conducive to competition among resource users. However, and perhaps in no small part due to the existence of such problems, water management has also proved to be a positive realm of experimentation for community-based initiatives, partly in the context of donor-supported development projects and partly independent from these. For instance, community-level institutions set up in the context of Village Development Committees to collect fees for access to water and for the maintenance of water infrastructure for domestic use, as well as to regulate patterns of use among community members accessing water for different purposes, have been rather successful in various parts of Kordofan. Indeed, villages where there have been donor-funded projects often have various kinds of community-based organizations, such as agriculture, livestock, health, and women's committees, which are usually part of the umbrella Village Development Committees that may include representatives from the (former) Native Administration or government agencies.

Despite the relative novelty and important contribution of initiatives, such as Village Development Committees to natural resource governance at the local level, these initiatives generally do not face a vacuum in village- and encampment-level government structures. Indeed, for a long time the administrative structure of the Sudanese state has included various institutions representing rural and urban localities, urban centers, villages, and nomadic encampments. The respective roles of these have been redefined several times in Sudan's recent history, notably through various Local Government Acts, the latest of which was issued by the Federal Government in 2003. The important Act among these referring to community-level government was the 1971 Act, which established a four-tiered system of councils that included elected councils in villages, encampments, and urban neighborhoods. Though these councils mainly served to channel downward policies initiated by the ruling party, they represented an important stage in the effort to organize and integrate communities into the formal governance system of Sudan.

Under the current government, the main administrative structure at the village level is the Popular Committee, which typically includes sub-committees entrusted with some forms of resource management, notably management of water sources located in the village and used for human consumption. At the level of individual villages, community-based water management mechanisms thus exist alongside private and cooperative ownership and management of water sources, such as wells, water yards, and hand pumps. Moreover, in many cases Village Development Committees operate in coordination with Popular Committees in livestock or farmland management, depending on the livelihood base of each village. It is within such committees that local resource users find a relatively representative channel to express their interests and find some room for participating directly in resource management; hence cooperation between them is crucial both for governance and for improved resource management. Such cooperation may grow in the future thanks to the 2002 Rural Development Organizations Act, which paved the way for the legal recognition of village-level organizations operating in various realms of community development, including Village Development Committees as well as users' groups and micro-finance institutions like the *sanduqs*, or savings-based "village banks."

The emergence and relative success of community organizations has contributed positively to the governance structure of natural resources in Kordofan, despite the still precarious sustainability of many of them both in terms of financial resources and in terms of their formal status, which is sometimes subject to attempts at cooptation or appropriation by government agencies. This positive contribution is a particularly important counterpoint to the role played by larger resource users' associations that operate at the national and state levels, such as the Farmers' Union and the more recently constituted Pastoralists' Unions. Despite formally representing the interests of farmers and pastoralists, both unions in fact mostly operate as lobbying agents on behalf of the richest farmers and livestock owners, are generally poorly represented in the policy-making process and enjoy little legitimacy among traditional resource users. Hence such unions (as well as other similar resource users' unions, such as those of horticulturalists, gum arabic producers, etc.) do not participate directly in natural resource management, nor do they provide autonomous inputs into natural resource policies in such a way as to improve their responsiveness and effectiveness.

C. Conclusion

This overview of the governance framework in which natural resource policy and management initiatives have taken place in recent years constitutes the backdrop against which future scenarios for natural resource management in Sudan in general and Kordofan in particular are likely to unfold. Another important component of this scenario is represented by the recently signed Comprehensive Peace Agreement (CPA), which a number of provisions concerning devolution of authority, local government and, to a lesser degree, access to natural resources. Besides marking the end of the fight between federal and Southern forces, CPA is in fact essentially a document about power-sharing between a newly constituted Government of Southern Sudan and the Federal Government. Moreover, the Agreement also provides for mechanisms for devolution of authority and most of all for the reallocation of resources among and within states, including oil resources as well as financial resources from taxation. In this framework, the state of South Kordofan plays a particularly relevant role because it is the object, along with the Blue Nile state, of a specific peace protocol, which features as chapter 5 in the CPA.

Among the various provisions of the Agreement and of its implementation modalities, of particular importance for the future of governance in Sudan is the call for general elections to be held no later than the fourth year of the interim period at federal and state levels, which will however be preceded by a reallocation of seats in key government offices (including state legislatures) to reflect the power balance between the ruling party and key Southern political forces. Many observers have voiced some concerns about the possibility that such reallocation may contribute to perpetuating a political culture based on patron-client relations. However, if power-sharing and the division of policy-making positions on the basis of political affiliation are undertaken in tandem with the democratization of government institutions, in line with the spirit of the CPA, these initiatives may actually lead to a transformation of such culture in the direction of more accountability, representativeness, and responsibility. Also important in this regard is the planned reorganization of the civil service, including affirmative action for people from disadvantaged groups and peripheral regions.

In the framework of a section of the Agreement devoted to wealth sharing, a key provision concerning natural resources is the planned constitution of various Land Commissions at the National, Southern Sudan, and state levels, which will deal with outstanding tenure conflicts

and with the land entitlements of displaced groups and other populations affected by the conflict. Though it is not possible to determine what kind of tenure arrangements will be favored by these Commissions, it is important to note that the Agreement envisions, as an accompaniment to their work, the development of a legislative process that may amend land laws to incorporate customary norms and practices whenever legislatures will deem it appropriate to do so. This process may of course evolve in ways more or less functional to ongoing changes in the direction of a market-led, increasingly sedentary, and private-property oriented approach to rural livelihoods and resource use. However, given the experience of other countries that have undergone a simultaneous transition from authoritarian government to decentralization and power-sharing in the political realm, and from state-led to market-led economies marked by informalization, deregulation, and fragmentation of livelihood systems in the economic realm, the resort to customary institutions to search for inputs into equitable natural resource policies may serve to temper the negative effects of such transitions. In particular, the search for institutional solutions in a system of norms and practices that places great value upon reciprocity, solidarity, and resource-sharing may temper the tendency of rural markets and national resource institutions in contemporary Sudan to evolve in the direction of indiscriminate competition, privatization, and rent-seeking on the part of private investors linked to old or new government elites. In sum, while CPA does not provide guarantees for markedly positive changes in the future of natural resource governance in Sudan or in the region of Kordofan, future scenarios based on an effective implementation of the Agreement justify some positive expectations, particularly if power sharing is accompanied, as envisioned by CPA, by systematic knowledge generation, attention to local livelihood systems, and reorganization of local governments on more equitable political and financial bases.

IV. UNDERSTANDING POLICY VOLATILITY IN SUDAN

A. Introduction

Sudan has had a turbulent political history of conflict and social strife over the last half century, which vastly disempowered the livelihoods of the population in general, and of the rural poor in particular. It also destabilized the design and implementation of government policies in various realms. Frequent changes in policy orientation, overlapping policy decisions, and selective or ineffective enforcement processes have combined to yield a volatile policy environment that. Policy volatility impacted directly and indirectly the effectiveness of state administration and institutions, particularly their ability to meet the challenges of poverty reduction, natural resource conservation and management, human and social development, and the public's participation in public affairs in an equitable way. The Government's to reform the governance system failed. Thus, understanding the roots and various dimensions of this problem is a precondition for improved design and implementation of policy and institutional reforms that may be conducive to broad-based empowerment, as well as increase the state's ability to meet the challenges of equitable development.

Policy-making is about setting and achieving goals that the political leadership deems desirable for its constituency, be it narrow interest groups or the public at large. Policy options represent are alternative strategies or courses of action that are pursued to achieve these goals. Only those that are developed to a level close to an actual action plan represent effective options. In the case of natural resources, for instance, the concepts of policy and policy options refer to a range of instruments and decisions that orient public action to expand or constrain the range of strategic choices that are open to natural resource users. A policy decision can be institutionalized in a law or expressed in other forms such as decrees, executive ordinances, strategies, action plans, guidelines, programs and projects.

The policy process takes place within an arena that links it to the political process[20]. A policy arena is a specific type of action situation with players engaging in repeated interactions, making alliances or coalitions, and learning from each other's past experience. A policy decision generally represents the outcome of such interaction,[21] therefore policy outcomes depend on the rules of the policy-making game as well as on the objectives, talents, knowledge, resources, and strategies of the players engaged in policy-making.

The concept of policy process this study adopts stands in sharp contrast with the conventional rational model of decision making.[22] According to the conventional model, decision results from a process of rational public choice with well established sequence of stages starting with the analysis of the issue and its causes, followed by the identification of available options that are subsequently appraised to determine their comparative worth, finally reaching a conclusion that is presumably based on criteria that maximize the collective utility or welfare.

[20] Ostrom, Elinor, "Problems of Cognition as a Challenge to Policy Analysts and Democratic Societies," in Michael D. McGinnis, ed.., *Polycentric Governance and Development: Readings from the Workshop in Political Theory and Policy Analysis*. Ch.17. 1998.

[21] Cf. Ilchman, W.F. and N. Uphoff, *The Political Economy of Change.*New Brunswick and London: Transaction Publishers, 1998.

[22] A valuable overview of the theories of the policy process is given in Sabatier, Paul, ed., *Theories of the Policy Process.* Boulder, Colorado ; Oxford: Westview Press, 1999.

This rational model is still formally in use among Sudanese policy planners, but the reality of various policy-making arenas shows a more complex and dynamic picture, where the degree of exposure of policy-makers to externally-funded projects and to their increasingly participatory design and implementation approach is changing some policy-makers' perceptions about what the policy-making process ought to be about. Indeed, the involvement of a wider range of stakeholders who are offered real opportunities to shape project design, the need to make policy choices, the fact that development projects increasingly support both investment and policy reforms, have transformed some of the more innovative large development projects into alternative policy arenas. This evolution has far-reaching implications in Sudan, because the bulk of budgetary resources allocated to natural resource management, rural poverty eradication, and conflict transformation (peace building) is channeled mostly through externally financed development projects. As a result, development projects that are important policy arenas may not be commonly perceived as such.[23] Other important policy domains, such as land management and decentralization, where external financing agencies have not played a large role until very recently, have been designed and implemented with the sole involvement of the Federal Government, States, or the Native Administration; hence they have not benefited as much from outside stimuli for change. Nevertheless, volatility continues by and large to characterize all these policy domains, regardless of their differential exposure to such stimuli.

This chapter attempts to examine this volatility and to understand its basic features and some of its sources with particular reference to Sudan's Greater Kordofan Region. Devolution policies define the overall policy domain of this study, including laws, regulations and policies enacted under the label of Decentralization, Land Allocation and Land Use.[24] Development projects of a major size that have sought to support the decentralization process and/or the devolution of natural resource management to local communities in the Greater Kordofan Region are also included in the domain of the study.[25]

B. Sampling

Understanding policy volatility in the realm of devolution requires an understanding of how policies are made in Sudan.[26] Put differently, what needs to be analyzed is the functioning of devolution policy arenas, the rules that govern them,[27] and their impact on the patterns of changes in policy design and implementation. The questions that be answered are: Who are the decision makers in these policy arenas? Who participates in and who is excluded from the policy-making process? What is the level of public involvement in policy-making? What are

[23] Performance indicators of development projects typically underestimate their contribution to collective and institutional learning as the latter is often embodied in individuals and is not tangible enough to be easily measured.

[24] For the purpose of this research, natural resources include arable land, water, forests and rangeland and resource users refer to a whole range of players, including state agencies, rural communities and private interests or operators.

[25] In the Kordofan Region, projects co-financed by the International Fund for Agricultural Development have been the most salient, if not unique, development ventures during the last decade.

[26] This study is not primarily concerned with an analysis of the content of these policies but in understanding how policies are made. Nevertheless a chronology of key policy decisions is given in annex. A thorough analysis of these policies and their impact on natural-resource-based conflicts will be offered in a forthcoming Sudan case study report.

[27] Not to be confused with the policy outcomes which are themselves a set of rules that shape the behavior and interactions between players at an operational (lower) level.

the profiles (identity, interests, goals, resources and skills, perceptions and attitudes) of key players in the policy process? Are there coalitions and alliances between some of these stakeholders? Who works and coordinates with whom? What are the rules in use in the policy process? How are roles and responsibilities distributed among the participants? What information is available to them in designing or implementing policies? What level of discretion do they have?

Answering such a large set of questions for a vast policy domain and covering a long period of time (from independence to the present) is impossible without access to reliable and knowledgeable informants. This study of the policy-making process in Sudan is thus based on interviews with about thirty Sudanese policy-makers or individuals involved in the policy-making process in various capacities and at various levels. Prior to conducting such interviews, a chronology of the main policy decisions undertaken by the Government in the realm of devolution of authority was established (see Annex 1). Such a chronology served as a reference during interviews and provided a framework for the interpretation of the information obtained from the interviews on specific policy processes.

The study is based on exploratory research; hence ensuring rigorous statistical representation of respondents or selected policies was not a relevant objective. Selection of respondents was based instead on criteria such as whether they formerly had or still have a decision-making role as far as devolution policies are concerned, and whether they are widely perceived to have been either an active participant in policy-making or to be a knowledgeable observant of policy processes. The authors' knowledge of the Sudanese scene and information provided by some respondents on other active participants were also put to use in the sampling of potential respondents. However, a number of additional steps were taken in order to strike a balance among respondents and to increase the possibility that the sample would represent a wide spectrum of perspectives. First, three women were included who were actively involved in policy-making or policy implementation, in recognition of the fact that, although women are not highly visible in any policy spheres in Sudan, they are nevertheless more present than in many countries at the same level of development. Second, it was considered necessary to represent more or less equally the two states that make up the study area; hence ten interviewees were chosen from North Kordofan and eleven from South Kordofan, with the remaining twelve being from the central/federal level. Third, the interviewees were chosen on the basis of a classification (see Annex 2) that included a wide range of roles and responsibilities, including ministers and former ministers at state and federal levels, administrative executive officers (commissioners) at the local government level, Native Administration members at tribal and sub-tribal levels, parliamentarians, academics, as well as representatives of civil society institutions such as non-governmental organizations (NGO), members of opposition parties, and development project managers (mainly from projects supported by IFAD). As the period under review often embraced the whole career of the respondents, frequently the same interviewee was able to provide more than one perspective and reflect on differences. The interview guide is given in the Annex to this study.

C. The decision making community: boundaries and behavior

Boundaries

In Sudan, policy decisions have historically been initiated by the bureaucracy, or civil service. The legislative assembly does not initiate legislation, only endorses it. The procedure at the state policy level is the same as that which applies at the Federal level. Successive authoritarian regimes since independence have controlled entry and exit to and from the decision making process. They have also actively interfered with the designation of local representatives, be it Native Administration, local government or union leaders. As a result, the population's interests are ill-represented in policy-making fora and often poorly reflected in policy decisions that concern them. Examples of such decisions at the macro level include the timing of decisions about crop prices in relation to the cropping and harvesting season, unfavorable exchange rates that for a long time taxed rain-fed agriculture, and taxation policies. With regard to policies that directly affect natural resource users, an example of poor popular representation in the decision-making process can be found in the Government's agricultural strategies that for long have given priority to large-scale mechanized farming operated by urban and foreign investors, with little consideration for the rights and needs of access to resources by traditional users, and in total disregard for the interests of pastoralists.

Within this context of general lack of concern for or the participation of the population at large in policy decisions, the interviewees identified three factors that make a positive difference:

- Size of land ownership and security of land tenure.
- Being engaged in commercial agriculture (e.g. horticulture as opposed to subsistence agriculture).
- Level of organization.

The rural elite, which increasingly resides in the main towns of the country, participates in policy decision making in many ways and in particular through its control of Farmers' Unions as well as of the Native Administration. The rural elite is composed of members of "important families"[28]. These families are heavily represented in the institutional set-up, and the most prominent of their representatives seek elected offices including in the National Assembly. At the other end of the spectrum, traditional farmers and pastoralists have been hardly involved in any decisions that directly affect their livelihoods and welfare, partly because they are generally not organized, live in remote areas, and have not constituted a pool of significant political or economic support for most governments that have ruled Sudan since independence.

Exclusion from the policy-making process may also in some cases result from a deliberate strategy of exit or resistance on the part of rural people vis-à-vis such process. This strategy may be partly linked to the fact that rural people in many areas have continued to recognize the Native Administration's role long after it was officially abolished in the early 1970s, whereas they do not recognize the formal land tenure system introduced by the Government

[28] There is no nobility in Sudan, but important families are those who have accumulated power and prestige.

in 1970 and therefore continue to believe that it is their right to protect customary entitlements on land and other natural resources. These norms are in turn enforced through Native Administration authorities and institutions, notably village sheikhs, to whom villagers in many cases continue to turn in situations of stalemated competition or conflict over resources, unless such conflict pits them against private investors or the state, vis-à-vis which village sheikhs hold minimal or no power. In extreme situations, such as in cases in which villagers have found their customary rights to be challenged by the state or by other parties in ways that have prevented effective resource to native institutions, "exit" has also taken the form of open revolt against government authority. More often, there is a significant degree of reluctance or lack of interest in interacting with government authorities or with the formal decision-making process among many rural communities, adding to the disempowering effects of lack of openness to popular input on the part of such authorities.

While rural people often do not trust government institutions and agencies that deal with natural resources and thereby tend to avoid participating in them, it is rather common for them to opt to participate in other initiatives and agencies, such as farmers' and pastoralists' unions or village associations created in the framework of donor-sponsored rural development projects. Rather than as avenues to participate in decision-making or influencing policy, however, these organizations are primarily seen by rural people as channels through which they can put pressure on the government to obtain better services and to capture a share of the national income.

Coalitions

The present Government is a political coalition unified by a commitment to Islamic governance principles. This should not suggest that the political system rests on a democratic basis, since the emergence of other coalitions that may challenge the ruling group is actively inhibited by the Government. To gain effective influence on the policy-making process in the Sudanese context, a coalition would ideally be composed of a leading sector ministry, supported by unions and grassroots organizations, as well as by an international funding agency.

Survey respondents identified a number of coalitions or alliances that are manifest in recurrent policy debates in which they support diverging positions. These cleavages generally oppose:

- Political (security) versus technical ministries at the federal level.
- Federal versus state governments and agencies.
- Regional competition between states for federal resources.
- Public sector unions versus government (resistance to administrative and liberalization reforms).
- Farmers versus pastoralists.
- Investors (mechanized farming) versus traditional farmers and pastoralists.
- Native Administration leaders versus new/formal institutions such as Unions and government structures.
- Agronomists versus veterinarians within technical departments.

The most powerful lobbies at the federal and state levels are the security/military apparatus, the Federal Administration, and the Gezira irrigation farmers and corporations. Businessmen

and merchants tend to work together and have a lot of clout. Mechanized farming schemes are tantamount to a pension scheme for senior civil servants who have large influence on policy decisions, partly in the context of a persistent coalition between merchants and senior civil servants.

As far as rural areas are concerned, the "hierarchy of clout" is as follows:

1. Country town dwellers.
2. Native administration.
3. Mechanized farmers (merchants).
4. Teachers.
5. Horticultural producers (pump irrigation).
6. Gum arabic producers.
7. Traditional farmers.
8. Pastoralists and nomads.
9. Women.

Farmers' Union leaders have a strong relationship with their base and membership, but this is not a guarantee of fair representation of the range of interests of their constituency. Poor farmers made poorer by adverse policies are left with even less clout to change the orientation of these policies. Notwithstanding this, farmers and pastoralists' organizations can articulate their needs and address decision makers, but their own capacity to take action on their problems is limited. The organizational strength of farmers' unions varies with the situation of their membership. It is positively correlated with land tenure security, proximity to town markets, productivity (income), size of membership, and regular relationship with the Government (even through a dependency relationship).

D. Rules used in the policy process

As a legacy of the British civil service, it is common practice in Sudan that policies are first shaped in ad hoc technical committees that are established to review the issue at stake and the available options, and to prepare recommendations to the higher-level political authorities (minister and council of ministers). The agenda, scope and membership of such commissions or committees is controlled by these political authorities through written terms of reference. The study of the rules used by these committees provides important insights about the way policies are made. Interviewees were particularly solicited to describe position, authority and information rules of the committees or commissions.

Position rules

Position rules concern roles and responsibilities within the commissions. Two groups of people seem to have more clout in them, namely those who have "extra powers" and those who have particularly strong vested interests. In decentralization policy processes, for example, state governors and commissioners play an important role. Roles and responsibilities in a committee are distributed among members by sub-issue to be treated, depending on their respective authority, role in government, knowledge and expertise. Although not explicitly mentioned in the interviews, age is also a factor with a premium to older members (as older age is often equated with experience and maturity). However, in

recent times inexperienced but politically well-connected young people have been placed in positions of responsibility. This phenomenon is regarded as part of a trend in the direction of increasing politicization of the membership of technical committees.

In the early years of independence, the British tradition of appointing members primarily on the basis of a criterion of excellence was broadly adhered to. Political affiliation and loyalty criteria have progressively taken over, starting with the regime of General Nimeiri (1969), especially after the harsh repression of the communist party and the creation of the Sudan Socialist Union as a single ruling party. During the brief democratic episode of 1985-1989, regional representation (leading families that can have influence on the ballots) was also an important criterion for gaining influence. Political criteria have acquired increasing importance with the advent of the current regime, but this is by no means a novel phenomenon.

There is no formal veto power within the committees, which essentially have a technical advisory role. However, those committee members who have personal power, knowledge, or manipulative skills can largely influence the outcome of policy decisions. Veto powers remain however in the hands of political authorities, who are free to accept, ignore or modify the recommendations of the technical committee. Changes brought to committees' recommendations by the political staff may actually be substantial, and they can be made without any obligation for political authorities to refer back to the committee members or its chairman to ask for a technical validation of such changes. Interviewees mentioned several cases of chairmen and members of technical committees bitterly and publicly complaining about the political authorities' total disregard of technical considerations articulated by their committees and about the loss of credibility they themselves suffered after the Government adopted certain policy measures ostensibly resulting from the work of the committees, but actually in sharp contradiction with their recommendations. Whatever the reason may be, the debate on technical versus political criteria in making decisions ultimately points to a crisis and lack of consensus regarding how public interest is or should be defined. It would be expected that this lack of consensus is between the general public and the state; the reality, however, is that it is also and most importantly present in the government machinery itself. This indicates the magnitude of the challenges that policy coordination and implementation present in today's Sudan, as confirmed by the analysis of authority rules.

Authority Rules

Authority rules are guidelines that stipulate the actions that are mandatory, authorized or forbidden in the course of the policy process and govern the participation modalities and procedures. They also define the level of discretion allowed to enforcement agents, once a policy is formally adopted. In Sudan, ideas of broad public participation have gained wide recognition and acceptance in the realm of project implementation. In political life, on the other hand, and more specifically in the realm of policy-making, there has not been as much progress for their acceptance.

The respondents' narratives reveal that there are few rules, if any, concerning the purely advisory role of ad hoc committees that define and restrict the actions that can be carried out by policy-makers or by committee members, or the policy options that they can consider. Furthermore, since specific issues are distributed among members of the committee, each member can organize his sub-committee according to his own style or preferences. This

apparently large degree of discretionary power does not mean that there are no boundaries to the set of authorized or mandatory actions and policy options. Rather, such large discretion reflects the fact that these boundaries are not governed directly by rules, but result indirectly from the status of the members of the committee (who is in and who is out, who leads and who follows) and most importantly from the awareness on the part of its key members of whatever sensitivities, norms or taboos must be taken into account. These may be religious, humanitarian or political sensitivities, true or imaginary, and mostly implicit, but nonetheless important.

Indirect and/or informal authority rules, such as those that result from external and self-censorship of the participants in the process, are a key modality by which the set of authorized and mandatory action is defined in technical committees. This modality is in sharp contrast with the theoretical view of a process in which participants freely debate the nature of issues and available options within clear and mutually agreed rules. It would be naïve to think that there are no such indirect and implicit rules governing the policy process in more democratic states. However, in democratic settings the level of informality is lower while formal rules are transparent, predictable and amenable to debate and can be changed by the participants in the process.

One last aspect of authority rules concerns the level of discretion left to enforcement agents. The respondents' general view is that enforcement is a function of the political will and capabilities of those responsible for enforcing policies. Many such agents have only limited choices or options in changing these policies, but they do have a large discretion in determining whether to implement the official policies or not. Inaction itself may often represent their only, but nonetheless powerful option to influence the policy process. While the respondents' argument has its merits, it appears, however, that the high level of discretion enjoyed by enforcement agents is largely the result of sheer necessity, due to serious inconsistencies in state policies and widespread and strong resistance encountered in the application of state policies and regulations.

Passive or active resistance to state policies is often the only option for groups that do not belong to the constituency of ruling elites and that therefore need indirect ways to protect their interests. Inertia in particular can be a powerful way to block the implementation of policy decisions that require the participation of the people (e.g. resource users), at least in the form of compliance. When the state nationalized most tribal lands in 1970, it presumably did not anticipate that it would only be able to apply new land laws on limited portions of the national territory. However, the economic rationale of such laws directed the state to concentrate its enforcement capability on the lands endowed with highest agricultural potential, which de facto resulted in its quasi-abdication from the responsibility of regulating land use in the largest part of the national territory, where the potential for agricultural development did not encourage direct state presence (for instance via the establishment of farming schemes). In much of this territory, therefore, non-implementation of land laws and non-abolition of customary tenure was the overwhelming "inertial" response of rural people to the new policy orientation of the state. Elsewhere, however, active resistance occurred in the form of open rebellion and civil strife. This has been the case in the Nuba Mountains, in the Eastern region, and most recently in Darfur (not to mention in the South of Sudan). This state of affairs reflects the fact that land policies adopted in the 1970s (and indeed ever since) have generally been in narrow policy arenas, where the variety of interests and stakeholders differ from those in rural areas. Under such circumstances, enforcement agents have added incentives to use discretion to serve their own individual interests or the interests of a

particular local group, aided by the persisting gap between what most rural people consider as legitimate and what is stated by official government policy.

Information Rules

Information rules affect first of all the knowledge or information sets of participants. In this case, even participants in restricted membership policy arenas do not have adequate information about the ultimate intentions and preferences of the highest political authorities. Moreover, information rules refer to the type and time of information disclosed to the public and the media. In this respect there is agreement among respondents that the rule of not disclosing information to the public during the early stages of a policy committee's work is generally observed. The Government routinely keeps most of its deliberations and proceedings classified for a certain period. The information that is held secret during the policy process is "the information that will create trouble," begging the question of who defines what is "trouble" and what is in the public interest to know or not to know. A good example of information that is unlikely to reach the public is one that would create a risk of insider trading, such as decisions concerning the official exchange rate. Moreover, information about oil policies and contracts signed by the Government for oil exploration with some foreign companies are never publicly disclosed, and only few people know part of the relevant information, but not all of it. With security concerns being still very high on the Government's agenda, manipulation and restriction on information are the rule rather than the exception. The end result is that the general population has virtually no idea, let alone knowledge, of what information exists on key policy issues that it would like to have access to.

E. Areas of consensus in policy-makers' views concerning decentralization and natural resource management

Some common elements emerge from the interviews; these may be summed up as follows:

A consensus on the volatility of the policy process

Almost all respondents regard the policy process as marked by volatility in all its aspects, including its rules, its participants, its outcomes (i.e. concrete policy decisions and implementation and enforcement. They are volatile, unpredictable, change frequently, lack resources for implementation, and the public is not aware of the decisions or of their legitimacy. Only one or two respondents address specifically the rules of the policy process and its participants; however, most of them indirectly hint at a relative informality of the rules governing the policy process and its likely dependence on the lobbying capacities of different interest groups, which are in turn linked to personal or party connections with individuals in top decision-making posts. This dimension is further developed in the next sections.

A relative consensus on the main problems Sudan faces in the area of natural resources

The view of most respondents regarding the main problems Sudan faces in the area of natural resources combines environmental/resource related factors together with governance factors.

In particular, they stress resource degradation, such as desertification, deforestation, and droughts, but they do so only in the framework of complex governance problems, including the lack of clear and equitable definitions of property and user rights and the lack of a strategic vision for resource use and development based on a dynamic understanding of current and potential use patterns. In addition, some respondents mention the recently-concluded conflict between the Federal Government and Southern rebels (as well as the ongoing conflict in Darfur) as a factor that has shaped patterns of access and use of natural resources in a major way, altering the natural and social environment of rural Sudan in ways that must be taken into account in any future natural resource management policies.

Lack of political will as the main problem faced by Sudan in relation to decentralization

Respondents generally agree that the decentralization process has been hindered by the Federal Government's resistance to yield the decision-making power to states and to local governments, despite the formulation and implementation of a series of Local Government Acts from the mid-1990s to 2003. There is also consensus on the negative, even paralyzing effects of decentralization policies that do not envision mechanisms for the financial autonomy of local governments, and in fact may be accompanied by financial initiatives that undermine such autonomy (e.g. the abolition of agricultural taxes). As a result of the incoherence of the policy process whereby increasing responsibilities are devolved to local governments while financial and budgetary initiatives are taken that undercut their independent resources, the decentralization process has significantly eroded the quality of public services in many regions.

A relative consensus on some governance problems that compound volatility

The governance-related factors of policy volatility are notably the decline of civil service, an ideologically-driven political culture, and a predatory or patrimonial attitude of policy-makers towards public resources and political power. Though only explicitly mentioned by few respondents, the problem of a weak or declining civil service is hinted at by many of them, particularly in discussions on the weakness of local government institutions regarding human resources. The causes for such weakness are complex and exceed the realm of policy volatility strictly speaking. However, one cause repeatedly mentioned by respondents appears to be the particular approach to the government that characterizes the current regime, as well as that of the previous ones. This is an approach marked by a predominant concern for ideological affiliations, both in policy decisions and in the selection of policy-makers and even civil servants. Also, it is a rather predatory or at least patrimonial approach to power and to the administration of public resources, whereby the latter can openly be treated as sources of rent or even as "private property" by top-level policy-makers or the ruling Party. Both approaches, which are complementary aspects of the same governance situation or political culture in Sudan, compound volatility in part because they make policy revolve around changing narrow interests, which correspond to individuals or groups succeeding each other in positions of authority over the administration of public resources and power. Moreover, a political system based on this sort of political culture tends to fill policy-making and implementation posts with political appointees that, in turn, are driven by private interest and/or ideological concerns, rather than by professional competence and political neutrality.

Significance of the democratic deficit in relation to policy volatility

With few significant exceptions, most respondents stressed the lack of popular participation in decision-making and the limited accountability of government institutions as two main factors not only of poor governance, but also of volatility, particularly in the domain of natural resource management. Lack of popular participation in decision-making generates poor information about existing patterns of resource use and user rights, as well as about the interests and concerns of primary stakeholders; the effect is that policies are often suboptimal or even misguided. Moreover, policies decided upon without sustained input from stakeholders are difficult to implement, difficult to fund properly, and even more difficult to enforce, since stakeholders may not have incentives to comply with them or pay for their implementation. Limited accountability of policy-makers and of institutions, particularly vis-à-vis the interests and concerns of populations living far from the main urban centres, where the ruling party finds the bulk of its constituency, is also a factor of volatility as well as of poor governance. It gives rise to slow and inefficient mechanisms for the adjustment of suboptimal policies or of their negative externalities, with the result that the implementation process may stagnate and be redressed only via abrupt policy changes.

To sum up, the picture of the policy process that emerges from these interviews has a number of problematic features, among which volatility is a cross-cutting, though not necessarily the dominant aspect. The main characteristic that emerges is that of a weak, centralized, but at the same time dysfunctional system of governance, where democratic deficit, lack of strategic vision, patron-client approaches to public management, and lack of mechanisms for information gathering and circulation feed off one another, underlining the failure of devolution policies to establish a capillary and equitable system for resource generation and service provision.

F. Attitudes towards natural resource management

Perceptions about the nature of natural resource management issues

In the view of the respondents the main issue policy decisions need to address regarding the management of natural resources is resolving the failure of past attempts to achieve the stated objectives. The absence of an effective planning and of a regulatory framework for the management of natural resources is the most frequently mentioned factor as the cause of this failure,[29] together with its consequences for conflicts among resource users, inadequate policy implementation, poor management of drinking water, unchecked oil exploitation, and ignorance of policy-makers of the importance and implications of cultural and environmental diversity.

There were other natural resource management issues that needed to be put on the policy agenda. According to the respondents these were: ecological problems (droughts); demographic issues (population increase, overstocking, weak capabilities of local communities); technical issues (shifting cultivation, scarcity of relevant research and technological development); and a general lack of awareness from both users and policy

[29] This, in turn, is linked to the abolition of the Native Administration, land tenure insecurity, weak budget and administrative capabilities, compounded by the effect of the war on infrastructure and budget resources and by stakeholders not being involved in policy design.

makers of the seriousness of natural resource management problems (mining mindset of both users and policy-makers, lack of political will, etc.).

Assessment of past policy solutions

When subsequently asked to characterize the solutions to the problems of natural resource management that have been tested in the past, and to give their opinion regarding their effectiveness and impact, the response was that relevant solutions were conceived and implemented in the framework of donor-assisted development projects of various sizes and duration, since comprehensive strategic programs were absent. Sixteen major projects were in fact implemented between 1980 and 2000,[30] not accounting for the interventions of NGOs and of the Government and emergency and relief operations. The financing institutions included the World Bank, IFAD, USAID, European Union, African Development Bank, Arab Funds and UNDP. The Food and Agriculture Organization (FAO) was also involved in a technical assistance capacity, in particular in the Western Sudan Agricultural Research Project and for the design of some of the above-mentioned projects through its Investment Centre.

Productivity-oriented investment projects as well as those directed to rational natural resource management generally had limited achievements or they failed altogether. This may be due in part to the fact that the projects did not develop sufficiently the appropriate and affordable technical packages, which reflects the weakness of adaptive research in the country, as well as among donor agencies. Also, investment projects had little impact, for they could not develop autonomous resources and administrative capabilities among the states and local governments responsible for providing services to rural communities.

Some projects embraced community-based development approaches (bottom-up model of development), but often they failed to have a durable impact, because they did not take a holistic approach to empowerment. Most of them did not encourage local government involvement, or did not provide adequate support to local government structures. The transparency and representativeness of local governments were questionable; this certainly played a role in the decision to disregard or not to encourage them. The result was that local governments' capabilities remained weak; hence they unable to take over project initiatives carry them on at the end of the project cycle.

Apart from externally funded projects, Federal and State governments have also promulgated several pieces of legislation in recent years aimed at regulating and rationalizing land use, forest plantation, tree felling, farming (including mechanized farming), grazing, stock route demarcation, and wild life protection. There appears to have been some continuity in orientation among policy decisions regarding land use regulations, but these policies were not always relevant/realistic and seldom implemented effectively. Most importantly, the disempowering effect of laws, such as the 1970 Unregistered Land Act, which abolished Native Administration and affirmed the ownership of the state on all unregistered land, has not yet been mitigated or reversed by new land regulations, despite the formal abrogation of the 1970 Act in the mid-1980s.

[30] Especially in the aftermath of the 1983/84 drought until the early to mid 1990s. Thereafter emergency and relief operations became predominant with few exceptions, in particular those of IFAD.

Vision of future natural resource management strategies

When asked for their opinion on about a future strategy for natural resource management, the interviewees' responses mostly revolved around general goals and guiding principles, but also included some specific propositions. There was a consensus that the goal of such a strategy should be to ensure a rational and sustainable use of natural resources that would support the livelihoods of resource users and contribute to poverty reduction and food security. Land tenure security, land use planning, productivity enhancement and users' involvement in the management of natural resources were, for the respondents, the key entry points for the efficient management of natural resources. Moreover, natural resource boundaries needed to be clearly demarcated and current patterns of land use clearly marked and acknowledged. An important element of successful natural resource management policies should be the provision of appropriate mechanisms to monitor compliance (and to sanction non compliance), so as to restrain powerful forces, such as the oil companies and the military, and offer alternatives for the use of natural resource products for fuel and building material, and sensitize the public to outstanding NR problems and policies. Changes in property rights that depart from the quasi-exclusive state ownership are also regarded as necessary, along with a mix of devolution initiatives targeting resource users' communities and privatization.

It is worth noting that the vision of public interest, as outlined by the respondents, differs substantially from the one that inspired past and current government policies concerning natural resources. This novel notion may reflect a change in perspective and increasing awareness among policy-makers at large as far as natural resource policies and, more generally, policy-making are concerned, possibly also the effect of the recently concluded peace process. The influence of the latter was indeed visible in some of the specific recommendations made by the respondents, including that of using oil revenues to finance the conservation of natural resources, providing better social services and infrastructure to rural areas, and developing new sources of income for the rural population, so as to reduce its dependence on natural resources. In the same vein, many respondents recommended to create joint commissions and committees to work with Native Administration in resolving conflicts under the umbrella of the Land Commissions provided for in the Comprehensive Peace Agreement. In their view, such commissions and committees should be representative of a broad range of stakeholders, especially local/indigenous people; and elected locality planning committees should also be set up to decide on the rules of land allocation and use.

In sum, interviews suggest that so far natural resource degradation has been treated by all players, including the state, as an externality as far as the policy-making process is concerned. Land nationalization for instance has ostensibly served specific developmental purposes from the perspective of policy-makers, but in reality it has increased insecurity of tenure and weakened accountability of decision makers involved in the regulation of the allocation and use of natural resources. More generally, policy decisions have reflected a preoccupation on the part of the Government to capture rents from natural resources, rather than to protect or develop them, thereby making negative externalities at the local level virtually inevitable. The fact that decision making has been the monopoly of a small group of people that are not sufficiently aware of the situation regarding the natural resoources and/or have other priorities has aided this policy process driven by rent-seeking.

G. Attitudes towards decentralization policies

Assessment of decentralization policies' rationale and outcome

Decentralization policies have their roots in the colonial indirect rule system of government. Prior to independence in 1956, local government and Native Administration policies were changed incrementally approximately every 10 years, following a process of review of the problems and of the progress made in addressing them. With independence, the pace of enactment of new policies increased particularly during the 1970s and the 1980s, but accelerated markedly thereafter to every 3 years on average. Key decisions pertaining to decentralization taken by post-independence governments include the regionalization policy and the various local government acts that shaped the current federal system of government.

The expected outcome of the regionalization process was to bring decision-making closer to the people, to involve them in the management of their affairs and to develop the economic potential of the different regions. This policy (or set of policies) was initiated in the early 1980s. Originally it benefited from the high level of political commitment by the leadership and the good level of preparation of the civil service. It also benefited to some extent from the gradual way in which it was implemented. Nevertheless, the outcomes were far below expectations. The respondents highlighted the reasons, which included the fact that policy implementation did not survive the transition to a democratic regime after the departure of Numeiri. The reform of the federal system between 1998 and 2002 had the apparent objectives of ensuring popular participation in local government with fair representation (free elections) bringing the decision making process yet closer to the people. The 1998 Constitution and subsequent local government acts indeed gave prominence to the principle of subsidiarity to distribute decision making powers among various levels of government. This principle is indeed one of the important criteria for genuine devolution to take place. Moreover, the set of regulations issued between 1998 and 2002 and subsequently made some progress in paving the way for genuine devolution by enabling local governments to develop relatively independent sources of revenue. It is too early to assess the outcome of these relatively recent policies; however, the interviewees observed that their implementation suffered from a paternalistic approach, as well as from inadequate compensation of councilors and from the incompetence of executive officers. Confrontations within the ruling coalition, the state of emergency that justified postponing all elections, and subsequently progress in the peace process, together with the perceptible change of Sudan's economy from being an agriculture-based one to one of oil rent economy, have all contributed to a de facto pause in the implementation process. When asked to assess the overall effectiveness of decentralization policies, 55% of the respondents declared that achievements were well below expectations, 28% stated that they were average, 72% not cost effective. The majority of the respondents (57%) stated that policies were equitable in their intentions or designs, but not in their actual outcome. Accountability was considered low or below average by 66% of the respondents.

Attitudes and perceptions about the nature and causes of decentralization issues

As in the case of natural resource management policies, respondents did not attempt to make a clear separation between causes and effects in identifying outstanding issues or problems in the policy realm of decentralization. The same views were frequently repeated by different respondents in different terms. Overall, what was deemed to be wrong with decentralization

policies can be grouped into two large categories, namely volatile policy implementation and general lack of accountability. The following table provides a sample of the respondents' statements in this regard:

Table 1: Expressed views about the main problems affecting the decentralization process

Volatile implementation
o Incomplete devolution of powers, marked by frequent reversals (from Federal Government to states and from states to localities).
o Important decisions still taken at the center and formally endorsed at the local level.
o Inequitable distribution of resources between center, states, and localities.
o The center's strong grip on power and resources.
o Lack of financial autonomy of decentralized structures.
o Frequent changes of policies: "policies have changed even before the public became acquainted with the policy and its accompanying legislation."
o High turnover of policy-makers and decision makers.
o Multiplicity of experiments of local government forms without prior thorough evaluation of past experiences.
Lack of accountability at all levels
o Lack of participation of stakeholders in policy-making.
o Absence of democratic life (free and fair elections); lack of democratic processes that make decision makers answerable to the public.
o Decision makers are chosen by appointment. They are accountable to the President or to the Governors, not to the people.
o Lack of accountability is also a cause for corruption and diversion of whatever resources are available.

The underlying causes of this state of affairs were seen to be mainly the lack of a political will, reluctance or even active resistance to sharing power and resources by the federal administration, and a divergence of visions and expectations between government and people about the ultimate goals of decentralization, as shown in the following table:

Table 2: Views regarding the causes of policy volatility and lack of accountability

Lack of political will for an effective share of power and resources
o The system is ridden with nepotism and favoritism (clientelism).
o Leadership does not trust people's ability to govern themselves and administer their affairs.
o Lack of democracy.
o Important constraints to regionalization that includes resistance from central administrations and staff (alliance), and limited financial resource transfers.
o People equated decentralization with "the return of the land to its owners."
Weak administrative capacities of the states and local governments and high dependency on federal resources
o Weak institutional capacities (competent staff, planning and policy-making) and states' inability to develop their own sources of revenue feed off each other.
o Financial autonomy is weak; resources hardly pay for staff salaries, no budget for development services.
o Poor infrastructure in support of policy implementation.
o Executive officers during the colonial rule were well trained. The appointment of incompetent officials in these posts have caused people to lose their respect for them and reduced their authority.
o Lack of resources (human, technical, financial) hinders proper monitoring of compliance and diligent implementation of policies.

Notwithstanding the limitations of the decentralization process, some authority and resources have been devolved, but devolution from states to local governments has been resisted by state bureaucracies. At all levels of the government, inefficient and non-transparent use of resources has been the general rule, due to weak administrative capacities combined with lack of accountability. What is required is not only a more equitable distribution of centrally collected revenues, but an actual devolution of fiscal authority to the local level.

Assessment of past policy solutions and vision of the future

In the last part of the interview, respondents were asked to assess past initiatives that have been undertaken to cope with these problems. The first observation made in this regard was that during the relatively brief democratic periods (the last one being from 1985 to 1989) freely elected governments did not support devolution policies. The regionalization policy was even abolished after the election of a democratic government in 1985. Attempts to devolve more powers, to improve local administrative capacities by grouping smaller administrative units into larger ones, and to organize partial elections, have not changed the situation in any substantial way. However, the creation of planning units to raise local capacities has had some positive effects. Similarly, community development actions (such as those promoted in IFAD projects) did have some results, but these were limited due to funding limitations and to their local and unsustainable impact. Also the promotion of civil society organizations to raise people's awareness with regard to their civil and social rights

has had poor results. Lack of financial autonomy and poor implementation capacities of local government units in particular remain severe constraints to effective devolution.

Asked about their vision of future solutions and to what the goals of decentralization should be, interviewees did not propose novel solutions, but had some specific ideas about how the available solutions should be better implemented. Past attempts at solutions, such as free elections, empowerment of local communities, and awareness-building, were deemed to have failed, because they were not implemented in an integrated manner or were necessary but not sufficient for effective impact.

Solutions proposed by respondents emphasized equity, efficiency and accountability, and were formulated in rather specific and concrete terms to encompass the following:

- Transfer of adequate resources.
- Equitable sharing of resources and powers.
- Trained and reasonably well paid competent administrative cadre.
- Accountability at all levels.
- Public involvement in policy-making.
- Implementation strategies of development operations to be based on broad partnerships and projects to operate as enabling devices.
- Establishment of locality planning committees elected by the population. The locality planning committee should be supported by the state and federal governments and provided with grants, training and advisory services.

Food security, rational natural resource management for the welfare of a unified Sudan, and poverty eradication were the alternative ultimate goals of decentralization upheld by the sample of policy-makers interviewed. To a large extent these goals are mutually consistent, in that they give priority to the protection of people's livelihoods and natural resources. They describe an acceptable definition of the public interest; however, the least that can be said is that the vision is quite different from the actual policies that have been implemented.

H. Conclusion

Sudanese federal laws have gone a long way towards devolution, and failure of devolution policies cannot be attributed to the lack of an adequate legal framework. If anything one may question their possibly overambitious goals when compared to the realities on the ground. As a matter of fact, the interviews of policy-makers revealed that policy volatility is not much about frequent changes of policy directions as much as it is a problem of repeated enactments of laws and regulations that are not enforced. They further indicate that these regulations are not really enforceable in a large part of the territory.

The image depicted by the respondents reveals the influence of rent seeking and windfall gainers on policy design and implementation (elite capture), where individuals in position of power (leaders) tend to overvalue their own ideas and vision and to ignore the reality of a highly diverse country, both environmentally and culturally. Moreover, volatility appears to be compounded by a number of factors such as political instability, excessive ideological content and wide-spread paternalistic mentality, poor and deteriorating administrative quality

displaying serious principal-agent problems[31] and isolation (boycott) from international community**.** These interactions create a vicious circle, making volatility both a cause and effect. The accumulated experience of well informed policy makers and observers suggests that there are pre-requisites to be met for devolution policies to succeed, in particular:

1) Political will of the leadership to share power and resources.
2) Converging expectations from decentralization (shared vision).
3) Adequate administrative capacity.
4) Downward and upward accountability.
5) Financial and fiscal autonomy.

The above findings give some credit to explanations of policy volatility in terms of weak administrative capabilities and of pervasive and multiform general volatility of the Sudanese context. The same applies, perhaps to a lesser extent, to the explanations that put emphasis on the fragmentation of policy arenas as a result of decentralization or to the prominence of ideology on rational decision-making. However, these explanations clearly do not exhaust the available evidence and do not account in particular for the findings regarding poor political commitment to equitable development, lack of autonomy of decentralized structures and broken accountability lines. Consequently *policy volatility is redefined as a policy enforcement issue and is explained in terms of both insufficient legitimacy of decisions and lack of accountability of decision makers in the context of state-building efforts.*

The argument of weak administrative capacities should be indeed looked at from the perspective of efforts aimed at the building of a modern state and a unified economy. Interestingly, the weak administrative capacity argument has been indifferently used by different groups or analysts to advocate a restrained implementation of devolution, or on the contrary, for a more complete devolution that would include the redeployment of budget and staff resources. Implicit in these views is the assumption that the state can afford to spend the required resources and that this is basically a matter of equitable distribution. What does not seem to be questioned by the respondents is the capability of a country as huge and diverse as Sudan to sustain in the long run the cost and mobilize the human resources required for an effective decentralized administration, especially in the form of a modern capillary bureaucracy. In addition to legitimacy and accountability dimensions, an explanation of policy volatility must in fact also provide a thorough understanding of the nature of the Sudanese post-colonial state which is attempted in the last chapter of this case study.

[31] In institutional economics, the principal-agent problem treats the difficulties that arise under conditions of incomplete and asymmetric information between a principal and a hired agent and the mechanisms that may be used to try to align the interests of the agent with those of the principal. By principal is meant physical or legal entity/person acting on its own behalf. Principal-agent problems have been also demonstrated to apply within hierarchies such as public administrations and large corporations.

V. RESOURCE-BASED CONFLICT IN KORDOFAN: A GOVERNANCE PERSPECTIVE

Conflict over natural resources has become a key preoccupation for development theorists and practitioners at least since the early 1990s, when the end of the Cold War seemed to inaugurate an era of unprecedented instability in the developing world, notably in Africa (Kaplan, 2000). Unlike conventional inter-state conflicts and even the proxy wars of the bipolar era, recent conflicts across the continent have in fact been marked by a fragmentation of state-centered political economies, livelihood systems, and mechanisms for natural resource management, which has challenged both in theory and in practice some of the key presuppositions of development work. These conflicts have typically taken place not only among formal state armies fighting on behalf of national interests and operating under the control of legitimate state institutions, but also among military and paramilitary groups fighting for narrow (sub-national or even private) interests with no formally legitimate mandates. In so doing, they have born witness to the limits of the process of state-building in several notably post-colonial African countries at least in a Weberian sense, i.e. the process that concentrates power over the means of violence in sovereign hands for purposes that can be at least formally legitimized by recourse to notions of public or national interest.

Besides exacerbating the absence of military hegemony of state institutions in numerous African countries, such conflicts, contrary to some long-held assumptions of development discourse, also point to the apparent inability of these states to perform economic functions that are conventionally associated with statehood,. According to mainstream Western narratives of statehood, state monopoly over the means of violence can in fact ultimately be sustained by state elites only if it serves a system of economic organization whose benefits can be widely, though not necessarily equitably, shared by the population of a country.[32] In the case of Western Europe, the ability of state-makers to impose a unified system of laws supported by a unified judiciary and police force over the national territory created integrated and regulated national markets, thereby reducing transaction costs associated with the expansion of economic activities and exchanges beyond the local level. This development enabled the state elites to turn the power they originally gained by military means into legitimacy proper, i.e. into broad-based social consensus around their monopoly of force, thanks to their provision of a robust physical and regulatory infrastructure for the economy, including the enforcement of property rights in a manner at least formally equal for all citizens.[33] In some cases, state investment in economic and social welfare has been an additional pillar of such legitimacy, though such investment has been mostly significant for the legitimacy of specific governments or regimes rather than for states proper. In the case of post-colonial societies, on the other hand, an important additional dimension of the self-legitimization of state-building and of state elites has often been the promise by these elites not only to provide formally equal or impartial rules to build a national economy, but also to directly mobilize national resources to realize ambitious projects of socio-economic prosperity for "the people" as a whole.

[32] See Polanyi, 2001, c1944, *The Great Transformation* (2001 edition), Boston, MA, Beacon Press.
Tilly, 1995. "To Explain Political Processes", *American Journal of Sociology*, Vol.100, No.6 (May 1995) pp. 1594-1610.

[33] See North, 1981. *Structure and Change in Economic History*. New York: Norton.
Chaudhry, 1997. *Price of Wealth: Economics and Institutions in the Middle East*. Cornell University Press.

Contrary to such "ideal" narratives of state-building and development, recent infra-state conflicts in Africa may be said to point to the failure of state elites to gain both military hegemony and developmental legitimacy – or indeed legitimacy as impartial guarantors of economic transactions. In fact, the political and economic logic of these conflicts often represents a reversal of the political economy of "ideal" state-building, since the military strategy of conflicting parties tends to revolve around the establishment of semi-autonomous and often very localized realms of economic transactions with direct access to transnational networks, where access to resources occurs neither on a pure market basis nor under a neutral regulatory authority, but rather on the basis of exclusionary forms of ascriptitious or political-military affiliation. Given the relatively under-developed economic structure of many areas involved in recent conflicts, access to natural resources in such semi-autonomous realms generally has key economic and political significance, both in areas rich in natural resources of high market value and in areas marked by subsistence-oriented livelihoods. Hence, in this type of conflict situations – and again Darfur may be a good example in this regard – access to natural resources tends to take place in ways shaped by the logic of violence, which encourages, among other things, exclusionary alignments among users, rent-seeking behavior, and unsustainable use patterns. Conversely, productive work and long-term investment involving natural resources and related livelihoods are discouraged, because they both require social trust and longer time horizons than those available to people (both "winners" and "losers") under conditions of conflict or persistent socio-political instability. Though the political economy of each conflict varies, there is thus a tendency for them first of all to redefine rights of access to resources in exclusionary ways along "identity" lines drawn or emphasized by violence, and also to transform the relationship between resources and wealth, investment and profit, economic exchange and violence in locally predominant livelihood systems, so that the second term of each pair tends to become independent of the former at least for warring elites. In this respect, the behavior of the latter may in some ways evoke, or even carry on, the predatory or rent-seeking behavior of colonial and post-independence state elites.[34] Unlike the latter, however, today's "warlords" rarely feel the need to make even rhetorical gestures towards developmental projects to justify their violent reallocation of resource entitlements, and prefer to operate within the short-term logic of continuous conflict.

Quite often Western observers have labeled this type of situation as "identity" conflict by Western observers, so as to mark the apparent absence of ideological and developmental projects behind the engagement of warring parties in violent struggles that only seem to lead to the disruption of productive livelihoods and to their replacement with predatory or rent-seeking sub-state and trans-state economies. This too has been the case in Sudan as in many characterizations of the North-South civil war as well as in early Western portrayals of violence in Darfur as "Africans vs. Arabs." The tendency to recur to the "identity" label has been in part the consequence of a surge of Western scholarly attention to issues of "identity politics" over the past couple of decades, which is only indirectly linked to the re-emergence of ethnic conflicts in Africa and in Europe. Whatever the origins, it is important to note that the growth of the discourse on "identity conflict" has often overshadowed simplistic "cultural" approaches to conflict analysis. More rarely, this discourse has been accompanied by attention to the interplay of so-called "tractable" and "intractable" factors in infra-state conflicts, i.e. to the way in which identity discourses (i.e. the "intractable") may be used by warring parties to challenge systems of resource distribution that are skewed in favor of the

[34] On the link between development, violence, and predatory semi-autonomous economies see among others Keen, "The Economic Functions of Violence in Civil Wars", 1998 and Duffield, "Global Governance and the new wars: the merging of development and security" 2001.

bearers of certain identities. In relation to Sudan, for instance, Suliman has argued that ethnic polarization in the Nuba Mountains has slowly become an independent driving force behind conflict only due to the exclusionary politicization of allocation and management of natural resources in this region, which threatened the livelihood system of ethnic Nuba farmers.[35] In turn, such politicization was itself the result both of socio-economic processes and of the politicization of identity divisions in the broader context of the South-North conflict. This argument is supported by a substantial body of literature on conflict transformation, which suggests that sub-national conflicts that are rhetorically articulated in a language of identity are often symptoms of exclusionary systems for resource management and distribution, in which identity is used as a discriminatory tool by state institutions, for instance in the context of patron-client relations. From this perspective, infra-state "identity conflicts" such as those that have plagued Southern and Western Sudan in recent years can be read as a particular political evolution of "resource-based conflicts" proper, particularly given the recurrent, though not systematic overlap between livelihood systems and ethno-racial or tribal identities in much of rural Sudan, including Kordofan.[36]

The resource-based conflict label itself is quite unspecific, since it fails to differentiate among the various kinds of resources that have been at stake in the conflicts that have scarred the African continent over the last 20 years. For instance, it may be used to refer to conflicts to control highly lucrative markets for precious minerals or clashes over the use of pastureland and water among small farmers and pastoralists. Moreover, the label fails to specify the intention of the term "based." Does it suggest that resources are a cause, or even *the* primary cause of conflict, or that they are its object, i.e. an area of impact or perhaps a goal, rather than a cause? In reality, making a definite choice for one or the other alternative may not be necessary on either point, as different interpretations are simultaneously relevant in most conflict situations, including local conflicts in Kordofan. Despite its ambiguities, what is valuable in the label of resource-based conflict, both analytically and from a policy perspective, is that it invites attention to the fact that certain infra-state conflicts can be seen as "laboratories" for the redefinition of patterns of access to economic resources, notably natural resources, in situations where state-building has failed to yield viable and/or equitable mechanisms to ensure security and non-exclusionary access to resources.

The important assumption that analysts make is that competition among resource users has grown in the past couple of decades across the developing world, both in areas characterized by resource endowments that generate large rents in the international market and in subsistence economies characterized by relative resource scarcity, as is the case in much of Western Sudan, including Kordofan. Rather than triggering "benign" adaptations in livelihood systems and patterns of resource use, as was the case "in the past," they see such competition as having reached a stalemate (i.e. borderline-conflict) or arising from conflict situations due to the deterioration of alternative livelihood opportunities caused by failed development plans, predatory state policies, and/or the crisis of local systems for resource and conflict management. For example, decreased availability of natural resources in areas affected by the Sahelian droughts of the 1980s are seen as combining together with relatively "novel" social and political conditions that prevent functional adaptation of local livelihood

[35] See Suliman, M. 1997, "Ethnicity from Perception to Cause of Violent Conflicts: The Case of the Fur and the Nuba Conflicts in Western Sudan". Institute for African Alternatives, UK

[36] See the growing literature on conflict analysis and management in projects that focus on natural resource management and conservation, particularly with a community-based approach. A good example of this literature is FAO's "Natural Resource Conflict Management Case Studies: An Analysis of Power, Participation and Protected Areas," A. Peter Castro and Erik Nielsen, eds., Rome, 2003.

systems, so that *relative* natural scarcities turn into potentially *absolute* livelihood scarcities for many rural poor. Whether or not there is solid evidence for a generalization of this argument is an open question, the answers to which require extensive field research that will clarify the theory and lead to sound policy interventions.[37] Field research conducted for this study suggests that representations of ongoing conflicts by parties directly involved often revolve around the notion that growing competition is a symptom of inequitable and unsustainable state management of natural resources, which pushes the rural poor to pursue various "exit strategies" or to seek to reconfigure power relations underlying access to resources. Given that these representations are concurrent factors behind the challenge posed by various groups to state-sanctioned resource entitlements or even to the state itself, taking them seriously is thus important even in the absence of conclusive evidence concerning the general validity of resource-based conflict assumptions about the political, or rather governance-related roots of livelihood scarcities and growing competition around natural resources.

The same is also true of a particular aspect of the supposed linkage between today's resource-based conflicts in the developing world and the failure or distorted character of state-building in post-colonial countries, namely the assumption that such linkage is affected by the growing penetration of the forces of economic globalization into post-colonial societies. In fact, some authors see the apparent growth of infra-state conflicts across the developing world as a by-product of authority crises linked to the hollowing out of state sovereignty due to globalization.[38] Others have focused on the key role played by regional and global market integration in providing unprecedented possibilities for rent-seeking behavior by para-military groups aiming to control trade of precious minerals, drugs, and even agricultural commodities like coffee.[39] In Sudan, interference into the national economy by international financial institutions may also be seen as an aspect of globalization; the same can be said of the US 1997 embargo against Sudan and the growing role played by foreign companies particularly in the oil sector in shoring up an increasingly rent-based economy. All of this suggests that economic and natural resource policies in Sudan, and therefore also resource-based conflicts, may be seen at least in part as responses to a context in which global forces and actors play a significant role. This is despite the fact that international attention to resource-based conflicts in Sudan and elsewhere has grown in tandem with the "rediscovery" of the importance and relative autonomy of local livelihood systems and political subjectivities, particularly those that are apparently pushed to the margins by the forces of market liberalization and global integration. These include livelihoods and subjectivities associated, for instance, with forest people, small farmers, pastoralists, and other social formations that seem to be relatively self-contained within the boundaries of "community."

Similar to the assumptions held by many analysts about growing competition among resource users and the increasing tendency of this competition to turn into open conflict, neither the causal power of globalization nor that of relatively self-contained "local" livelihoods and political subjectivities with regard to resource-based conflicts can be "demonstrated" with scientific finality. Nonetheless, it is worthy of note that all these assumptions are present in

[37] See Hussein, K. 1998. "Conflict between farmers and herders in the semi-arid Sahel and East Africa: A review. Pastoral Land Tenure Series No. 10, IIED, London 94 pp.

[38] See Kaldor, M. 2001 "New and Old Wars: Organised violence in a global era. Polity Press/Stanford University Press.

[39] See Klare, M.T. 2002, "Resource Wars", New York; Strange, 1996 "The Retreat of the State: The Diffusion of Power in the World Economy", Cambridge Studies in International Relations; Bannon and Collier (eds), 2003, "Natural Resources and Violent Conflict", The World Bank.

the self-representations of various "local" actors involved in conflicts around natural resources in the case studies collected for this chapter.[40] In many of these cases, interviews with local villagers and policy-makers reveal in fact a keen awareness of the differences and interconnectedness between local, national, and global processes that affect them both locally and as citizens of Sudan. The same is true in neighboring Darfur, where people maintain livelihoods and socio-political structures that span inter-state borders, and where the framework in which many socio-economic transactions take place is smaller than Sudan and yet larger than the national state, reaching for instance the livestock markets of Libya and the Gulf states. This suggests that one should be mindful of the simultaneous presence of global, national, and local factors in the economic, political, and also imaginary background of resource-based conflicts in Sudan, even though the relative weight of these factors may be markedly different particularly in areas where subsistence economies are predominant. In fact, conflicts, such as those at issue here, pose unprecedented challenges to the state precisely because they point to its inability to function as the ultimate framework in which key socio-economic transactions, including the management of natural resources, takes place.

The recognition of the complexity of resource-based conflicts requires, among other things, that the temptation to search for their univocal "root causes" and simplistic "solutions" be resisted, whether this takes the form of explanations and prescriptions focused on resource poverty or weak policies alone, or on initiatives that target the "local" livelihoods in isolation from their national and transnational contexts. On the contrary, the analysis of the literature on resource-based conflicts, as well as cases in this study suggests that appropriate solutions must come from a reconfiguration of the economic, environmental, and political-institutional realm at various levels, somewhat in line with the "sustainable livelihoods" approach of some RBC literature.[41] Appropriate solutions are likely to involve more effective and more equitable social, economic, and political governance of natural resources. It is not coincidental that decentralized governance of the natural resources draws the greatest attention in the literature on resource-based conflict. This reflects the fact that, as mentioned earlier, a great deal of resource-based literature has grown under the sponsorship of aid agencies working in situations in which poverty and limited access to resources are affected by insecurity, political instability, and institutional weakness both locally and at state level. Furthermore, in many African countries, including Sudan, rural areas face special challenges in terms of governance due to their peripheral role in state-led development plans as well as in the systems of patron-client relations that characterize state politics. Rural areas are also particularly dependent on natural resources for the survival of their population, given the low level of diversification of productive activities in most of rural Africa and the relatively underdeveloped structure of urban-rural market networks in many countries. Hence natural resource management in rural areas is a particularly delicate, but also particularly fertile laboratory for agencies interested in experimenting with governance solutions to poverty and resource scarcity or competition, and conflict itself may be an entry point into the question of how state and informal institutions interplay in managing both resources and the conflicts that may occur around them. In addition to enriching the understanding of resource-based conflicts in Sudan, focusing on conflicts may yield insights into broader problems related to natural resource access and management.[42]

[40] For a narrative of all the case studies, see the annexes to the report.

[41] See Hussein, K. 1998. "Conflict between farmers and herders in the semi-arid Sahel and East Africa: A review". Pastoral Land Tenure Series No. 10, IIED, London 94 pp.

[42] See Buckles, D. (ed.) 1999. *Cultivating Peace: Conflicts and Collaboration in Natural Resource Management*. London, IDRC.

The study approaches the issue of resource-based conflict in Sudan partly through a series of case studies and partly through secondary sources pertaining to Greater Kordofan. Particularly it looks existing patterns of conflict around the use of natural resources that are key to the livelihood systems that prevail in the area, namely sedentary small-holder farming and nomadic and transhumant pastoralism. It focuses on the already mentioned institutional setup that has contained and managed such conflicts until the present, including informal institutions linked to customary law and the Native Administration, as well as government institutions and policies.[43] These institutions and policies have in fact provided more or less effective conflict management services and also by reflecting specific policy visions and interests concerning the distribution of natural resources and their use, often played a significant role in addressing the existing resource-based conflicts and in creating an enabling environment for their occurrence.

A. Defining the question: natural resource-based conflict, institutions and the state

Conflict displays various concepts in different strands of the political, sociological, economic, and anthropological literature partly because it has a certain semantic fluidity, and partly because it is an all-around negative phenomenon or rather a normal occurrence and even a catalyst of positive change. Many students of contemporary wars and ethnic conflicts consider it to be a symptom of "global anarchy,"[44] of the breakdown of state authority,[45] or of a rush to seize control over precious natural resources in an increasingly unregulated market.[46] From these standpoints, conflict is an essentially negative phenomenon, as it leads to social disintegration, wastage of economic and human resources, and further erosion of already weak government institutions. However, conflict may also be considered as a "natural" part of the life of societies and institutions. According to William Zartman, for instance, if understood as contradiction among the many demands posed by a diverse body politic to governments, conflict is an intrinsic and healthy part of social and political life. Indeed, governance itself is nothing but conflict management, and the latter "means reacting responsively to reduce demands in a manner consistent with human dignity so that the conflict does not escalate into violence."[47]

Certain strands of sociological and economic literature have traditionally regarded conflict (i.e. lack of harmony among group interests and demands) as a symptom of structural problems that require radical change, as well as a potential catalyst for actions that may facilitate such change. One popular version of this perspective is that of the classic Marxist theory, some echoes of which are also present in the current literature of the so-called non-global movement as well as in the development literature that sustains the self-empowerment of groups that are marginal actors in the global market (e.g. indigenous groups, land-less people, etc.). This literature does not propose revolutions or support the escalation of structural inequalities into violent conflict; rather it gives prominence, locally and internationally, to such "structural conflicts," so as to focus energy to bring about positive change. In a similar vein, some authors regard conflict as a necessary trigger for change and

[43] See chapter 3 for a discussion of this institutional framework.
[44] Kaplan, 2000 "The Coming Anarchy: Shattering the Dreams of the Post Cold War. New York:Random House.
[45] Kaldor, M. 2001 "New and Old Wars: Organized violence in a global era. Polity Press/Stanford University Press.
[46] Bannon and Collier (eds), 2003, "Natural Resources and Violent Conflict", The World Bank: Washington, D.C.
[47] William Zartman, 1997 *Governance as Conflict Management: Politics and Violence in Africa,* Washington, DC: Brookings Institution Press, p.9

adaptation of institutions that may otherwise become dysfunctional over time.[48] The common element in these different arguments is that conflict does not always need to be managed, as it may point to structural factors that need to be addressed in a transformative way.[49]

Most texts use the meaning of "conflict" in a rather loose way, and regard conflict as a wide range of phenomena including lack of convergence of goals, interests, and expectations among individuals and social groups, the pursuit of actions or livelihood strategies on the part of certain groups that result in damage to others, open confrontation among actors holding conflicting interests, and finally recourse to various degrees and forms of violence against objects or people. An example of such a broad formulation of conflict is given by the authors of an FAO training package on community-based forest resource conflict management, that defines conflict as "a relationship among two or more opposing parties, whether marked by violence or not, based on actual or perceived differences in needs, interests and goals."[50] Such a broad definition seems hardly conducive to clear analytical propositions concerning the mutual implications of political, economic, and other structural or circumstantial factors in determining or resolving specific instances of conflict, let alone to recommendations for conflict management or resolution. To reach some clarity in this regard, Hussein (Hussein, 1998) suggests that conflict of interest and competition are different phenomena and carry different policy and developmental implications than violent conflict, even when the latter is apparently rooted in competition among interest groups, as is typically the case in resource-based conflicts.[51] However, most authors prefer to consider non-violent and violent conflict as different stages or possible manifestations of the same phenomenon, namely a relationship of "actual or perceived differences in needs, interests and goals." When natural resources are at stake, one may thus read of "natural resource-based conflict" to mean competition (whether violent or not) over scarce natural resources, open conflict between different kinds of natural resource users (for instance farmers and herders, or small-holders and large farmers) – whether that is specifically over such resources or also due to other factors – and finally conflict between government and/or rebel groups that is either funded via control of precious natural resources (e.g. oil, drugs, diamonds) or fought to achieve that control.

This chapter uses the first two meanings of natural resource-based conflict, although the third meaning may increasingly apply as well, particularly in oil industry areas of Sudan. The material collected through field interviews suggests that these two meanings of conflict should be disaggregated in terms of their intensity:

1. Competition or contradictory interests/needs (whether real or perceived) among different natural resource users, whether local or non-local.
2. Open confrontation between the bearers of these contradictory or competing interests through non-violent means (e.g. through resource to judicial institutions or the Native Administration).
3. Violent confrontation among natural resource users and/or political or military forces supporting different user groups, with the caveat that competition over

[48] Mathieu 1995.
[49] Gary Craig, Nigel Hall, and Marjorie Mayo, "Managing Conflict through Community Development," *Community Development Journal,* Vol. 33, No.2, p.79.
[50] Katherine Means, Cynthia Josayma, Erik Nielsen, and Vitoon Viriyasakultorn, *Community-based Forest Resource Conflict Management*, Rome, FAO, 2002, p.13.
[51] Hussein, K. 1998. "Conflict between farmers and herders in the semi-arid Sahel and East Africa: A review. Pastoral Land Tenure Series No. 10, IIED, London 94 pp.

natural resources may not be the primary factor triggering violence, notably in the case of Kordofan.

This distinction has implications for the task that formal and informal political institutions may be called upon to play. In the first and second case, this task is essentially one of conflict management, whether directly (e.g. via judicial intervention or through customary arbitration mechanisms) or indirectly (e.g. via effective and equitable natural resource management). In the third case, the task includes conflict resolution proper, which may engage both informal and formal institutions, but with different governance implications than for conflict management. In turn, this distinction between different aspects of a governance system engaged by various forms or degrees of conflict begs the question of the respective role of different (formal and informal) institutions in creating an environment more or less conducive to conflict and in addressing existing conflicts in a more or less equitable and effective way. To be able to frame this question, it is important to sketch, at least in broad terms, some conceptual and normative referents of present debates on governance and resource-based conflict. To different views of conflict may in fact correspond different ways of understanding the nature of government and the relationship between state and society, politics and economy.

One popular, perhaps rather simplistic way to characterize this set of issues is articulated in the literature on so-called "predatory states," a term originally suggested by the political economist Deepak Lal to refer to the tendency of states to extract resources from society to the benefit of government elites.[52] Although Lal argues that predatory agents exist in all states, the term "predatory state" has become a common label in the literature to indicate the polar opposite of the state as "Platonic Guardian," i.e. an entity governed by altruistic and enlightened power-holders who have no interests other than the public good. Contrary to this ideal, the predatory state is defined as one in which power-holders are interested not so much in the provision of public goods,[53] as rather in the selfish appropriation of private goods from the national economy. In extreme cases, this may mean plundering natural resources and investing little or nothing in their development. In Africa, many states have indeed maintained colonial and post-colonial regimes that lived off abundant natural resources, which have required little or no investment in human capital and socio-economic institutions.

This is not the place to debate extensively the merits of the predatory state model, either in its original formulation by Lal or in its various popular adaptations, nor to do justice to the critique articulated by Mancur Olson to the notion of a purely predatory state, based on the notion that the self-interested rationality of state power-holders always dictates the provision of at least some public goods.[54] However, at least a gesture in the direction of that model is inevitable, given the recurrent explanation in the literature of the "rationale" of states in which governments play a non-impartial role in conflict management and conflict resolution. The Sudanese case needs to be analyzed from a position of awareness of such a model, but at the same time it may benefit from other, more nuanced models that also aim to capture the political "rationale" or logic of operation of states that are quite distant from the Platonic Guardian model.

[52] See Deepak Lal, 1985. *The Poverty of Development Economics*. Harvard University Press. Cambridge, MA.
[53] Lal stresses that even predatory states do provide public goods.
[54] See Mancur Olson, 2000. *Power and Prosperity: Outgrowing Communist and Capitalist Dictatorships*. New York: Basic. In Olson's words, this would make states into "stationary bandits" as opposed to "roving bandits."

An alternative way to define state elites as non-neutral bearers of their own interests is again offered by Zartman, who acknowledges that his notion of state governance as impartial management of conflict among social groups actually corresponds to an ideal of statehood, rather than to reality. This is particularly true of post-colonial states, where state elites tend to represent a social group whose interests may be in conflict with those of others, rather than being impartial providers and administrators of the public good of mediation. Zartman links this reality to the heritage of a colonial distinction between *pays réel* and *pays légal*, which may result in a delegitimation not only of government, but even of the state *as such,* as a non-neutral, non-broadly representative party. In a similar vein, Mary Kaldor attributes the proliferation of today's local and transnational conflicts, including those that are apparently based on "greed" or "grievance" motives, to the erosion of state authority as the authority of institutions that are supposed not to be bearers of particular interests.[55] In her view, this erosion is the result of the reversal of a previous situation of legitimacy and "normal politics," i.e. the neutral functioning of state institutions on behalf of public interest due to globalization. For Zartman and others,[56] the problem instead has more distant roots in the political and economic history of colonial and post-colonial Africa.

For Kaldor and Zartman alike, one important implication of the fact that the state in many developing countries is non-neutral vis-à-vis social interests and public resources is that it may not have sufficient authority to successfully mediate among competing social interests. Indeed, to Kaldor the non-neutrality and crisis of authority of the state are such that conflicts do not result from competition over resources external to the state, but rather they are "procedural conflicts," i.e. conflicts over who control the state as a primary economic resource. A second important implication is that states that are, or are perceived as, being non-neutral vis-à-vis social interests and public resources may also be more prone to play a non-constructive or even negative role in a developmental sense. In the political economy literature on post-colonial states the "predatory state" model is in fact often presented as the polar opposite of the developmental state, because of its lack of interest in investing in development rather than in maximizing rents from natural resources, aid, or its geopolitical position. The issue is a complex one, and there is no reason to assume that a state whose power-holders have predatory interests will not be capable of investing in development, notably market development, as Dal noted. Moreover, Peter Evans has convincingly argued that there is no specific state form that is most conducive to development, as different kinds of institutional systems and different patterns of relation between government, society, and the economy may or may not lead to sound development policies and socio-economic welfare in different contexts.[57] However, many have argued that one of the reasons why natural resource-based conflict has proliferated in Sudan at various times since independence is the fact that the state has generally been representative of a narrow social group, which has influenced the developmental choices made by successive regimes and determined a clientelistic mode of interaction between state elites and the majority of the population.

In the case of Western democracies, the possibility that a mutual "contamination" between state and social interests may lead to suboptimal political economy choices has been addressed in the context of public choice theory, according to which the political realm is neither neutral nor populated by institutional actors endowed with "superior wisdom"

[55] See Kaldor, M. 2001. *New and Old Wars: Organized Violence in a Global Era*. Polity Press/Stanford University Press.
[56] See e.g. Kaplan R., "The Coming Anarchy". *The Atlantic Monthly*, 1994
[57] See Evans, P. 1995. *Embedded Autonomy: States, Firms and Industrial Transformation*. Princeton, Princeton University Press.

concerning public affairs. According to this theory, the political realm is in fact populated by actors who operate as market agents bent on maximizing private profit, which means, among other things, maximizing the number of votes one expects to obtain in the next elections, or increasing the budget allocated to one's office or agency. In the case of non-democratic states, choices may be made for the sake of maintaining political clients rather than democratic votes or maintaining control over assets that are capable of generating significant economic and financial rents.

Finally, the third apparent implication of the combination of crisis of authority and increasing competition that seems to affect many African countries and fuel conflict is the notion that a reversal of today's conflict-prone conditions may require democratization of the political process, as well as of the relationship between political institutions and the economy. In natural resource management literature, this notion is expressed through the call to strengthen local governance mechanisms for conflict management as well as for resource management in general, either to prevent excessive competition or to keep it from escalating into violence. In this vein, for instance, Craig, Hall, and Mayo write that community development has a vital role to play in managing conflicts, as well as, at least in some cases, in addressing their structural causes, thanks to its ability to empower individuals and communities to develop transformative strategies for development, including new patterns of access and use of natural resources.[58] Similarly, Michael Warner notes that conflicts over natural resources can be avoided or reduced by enhancing inclusive stakeholder participation in development projects and in the management of the resources themselves.[59] Finally, in his attempt to sketch out the main requirements for a policy framework that may enable a constructive approach to natural resource-based conflict, Stephen R. Tyler (in Buckles, 1999), stresses among other things the need to redefine the role of the state so that it can become a more neutral mediator and recognize the legitimacy of multiple resource stakeholders.[60] This process is to be accompanied, however, by an effort to valorize local interests and capacities to prevent and manage conflict: in Tyler's words, "Policy responses [to conflict, n.d.r.] should recognize and empower local stakeholders to become more effective in assessing their own needs, negotiating with other resource users, understanding and interpreting technical assessments of resource quality, and implementing consensus solutions. In short, much progress can be made in conflict management through policy responses that improve *governance* at the local level."

In what follows, each of these implications is tested against the specific context of contemporary Sudan, specifically Greater Kordofan.

B. Conflicts over natural resources in Kordofan: some recurrent patterns

To gain a sense of the range of competitive or openly conflicting relationships that exist among different users of natural resources in Kordofan, research conducted for this study has gathered information from 20 case studies from different areas in the region. The analysis does not claim to provide a comprehensive review of the existing typology of conflicts in the three possible degrees or meanings of the concept noted above, or to support general

[58] Gary Craig, Nigel Hall, and Marjorie Mayo, "Managing Conflict through Community Development," *Community Development Journal,* Vol. 33, No.2, p.79.
[59] Michael Warner, *Conflict Management in Community-based Natural Resource Projects: Experiences from Fiji and Papua New Guinea*. London: Overseas Development Institute. April 2000.
[60] See R. Tyler, 1999. "Policy implications of natural resource conflict management (Ch.14) In *Cultivating Peace: Conflicts and Collaboration in Natural Resource Management*. Buckles, D. ed. London, IDRC.

propositions about the causes and consequences of resource-based conflicts in Kordofan, let alone Sudan as a whole. Rather, the analysis of these case studies simply illustrates the range of existing tensions around natural resources.

Case studies were compiled beginning with existing records, particularly those of the Archives of the North Kordofan State Ministry of Agriculture, records of the secretariat of the two states' governments, and those of the SOS Sahel Conflict Management Project in El Obied. Open-ended interviews were then conducted with some politicians, senior government officials at the federal and state levels, Native Administration leaders, farmers, pastoralists, and civil society organizations. Based on these records and interviews, 20 cases of competition or open conflict were then chosen as samples of the variety of situations of conflicting interaction among resource users in Kordofan. These were further investigated at field level to flesh out a narrative of their occurrence and development, with special attention to outstanding governance issues that may have been implicated in their occurrence or complicated their successful management. To this purpose, field interviews were conducted to solicit the perspective of a particular group of stakeholders, namely village communities, and more specifically men of various age groups. The interviews were not meant to provide a causal account of specific cases of competition or conflict, but simply to follow up on and confirm some insights gathered from the desk review of various cases, by bringing in the perspective of some of the people involved. Moreover, given the study's particular interest in governance issues that have an impact on conflict either by leading to it or impairing its efficient management and resolution, field research investigated community members' knowledge concerning government policies about natural resources and their perception of the role played by government and Native Administration in conflict management and resolution.

A review of the narratives collected during desk and field research yields a typology of competitive or conflicting relations that essentially confirms the results obtained by other studies conducted in the region (the most recent one is the Appraisal Report by IFAD), as well as broader categorizations developed in the literature about natural resource-based conflict. Without giving a specific definition of the term "conflict," the IFAD Appraisal Report listed the following types of conflict involving: pastoralists and farmers along stock routes and in villages (mostly due to livestock encroaching upon areas or farmers cultivating land allocated for grazing); nomadic or transhumant pastoralists and leaseholders of mechanized farms (mostly caused by the fact that many farms have been set up on stock routes or grazing areas, or they have blocked access to watering points); camel herders and owners of gum arabic trees (due to the fact that many of the latter have recently begun to forbid herders from letting their animals graze on the foliage of their trees). A fourth kind of conflict was around the use of *hafirs*, some of which were originally built as water points for livestock but have recently been taken over and fenced off by farmers (notably outside investors) for horticultural production.[61]

The list included "conflicts" of various degrees, from competition over shared resources to open attrition and recourse to informal or, less often, formal mediating or judicial institutions. Sustained collective violence is more or less absent in this categorization, though such violence has been a significant phenomenon in parts of Kordofan over the past couple of decades. This may be due to the fact that the link between natural resources and inter-group

[61] IFAD Appraisal Report for the Western Sudan Resource Management Programme, IFAD, Rome, May 2004, Working Paper 1: "Socio-economic characteristics and targeting," pp. 19-20.

violence in situations such as the conflict between Baggara and Nuba around the Nuba Mountains is generally not a direct one, making it difficult to speak of "natural resource-based conflict" without adding many caveats and qualifications.[62] However, this is not an exceptional situation, since in many other parts of Sudan whenever resource user groups have taken up arms against each other there has usually been an overlap of political and resource-related factors behind their decision. Salient political factors have typically included the recently concluded conflict between the central government and the Southern People's Liberation Army (SPLA), the influence of external parties (neighboring countries in particular) on inter-tribal relations, and the growing ethnicization of Sudanese politics. All of these factors have shaped and intensified both resource competition and open violence among groups with different livelihood systems. In Kordofan, for instance, relations between the Baggara (primarily pastoralists) and the Nuba (primarily settled farmers) turned into open conflict only when the state armed the former during the 1980s to fight as popular militias against SPLA, though their different livelihood systems and resource claims had created plenty of opportunities for (mostly peaceful) competition long before that time.

The overlap of these political and resource- or livelihood-related factors in encouraging or complicating competition over natural resources is evident from the case studies and background research undertaken for this study. A poignant example is given by the following excerpt from the narrative of a case study from the village of Al Tokma (labeled as Case Study 1 in Annex 1). The length of the excerpt is justified by the fact that it sums up different aspects of the current predicament of many communities engaged in conflict over natural resources in Kordofan and facing great difficulties in managing them.

"In 1992 the conflict between the Government and SPLM [Sudan's Peoples' Liberation Movement] forces intensified, and SPLM forces occupied the rich grazing areas in the far South of South Kordofan, which used to be a good grazing area for Hawazama pastoralists from South Kordofan and Messerya pastoralists from West Kordofan. The occupied areas contained important stock routes for the nomadic tribes of Hawazama and Messerya, who are allied to the Government that has used them as militias in its fight against SPLM forces. The SPLM occupation forced Hawazama tribes to change their stock routes and start using new routes close to the village of Al Tokma, leading to progressive encroachment by livestock and by pastoralists into village lands. At the same time, and also due to the SPLM occupation of some of their grazing areas, Messerya pastoralists also began to enter the area of the village to graze their animals, although historically their stock routes had not been in its proximity. This has caused damage to the crops of village farmers, who are ethnically also distinct from the Messerya and Hawazama (who are of "Arab" origins) because they belong to the Delleng tribe, who is of Nuba origin. Despite a cease-fire agreement between Government and SPLM since January 2001 and up to the last season of 2003, pastoralists and their livestock continued to enter the area because their grazing grounds are still under SPLM forces, creating a situation in which competition over the same land has been compounded by ethnic and political factors encouraging attrition and complicating the possibility of recourse to the government as a reliable and neutral mediator. Field investigations indeed revealed that there were no official mechanisms in place to settle disputes originated in livestock encroachments, while traditional authorities such as the village Sheikh Gism Allah Bakhit found themselves lacking appropriate judicial or enforcement instruments (such as a police force) to resolve these disputes with the necessary

[62] See also Suliman, M. 1997, "Ethnicity from Perception to Cause of Violent Conflicts: The Case of the Fur and the Nuba Conflicts in Western Sudan". Institute for African Alternatives, UK.

authority. In addition, the Sheikh attributed his lack of enforcement authority (which his predecessors up to 1970 used to have) to his lack of affiliation with the ruling Congress Party, pointing at a weakening of tribal authority as at least in part a problem of formal governance. This was also evident in the fact that villagers did not approach their Amir because they claimed that he is a political appointee and the tribes with whom they are in conflict are allied to the Government, so they do not trust him to reflect their opinion or be keen to resolve the issue in a fair manner. As a result of their perceived inability to seek support from mediating institutions, the villagers resorted to burning pastureland, with considerable damage to the environment, so that the area would not attract pastoralists. Villagers also reported several incidences of threats by young herders carrying arms when confronted by farmers whose cultivated areas are encroached upon. In general, they feel that they are not part of the decision-making process and their conflict is with stronger parties who are armed and allied to the Government. They feel that it is their rivals who make the rules, or perhaps rules are made to support their rivals. Those who are supposed to protect their interests are deprived of powers (the Sheikh) or allied to the Government, hence colluding with the group with whom they are in conflict. In sum, villagers expressed a feeling of being in a state of lawlessness, which in their view justified recourse to defensive mechanisms such as burning grazing areas, even if they are also negatively affected by this action […]."

This narrative, which was compiled on the basis of field interviews, is emblematic of a combination of factors surrounding increasing competition and/or conflict over natural resources in the area, both as concerns the range of causal factors that lead to them and the ways in which their resolution is attempted or impaired. Factors that are present both in this case and in most of the others reviewed in this paper include proximity to areas of combat between the Government of Sudan and SPLM forces, the negative effects of misguided government policies both on the military front and on the developmental front, and politicization and loss of autonomy of traditional conflict management institutions discussed in Chapter 3 of this study. This combination, which is relatively "new" (contrary to Hussein's contention that conflict among farmers and herders is "always the same"), has resulted first of all in increasing competition over natural resources (land and pasture), and secondly in a source of chronic attrition that can easily turn into open violence, due to the absence of effective mediating parties and to the general availability of weapons resulting partly from government military decisions and from the North-South war.

A similar combination seems to be at play in virtually all the cases reviewed for this study, suggesting a degree of uniformity among different situations of intense competition or open conflict over natural resources both from a causal point of view and from the point of view of an impasse of mechanisms for conflict management and resolution. However, to the extent that different factors play a more or less significant role in different cases, a somewhat fluid categorization of conflict or quasi-conflict situations based on these case studies may be the following:

Conflict between farmers and herders

Conflict along stock routes and in gum arabic forests **(cases 1, 6, 7, 8, 10, 14, and 19)**
As mentioned in previous chapters, the livelihood system of different pastoralist groups (camel herders, cattle herders, sheep herders and agro-pastoralists in general) demands more or less extensive seasonal movement in search of water and forage, whose availability also

varies seasonally among different areas. Traditionally, settled communities have negotiated these seasonal movements with nomadic and semi-nomadic groups these in more or less institutionalized forms, identifying corridors for the passage of livestock and establishing clear rights and obligations to prevent damage to crops and promote the complementary use of a shared pool of natural resources. In cases of trespassing, a variety of customary mechanisms were available to settle disputes, usually based on a principle of subsidiarity, namely turning first to the lowest level of traditional authority that may handle a dispute. Since the colonial period, repeated efforts have also been made to formalize livestock migration routes, or stock routes (*Maraheel*),[63] and to develop stock route maps that are then distributed among communities through local government offices. Up until the last civil strife, there were at least 20 formally recognized *Maraheel* in Greater Kordofan.

As has been noted earlier, the use of stock routes has traditionally obeyed rules known to all stakeholders: in particular, a basic rule is that pastoralists should not encroach on farm land and farmers should not cultivate inside the routes and in their resting points. However, due to a number of changes that have taken place over the last three decades, such as expansion of mechanized farming, the civil war, displacement of people, and lack or deterioration of services along existing routes, many of the main *Maraheel* have become less viable and have been abandoned, and pastoralists have begun to stray into various bifurcations or alternative routes, often encroaching into farmland. At the same time, the combination of these changes with increased demographic pressure and lack of technology to improve the productivity of smallholdings has generated a tendency among settled farmers to expand into areas around traditional farmlands, sometimes leading them to encroach into established stock routes.

A rather common type of conflict occurs as a result of such mutual encroachment, which is not a new phenomenon per se, but is nevertheless occurring in an unprecedented situation of demographic, technological, and developmental pressure combined with environmental degradation. The conflict management capacity of traditional mechanisms may not suffice to cope with the situation even if they had not been weakened by specific government policies. A related, more recent type of conflict, pitting farmers against herders, gum arabic tree owning farmers increasingly prohibiting pastoralists from grazing on their foliage, since they realize that animal grazing on trees limits the production of the gum. This phenomenon has not been significant in North Kordofan, but it may escalate with the move of the gum arabic belt into Southern areas since the 1983-1985 droughts, settling around the eastern slopes of the Nuba Mountains. In the original location of the belt in the light Savannah of North Kordofan there are traditionally strong ties between nomadic and settled tribes, but in Southern areas gum arabic tree owners are more likely to be from ethnic groups (the Nuba in particular) who are already at odds with nomadic tribes for reasons related to the North-South conflict, and may therefore be particularly reluctant to allow them to graze on the foliage of their trees.

Conflict over the use of hafirs (cases 4, 9)

Several cases of *hafirs*, built to water livestock, are being taken over by agriculturalists (notably non-local farmers) to water horticultural enterprises set up on neighboring land to take advantage of growing market demand for horticultural products. Farmers then generally fence off *hafirs* to prevent pastoralists from watering their livestock there, thus forcing them to travel greater distances than they have planned or traditionally been accustomed to, in order to reach sites from which they can access water. The result is not only attrition between

[63] The average length of a *Maraheel* is about 180 kms, ranging from a maximum of 450 kms when the territory of more than one state is crossed, to a minimum of 100 kms. Each stock route contains around 10 camping or resting stations, where stock and men can stop for one or two days before moving again.

these farmers and pastoralists, but also overgrazing on pastureland surrounding un-fenced watering points, and an unsustainable distribution of livestock around them. In a number of instances pastoralists have misused *hafirs* built for villages and damaged them, threatened villagers claiming primary rights over them, and/or caused environmental degradation around them. In some cases, the sedentary population's growing awareness of the health hazards of allowing animals into *hafirs* meant for village use has intensified tension between villagers and pastoralists, particularly because in such situations no compromise solutions, such as negotiated sharing of the use of water ponds, may be possible due to health considerations.

Conflict around gardens (case 13)

Some farmers (notably but not exclusively non-local farmers) grow horticultural products along *wadis* and *khors*, which carry considerable amount of water and silt during the rainy season. In the dry season, these farmers depend on shallow ground water aquifers. Due to the mentioned growth of market demand for horticultural produce, an increasing number of local farmers have started to engage in this kind of production, which traditionally is a "female" realm of activity, particularly in home gardens producing mainly for family consumption and secondarily for the local market. Many have established fences around their gardens for protection from livestock encroachment. This has resulted in blocking passages for livestock towards *wadi* and *khor* water points, igniting conflict between garden owners and pastoralists.

Conflict between new settlers and Dar owners (cases 16, 17, 18, and 20).

In North Kordofan the most important *Dars*, or tribal homelands, are those of the Bederyah (around El Obied), Gawamma (Rahad and Um Rawaba), Hamid (Bara), Kababish (Sodery) and Kawahla (Um Badir). Other non-*Dar*-holding groups enjoy the status of affiliated tribes, which means that they can live in a particular *Dar* and use its resources, but their own leaders are subordinated to the authority of the *Dar*'s *Nazir*, or tribal chief, at least according to customary law. Similar to other parts of Sudan, such affiliated tribes are generally characterized by livelihood systems based on mobile pastoralism, though this may have been the case more at the time when the *Dar* system was consolidated under British domination than at present, when non-*Dar*-holding tribes may have evolved into semi-sedentary agro-pastoralist groups. In Kordofan, such tribes include the Showihat, Daju, Manasir, Bargo, Fellata and Shanabla. All of these can claim entitlements over natural resources based on their long presence in the region, though these entitlements based on the *Dar* system are inferior to those of the members of *Dar*-holding tribes, in so far as their customary authorities are subordinated to those of the tribe they are affiliated to by virtue of living in its homeland. This does not mean that pastoralists from non-*Dar*-holding tribes, or indeed pastoralists in general, can only move and use resources in the territory of their own homeland or that of the tribe to which they are affiliated. Rather, pastoralists in general customarily acquire the right to pass through and temporarily reside on the land of other tribes, depending on a complex series of customary norms regulating reciprocal rights and obligations and based on direct negotiation among concerned groups. In this system, open conflict may arise only when a group settles in the *Dar* of another group without accepting to abide by local traditions and local authority structures, or when it encroaches upon a *Dar* without previously obtaining the consent of its traditional leaders.

While this type of situation was not unknown during the pre-colonial period, under the British domination and Native Administration this type of conflict became relatively rare in the Sudan. However and as already discussed in Chapter 3, the 1970 Unregistered Lands Act

and the 1983 Civil Transaction Act paved the way for more frequent occurrences of this type of conflicts. On the one hand, by declaring the state to be the primary owner of all land not registered as private property, these Acts profoundly changed the nature of the land tenure system that had thus far been based on the notion of the *Dar* as a legitimate framework for allocating hierarchically ordered land entitlements within and among tribal groups. On the other hand, these Acts were part of a policy that weakened not only the tenure basis of the *Dar* system, but also Native Administration, which represented a system of resource management linked to the *Dar* system and also exceeded the realm of land tenure per se. Once customary tenure arrangements and resource management institutions associated with them were abrogated or subordinated to statutory law, the basis of customary conflict management was also dealt a serious blow.

In the case studies reviewed for this study, the weakening of the *Dar* system seems to have encouraged *Dar*-less tribes (traditionally, as noted, nomadic or semi-nomadic pastoralists) to claim right of settlement over areas traditionally held by other tribes as part of their respective *Dar*. When brought before state courts, such claims have at times been supported by the judicial system, not necessarily out of lack of impartiality or out of a policy of deliberately favoring nomadic or semi-nomadic groups (though many of these have been involved by the state's fight against Southern rebels), but rather because the system upholds a notion of resource entitlements based on statutory law. According to this notion, entitlements regulating settlement depend only on state ownership of all unregistered natural resources and on the (at least formally) equal rights of settlement of every Sudanese citizen over the entire national territory.[64]

Conflicts between pastoralists/small farmers on one side and Government/large private investors on the other

Conflict over mechanized farming areas (cases 2, 11)

In the research area there are approximately 2.3 million *feddans* of demarcated mechanized farms, and about the same amount of un-demarcated mechanized farms. Mechanized farms have been installed since the 1970s particularly in areas considered as "empty," and therefore as rightful state property, based on the criteria of the 1970 Unregistered Land Act and the 1983 Civil Transaction Act, i.e. on land unregistered as private holding. In many cases, these were areas that were previously used as seasonal grazing lands and stock routes by pastoralists, so that their seizure by the state and their allocation to mechanized farming schemes has very often resulted in a reduction of access to pasture, water, and passage areas for livestock owners. As noted by a researcher on the effects of concessions for mechanized schemes over the livelihoods of traditional farmers and herders in "empty" areas, these schemes often "crossed the colonial grazing lines, blocked access to watering points, and disrupted numerous important pastoral routes. As pastoral routes and corridors in the farming

[64] The state's desire to enforce the notion of citizenship unfettered by the *Dar* concept is of course a normal part of any process of state-building, which must necessarily aim at the eventual elimination of exclusionary entitlements in terms of location of settlement other than those linked to private property. In theory, such a process can win against local resistance so long as the enforcement of freedom of settlement reflects impartial policies on the part of the state vis-à-vis all citizens, and most of all if it occurs in the context of a genuine attempt by the state to constitute a social, political, and economic space in which citizenship may ensure to all equal participation in national affairs. In the case of much of rural Sudan, however, enforcement of the right of "national citizens" to settle anywhere has been carried out outside the context of such an attempt, and as part of a system of selective political rewards. Hence its destabilizing effects and its perceived illegitimacy.

areas were narrowed, incidents of crop damage proliferated with a consequent intensification of disputes between farmers and pastoralists."[65]

In addition to encroaching upon pastoralist routes, mechanized farming schemes have also in some cases taken over land traditionally used for rain-fed farming by individuals or on a communal basis at village level, particularly when this land was not continuously farmed but rather used on an annual basis or in rotational cycles. This has dealt a significant blow to the livelihood strategies of small farmers in poor rain-fed areas, who already tend to operate in the framework of a fragile subsistence economy due to the combination of environmental factors, such as low and volatile rainfall and frequent pest attacks, and other disabling factors such as the lack of adequate technological packages to improve the productivity of non-mechanized farming in these areas. Overall, crop production is traditionally a risky business for these farmers, who have over time developed various mechanisms to reduce the risk and adapt to their difficult environment. Among other things, these mechanisms include customary norms regulating farmers' access to large tracts of land where they can practice shifting cultivation. However, the government's decision to seize lands to allocate them for mechanized agriculture has deprived traditional producers from this risk-reducing strategy, gradually creating the conditions for increasing competition among local farmers, between pastoralists, farmers and mechanized agriculture scheme holders, and finally between traditional local farmers and scheme holders, most of whom are urban merchants or civil servants with political ties to the Federal Government.

Conflict over oil infrastructure **(cases 3, 5)**

Investment in oil-related infrastructure has increased considerably in recent years with the beginning of exploitation of Sudan's significant oil resources in cooperation with international (notably Chinese) companies. This is a promising sector for Sudan's economic development; hence the Government of Sudan has made a sound and inevitable decision by initiating and encouraging investment in oil extraction. However, the construction of oil-related infrastructure has caused some damage to the natural and social environment of areas directly or indirectly affected by the oil industry. Indeed, observers and interviewees argue that such construction has commonly been carried out without taking into consideration externalities such as the impact of oil infrastructure on the livelihoods of rural populations.

Several assessments of the environmental impact of oil production and transportation have actually been commissioned by the Government of Sudan. For instance, in August 1998 a report was conducted on the Muglad Basin Oil Development Project (including the oil pipeline system) for the CPECC. This report was noteworthy, because it included a section with recommendations concerning the resettlement and/or compensation of affected rural communities for damages caused by the project. However, the recommendations of this and other similar reports have not been fully implemented by government agencies in charge of developing the oil sector. On the contrary, oil investments including oil fields, roads, and a pipeline have been conducted in ways that have resulted in the blockage of traditional stock routes, in the reduction of forest areas and farmland, and in the obstruction of access to good water sources both for sedentary and for semi-nomadic populations, without adequate planning for alternatives or compensation.

Another interesting report was that produced by Talisman, a foreign oil investment company, featuring a series of satellite images collected in 2001 that showed how the water table in

[65] See Salah, 2002.

Sudan was affected by the construction of roadbeds on the Mujlud-Heiglig route. Despite their economic importance and the positive impacts they on the area, these roadbeds were shown to have negatively affected the flow of water particularly into farmland and pasture areas. However, no adequate planning was made to obviate the problems of affected resource users, including communities interviewed for this study and living around the Ballila-Kadogli road (which was also built in relation to the oil industry). The oil pipeline also had significant negative externalities, especially because it crossed village farms in many areas without local communities receiving adequate compensation, if any. In some cases, open confrontations have occurred between affected groups and pipeline/government authorities, sometimes requiring the intervention of police forces. With more oil investments being envisaged in the future, more local conflicts of this kind can be expected, unless adequate provisions are made for minimizing the impact of such investments on local communities.

Conflict over other private investments (case 15)

Another phenomenon that can be traced back to governance decisions and that has led to local conflicts over access to natural resources is the series of private investment schemes set up under the 1990 Investment Encouragement Act (IEA). These investments in many instances encompass the areas formerly covered by village farms, pastoral routes and rainy season grazing settlements, and therefore deprive different users' groups from their usufruct rights. Similar to the oil sector, the importance of these private investments to the development of the region is not in question. Nevertheless, concessions for such investments are likely to lead to conflicts within and among local resource users, because they create de facto new entitlements to resources vis-à-vis customary arrangements. Moreover, and similar to mechanized farming schemes, these concessions typically bring in outside stakeholders on privileged terms, whose interests are often at odds with those of local resource users and who, unlike the local population, can rely on clientele ties to Khartoum-based elites.

Conflicts around catchments of seasonal running water (case 12)

Runoff from torrential rains forms a number of ephemeral streams all over the research area, and there is a growing tendency by sub-federal states to establish catchments along these streams for irrigation purposes. However, assessments of the social and economic impact of such interventions are rarely conducted, if ever and in general catchments are not planned along with mechanisms to regulate and ensure adequate provision of water for both upstream and downstream users. Hence attrition can ensue between downstream and upstream users, as well as among users concentrated in the catchments area, particularly during periods of water scarcity. To date, no violent conflicts of this sort have occurred. However, the case mentioned here gives an indication of how natural resource management decisions affecting the relative availability of water resources may drive a wedge among groups of resource users not only around water ponds (*hafirs)* but also around catchments.

Table 3: Distribution of case studies among categories of conflict*

	Types of conflict	**Number of cases studied**
I	**Conflict between pastoralists and farmers**	**10**
	Over land and pasture around stock routes and in village lands	7
	Over use of *hafirs*	2
	Around plots cultivated as vegetable gardens	1
II	**Conflict between "new settlers" and *Dar*-holding tribes**	**4**
III	**Conflict between pastoralists/farmers and large private investors and the state**	**5**
	Over mechanized agriculture schemes	2
	Over areas covered by oil investments	2
	Over areas covered by other private investments	1
IV	**Conflict between upstream and downstream water users**	**1**
	Total	**20**

* Based on the sample of case studies reviewed for this paper, the most common category of conflict seems to be that between farmers and pastoralists, followed by conflict caused by settlements in *Dar* land and by disputes over mechanized farming schemes and oil-related infrastructure. However, this has no statistical value as to the relative frequency of different kinds of conflict at the regional level.

C. Some environmental and socio-economic implications of RBCs in Kordofan

The many years of civil war and ethno-political strife that Sudan witnessed until recently, and is still witnessing in areas like Darfur, have had a devastating impact on the natural and socio-economic environment, notably in those areas directly affected by the fighting between Government of Sudan and Southern forces and also those that, like Kordofan, have been on the fringes of the war. As some case studies reveal, ongoing conflicts over natural resources in some of these areas (notably in "transitional" areas between South and the territory controlled by the Government of Sudan) have resulted from the war and from its various reverberations, ranging from a divide-and-rule policy by both the state and SPLM to a preference for military rather development expenditures. Environmental degradation resulting from such reverberations as well as from natural events, such as droughts, has further contributed to feeding result-based conflicts. However, resource-based conflicts at the local level in turn contribute to further environmental and socio-economic degradation, suggesting that the relationship between conflict and environmental problems is not one of unidirectional causality, but rather one of complex interdependence.

Such interdependence is evident in, for instance, overgrazing, which is generally considered as one of the major problems of environmental degradation in the area. In part, overgrazing is a consequence of reduction in the overall availability of grazing areas, due to the expansion of mechanized agriculture, oil investments, and other investments in the 1970s and then again since the 1990s. Moreover, traditional grazing areas have also become unavailable because of climatic changes, desertification and the more or less temporary inaccessibility of certain areas due to insecurity caused by the recently concluded civil war, as well as ongoing smaller-scale conflict. This combination of factors has put pressure upon pastoralists to seek pasture away from traditional stock routes particularly since the mid-1980s, and/or to concentrate livestock in the relatively few areas that are available and viable as pastureland. In some cases such concentration has, in turn, caused lasting damage to the plant cover around water points, reducing or halting the process of plant regeneration that was traditionally made possible by customary practices regulating natural resource management.

While clearly harmful in the medium and long term, such concentration and the resulting overgrazing in selected areas has nonetheless been adopted as a suboptimal strategic option by many nomadic groups, given the absence of better alternatives in the immediate term. Moreover, while mobile pastoralists used to form small camps and travel with relatively small groups of livestock up until the late 1980s, the insecurity generated by the civil war and by small-scale, but often persisting conflicts among local resource users increasingly pushed them to move in large groups, even though this creates suboptimal conditions and even competition for resource use among group members.

Another dimension of environmental degradation is a consequence of the disruption of complementary patterns of use of land and pasture by farmers and herders. Currently, a significant number of farmers are reported to deliberately burn pasture in order to keep pastoralists away from their land, ostensibly to defend themselves and their crops and to avoid conflict. Several villages, including the village of Al Tokma mentioned above, have witnessed this kind of deliberate attacks to the local environment. The Range and Pasture Administration estimates an annual burning of about 20% to 30% in the rangeland, though not all are due to deliberate actions like the ones at issue, resulting in the destruction of between 20%-30% of the herbaceous biomass. Frequent fires have also affected perennial grasses. The government-sponsored study of rangeland in South Kordofan has argued that, if fires were prevented, the land could support a 43% increase in livestock biomass and this would greatly increase the number of trees, shrubs and tall coarse grasses.

Besides pastureland, conflict has also led to degradation of water sources, partly due to pressure over existing water points not fenced off or blocked by mechanized farming schemes and horticultural gardens, and partly due to a decision by some communities to stop maintaining water points so as to avoid conflict around them. Among the communities visited during fieldwork, for instance, that of Al Korogol in South Kordofan (case 4) reported deliberately neglecting maintenance of their *hafirs,* because these used to attract pastoralists. In their view, this is a necessary measure to avoid conflict that may ensue from the arrival of pastoralists in the area, an occurrence that would have been regarded as normal until the early 1990s, when there was less mutual acrimony and suspicion between farmers and herders.

Finally, many reports state that forest cover in the research area is witnessing a continuous decline, though quantitative estimates concerning this phenomenon differ. This is due partly to the cutting down of trees to make room for oil concessions, infrastructure, and farming schemes, and partly to problems that have recently occurred between pastoralists and owners of gum arabic gardens, following the decision by the latter to fence off trees to prevent pastoralists from grazing camels on the foliage. This is not yet a statistically significant occurrence, but it is a novel and potentially dangerous one, as it has already pushed some groups of pastoralists to force their way to gum arabic forests by felling trees. Moreover, farming groups have also been engaging in tree cutting to take advantage of growing urban market demand for forestry products (mainly charcoal and wood), that are partly shielded by the absence of clear and efficient law enforcement mechanisms for forestry control. This is particularly a problem in South Kordofan, where deforestation is not only an environmental concern but also a process fuelling conflict due to the importance of forest products in the livelihoods of both nomadic pastoralists and settled communities.

On the social level, the case studies evidence the intersection of resource-related and "social" factors as the important aspect of the complexity and overlap of causes and effects in conflicts among resource users in Kordofan. Often local disputes over natural resources result

from the displacement of people escaping from areas of fighting, since these newcomers cannot always be accommodated smoothly among local resource users. Alternatively, groups that have engaged in combat elsewhere may return to their areas of origin carrying weapons and with a more contentious attitude towards their neighbors than they, or their elders, had in the past. In other cases, resulting from the emergence of new sources of competition over local resources, groups, such as pastoralists who lose grazing land in their homeland or traditional stock routes due to mechanized farming schemes, may have lost their livelihood base in a given area, and may become "permanently" displaced and move more or less continuously across *Dars*. In the process they may enter into conflicting relations with the various groups they encounter on their path.

Another important and much-studied dimension of conflict in this part of Sudan is the overlap of natural resource-based and ethnic divisions, which results either in the ethnicization of divisions that are rooted in competition over shared resources or in the disruption of formerly collaborative patterns of resource use due to ethnic polarization and loss of trust among tribal groups. As Mohamed Suliman, among others, has shown, even conflict situations that are rooted in competition over resources, as in the fertile land around the Nuba Mountains, may take on a logic that is partly independent of natural resource arrangements, if other factors like ethnicity become prominent in the social and political background. These factors may initially be only an ideological veneer covering resource-based interests, but once they are significantly mobilized by conflicting parties in their interactions they tend to invest conflict with a self-perpetuating force that is not likely to be eliminated by recourse to resource-based solutions alone. The government's decision to mobilize certain ethnic groups, notably "Arab" pastoralist groups, in its fight against Southern rebel groups has been a factor encouraging ethnic polarization of resource-based competition in Kordofan. This decision has contributed to polarizing relations between neighboring groups like the Nuba and "Arab" nomadic groups because of the ethnic affinity between the Nuba and the SPLM on the one side, and the "Arabs" and ruling elites on the other.

Also on the social level, the cause and effect of resource-based conflict in Kordofan has been the disruption of institutions upon which resource management has traditionally been based until the present, despite repeated policy decisions formally undermining their validity. This is particularly the case as concerns the institution of the *Dar*, which formed the basis of land tenure and more generally natural resource arrangements in rain-fed areas of Sudan at least from the early colonial period. In its already discussed attempt to replace traditional customary norms with state-centered norms for access to and management of natural resources, the Federal State has weakened the institution of the *Dar* perhaps beyond its own intentions. However, because of its failure to replace that institution with a sustainable and equitable system of entitlements that meets the needs of a variety of local stakeholders, the state de facto put *Dar*-holding groups as well as *Dar*-less people in a situation where there are no clear mechanisms defining and enforcing rights and obligations vis-à-vis natural resources. Partly as a result of insecurity and displacement caused by the civil war, individual attempts to by-pass *Dar*-based arrangements, such as attempts by certain *Dar*-less groups to settle in areas informally regarded as belonging to particular tribal groups, have further weakened the ability of this institution to continue to organize access to resources at least informally (see case studies 17 and 18). Against this background, the government has not always played a constructive role by choosing to ignore or even encourage such attempts, notably by creating new formally recognized entities within well-known *Dar* boundaries, such as the Emirate of the Shewihat, a landless tribe in the Bederiya *Dar* in North Kordofan. In another case, the government has attempted to create a similar entity for the Bargo, another

landless group. In both cases, reasons of political patronage and a desire to reward these groups for their loyalty to the government appeared to be at play, overruling the significance and relative functionality of *Dar*-based arrangements previously tolerated, though not formally sanctioned by government authorities. The result has been to create situations of potential conflict over natural resources on the one hand, and to undermine the authority of Native Administration institutions on the other, which may at least in principle play a more effective role in conflict management and conflict resolution.

The crisis of *Dar*-related institutions and of the Native Administration points to another major social aspect of recurrent resource-based conflicts and of the reverberations of the North-South war in Kordofan, namely the erosion of social trust and more generally of social capital within and among rural communities. This includes the decline of collaborative relations among social groups, whether settled or mobile, as well as the erosion of people's trust in social and political authorities, whether related to Native Administration or to the government. The politicization and/or increasing ineffectiveness of Native Administration authorities have undermined their credibility as truly representative and authoritative entities among many rural people, particularly younger generations growing up in the shadow of continuous conflict. On the other hand, the non-neutral role played by the Government of Sudan and by federal political elites in some cases of conflict, particularly those involving private investors or newly settled *Dar*-less tribes, has eroded whatever beliefs people may have held in previous decades concerning the relative neutrality of the state and its genuine commitment to promoting national development. Field interviews suggest that many people in Kordofan hold a patrimonialist, if not altogether predatory, view of the state as an instrument of power in the hands of a specific group or party, which is mostly used to maximize the welfare of that group and of its clientele. Though this view has roots that go further back in time than recent conflicts, the recurrence of small-scale disputes over natural resources in the past couple of decades, combined with the effects of the war between the Government of Sudan and SPLM, seems to have intensified a perception of the state as a self-serving, if not altogether hostile entity. This is particularly the case among communities that have seen government institutions working against local interests, for instance in areas where the army has cleared forests for trading (case 9), where the Water Corporation has taken over water facilities established with community resources (case 4), where the State Ministry of Agriculture has distributed land to outsiders without local involvement thereby disrupting local livelihood systems (cases 2 and 15), or where the legal system has challenged the principles of the *Dar*, on which local tenure security depended (case 18).

The deterioration of social trust among local groups has thus gone hand in hand with their growing disaffection vis-à-vis political authority, possibly paving the way for yet more conflict, given that many rural people today bear arms, partly as a result of their involvement in the conflict between the Government of Sudan and SPLM. The younger generations particularly among pastoralists are especially affected by this, since many youth have grown up in a violent environment where recourse to weapons is an easily accessible, more effective alternative to seeking traditional arbitration or turning to the judicial system. In spite of this, many communities are still able to find mechanisms to prevent disputes from escalating into open violence, and some have also been able to continue to use either Native Administration or government institutions to seek a resolution of open conflict situations. In other cases, affected communities have entertained the idea of taking up arms to defend their livelihoods (case 7), and others have decided to abandon their land and to migrate, despairing of a successful resolution of ongoing conflicts (case 2). In all cases, the interviews suggest that a combination of factors is at play whereby increasing competition over natural resources

and/or an increasing tendency to address competition through some form of conflict are partly related to policy decisions, whether these concern natural resource management, developmental choices, or institutional interventions that have undermined certain conflict management mechanisms. At the same time, neither Native Administration nor government institutions appear to be able to contain and redirect constructively such competition, let alone open conflict, both because of their ineffectiveness and because of the erosion of social trust, which is also an erosion of the legitimacy foundations of institutions as mechanisms of conflict management and resolution.

Conclusions

The above review of cases of resource-based conflict in Greater Kordofan and the brief analysis of governance institutions in Sudan suggest that poor governance contributes to this kind of conflicts at least in two ways: (1) as a direct or indirect cause of their outbreak, notably via certain resource management and developmental policies; and (2) by creating an institutional, policy, and legal environment that is not conducive to efficient conflict management and/or resolution.

This does not mean that governance factors are the only or primary cause of conflict, as is evident from the case studies. In particular, phenomena such as repeated droughts, desertification, and environmental degradation have contributed to resource scarcity, paving the way for competition. To this must be added the consequences of instability and war in neighboring areas, which include displacement of population, inaccessibility of farm and pastureland in certain areas, inability or unwillingness on the part of various groups to respect stock routes, and deterioration of social capital. Other concomitant factors behind competition include expansion of farmland due to population as well as market-driven increases in animal stocks.

While the resolution of the war between North and South is evidently a governance issue, not all the other mentioned factors, such as the management of natural resources and livelihood systems based on them, immediately appear as such, particularly if governance is seen as primarily a function of state institutions rather than as encompassing the activities of a variety of stakeholders. However, field research and the review of secondary literature on resource-based conflicts in Sudan suggest that policies, legislative choices, and both formal and informal governance institutions play a significant role in either paving or complicating the way for conflict resolution. This role sometimes amounts simply to an intensification of the negative effects of other factors and sometimes to a failure to defuse them, for instance through appropriate development planning or through equitable and stable systems of access and use rights.[66]

[66] To give some concrete examples of the intersection of environmental or economic factors and governance issues in creating conflict-prone situations, it can be noted that one of the reasons why small farmers have been enclosing farmland and excluded pastoralists from access to traditional grazing land is the unavailability of technologies that may increase the productivity of available holdings, so as to meet the needs of a growing population without extending the surface of cultivating plots and reducing or eliminating fallow periods. This is in turn largely a reflection of misguided policies on the part of the state, which have privileged developmental strategies that marginalize livelihood systems based on small-scale farming. Another economic factor that has paved the way for greater competition over resources, namely the increase in the number of livestock maintained by pastoralists and agro-pastoralists in Kordofan, may be partly linked to economic liberalization

To refer back to the earlier discussion of different problematic models of state politics, it could be argued that the case studies reviewed for this study suggest the relevance of a combination of traits marking different models in the case of Sudan in general, and Kordofan in particular. The earlier discussion of the hegemonic claims articulated by the central government vis-à-vis natural resources (notably land) starting in the 1970s suggests the combination of some traits of predatory statehood with those of an authoritarian developmental state. On the one hand, state legislation and policies concerning land in Sudan have been consistently marked by the state's desire to assert not only sovereignty, but actual ownership over all land not registered as property in a modern sense, i.e. with a connotation of exclusivity.. This assertion has generally been presented in public discourse as a necessary precondition for post-colonial state building and as a necessary step in the direction of economic modernization and development. At the same time, this same assertion and the particular modalities of its occurrence have enabled state elites to undertake predatory actions vis-à-vis land resources by distributing them as political rewards to their clientele, thereby extracting political rents from them, and/or by using control over land as an enabling factor in the pursuit of rents from other resources, notably oil.

In principle, there is no solid reason to doubt the sincere intention of the state to promote a "bread-basket" development policy during the first decades after independence, particularly, since at the time success in this endeavor would have served not only developmental purposes, but also shored up the process of state-building and its legitimacy, by enabling a system of revenue generation based on taxation rather than on rents. Reliance on the latter has however been a dominant aspect of Sudanese politics at several points in its history, and it may be growing today as the oil industry takes on increasing importance in the federal budget. In general, the states' reliance on rent (particularly post-colonial or new states, i.e. states that lack solid institutional roots in their societies) tends to reduce the importance of creating a sustainable economic basis for governance in the eyes of state elites. In Sudan, too, sufficiently high oil rents accruing to state elites may in principle allow the state to insulate itself to a growing degree from the real economy, making investment in natural resource management and in rural development even less of a priority than appears to have been the case since the times of the bread basket policy. The cases reviewed in this study suggest that so far, whenever the state has faced a choice between facilitating the development of the oil industry and protecting local livelihood systems based on farming or pastoralism, oil interests have been given priority, without serious consideration for impact on livelihoods. However, the present commitments of the state under the Comprehensive Peace Agreement, combined with the un-sustainability of a situation of recurrent small-scale resource-based conflicts in many parts of rural Sudan, may provide a powerful incentive for the state to devote greater attention to restoring sustainable rural livelihoods and equitable resource management

policies promoted by the government in 1992. These have resulted in increasing production of livestock to meet rising demand on export markets, which has not been accompanied by appropriate measures to buffer the impact of increased animal production on the socio-economic and natural resource environment of regions such as Kordofan or Darfur. While the share of animal products in total exports increased from 11.6% in 1990 to 28.7% in 1998, data from the Animal Resource Department in Kadugli shows that cattle and camel numbers increased by 17% and 71% from 1993 to 2001, respectively. The resulting pressure on land and pastures has been accompanied (and partly caused) by lack of development of technical packages that may encourage investing to improve quality rather than to grow quantities of livestock, as well as of government investments in improving and protecting rangeland and water resources.

institutions, despite its growing financial independence from the rural economy (including export-oriented livestock production).

Finally, there are two aspects of Sudanese politics that must be taken into consideration in envisioning future governance solutions less conducive to resource-based conflicts. These are the geopolitical and ideological connotations of contemporary Sudan. At various stages in its development, developmental socialism, pan-Arabism, and political Islamism have played a role in marking the attitude of the Sudanese state vis-à-vis the mosaic of populations and livelihood systems that characterize the country. This has had important implications in terms of state attitude towards the Native Administration and customary systems of land tenure and access to resources, which developmental socialism perceived as an obstacle on the path of post-colonial emancipation and modernization. Secondly, the Arab nationalist orientation of various Sudanese regimes has sometimes led to policies that privileged certain livelihood systems associated with Arab populations in areas like Darfur, while elsewhere the tendency has been to favor the interests of sedentary farmers, most of whom are of non-Arab origin, over those of pastoralists, who are often Arab.

In the context of the recently concluded civil war between the Federal Government and Southern rebels, Islamist ideology and Arab ethno-politics have combined to yield a distinctive pattern of alliances between government elites and different ethnic groups in states more or less marginally involved in the conflict, including Kordofan. At the local level, moreover, the ethno-religious character of the civil war has resulted in changes in the local political economies of natural resource management, not only by causing population displacement and movement of stock routes along ethnic lines, but also by disintegrating complementary relations between groups of resource users that the war placed on opposite sides, sometimes due to their ethno-religious affiliation or to their participation in the fighting This has been, for instance, the case of the Nuba Mountains. In such cases, the state's sort of "war clientelism" has affected the balance of power among resource users in such a way so as to force de facto changes in patterns of access and resource use, which have sometimes struck roots, despite not being sanctioned by any formal developmental plan or institutional authority. Thereby a sense of lawlessness was fuelled among local populations that may ignite, or re-ignite, conflict.

In sum, the main traits of Sudanese state politics that appear chiefly responsible for creating an environment conducive to resource-based conflicts from the review of the case studies are a patron-client approach to politics, failed or ineffective natural resource management and development policies, and top-down government institutions. The first factor can be noted in the state's discretionary allocation of land, farming schemes, and investment concessions among various private interests, as well as the discretionary allocation of various resources by the ruling party to states and localities. The second factor points to the limits of a process of investment in rural development, both in terms of planning and in terms of managing natural resources in sustainable and equitable ways, including the creation of institutions capable of managing and/or resolving potential conflicts. Thirdly, the case studies repeatedly bring up a problem of lack of accountability of institutions and policymakers to rural stakeholders, notably poor farmers and pastoralists, which discourage compliance with existing natural resource policies, as well as recourse to formal institutions in cases of unsustainable competition or open conflict among resource users.

While it is important to stress once again that this is not to suggest that poor governance is the main or exclusive cause for competition and/or conflict among resource users in fragile areas of rural Sudan like Kordofan, it seems reasonable to suggest that improving governance may help contain this competition by providing a more favorable environment in which natural resource management and resource-related problems can be addressed efficiently and equitably without escalating into violent conflict. Put differently, improving governance at various levels of formal and informal government is a necessary, though probably not sufficient step both to remove some of the concomitant causes of conflict and to improve mechanisms to manage and solve it if it occurs. Hence appropriate governance reforms should focus on improving both the capacity and the equity of natural resource management and conflict management institutions. They should reflect a desire to reconcile as much as possible the entitlements of local users with government concerns about the needs of an integrated national economy. In turn, the latter should remain a key goal of Sudanese politics despite the current rentier orientation of the state. In this endeavor, the Government of Sudan has in fact a primary stake in addressing governance problems resulting in resource-based conflicts, given its current commitment to the Comprehensive Peace Agreement with the SPLM, which includes deep-reaching reforms of institutions at various levels, including natural resource management. Against this background, paying attention to the governance-related aspects of natural resource management and resource-based conflict is of pressing concern for the Government of Sudan in terms of internal security and political stability, notably in light of the lesson from Darfur). Moreover, the Government of Sudan also has an economic and developmental stake in promoting rational and inclusive natural resource and resource-based conflict management, in order to strengthen the Sudanese economy and provide a more solid and autonomous basis to local institutions than what can be provided by the federal budget. Perhaps most important, appropriate governance reforms concerning natural resources and resource-based conflict are key to shore up the relative financial autonomy of the state with a process of stable self-legitimation, which can only come from the recovery of a novel, non state-centered developmental project that may truly contribute to the creation of a cohesive, though not centralized or uniform socio-economic fabric for Sudanese society.

VI. MEASURING COMMUNITY CAPABILITIES

This chapter describes the methodology and the main results of the community capability survey conducted in the framework of this research with a sample of 85 randomly selected rural communities in the period from June to September 2004. The assessment of community capabilities covered both North and South Kordofan. At the time when fieldwork was conducted, West Kordofan still existed as a state. However, as its subsequent absorption into North and South Kordofan was expected, field research was carried out with the assumption (later confirmed by the Comprehensive Peace Agreement) that the southern and northern parts of West Kordofan would become parts of, respectively, the states of South and North Kordofan.

A. Research methodology

Conceptual framework

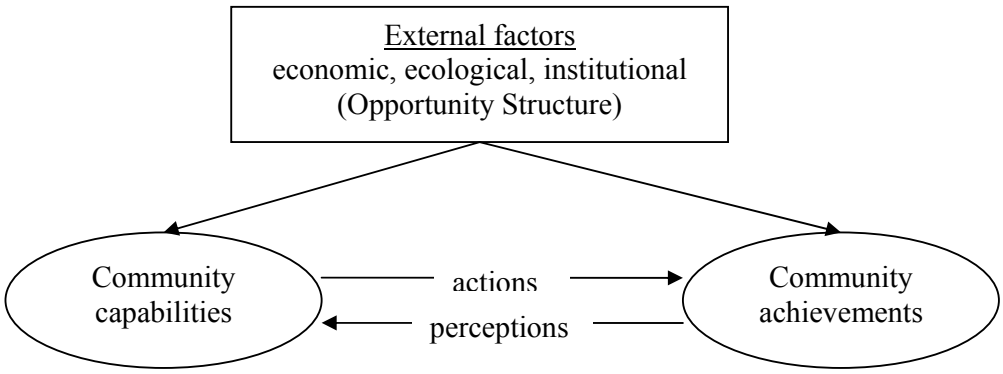
The main reference for the survey design was the model of empowerment developed by Khalid El Harizi,[67] which formed the starting point for the development of a Community Capability Index (CCI) that includes a broad range of factors of key relevance for measuring community capabilities. The model builds on the concepts of agency and capability as developed by Nobel Prize winner Amartya Sen in his book "Development as Freedom". Agency is the attribute of an entity that has a degree of autonomy and freedom in decision making. The concept of capability is a measure of an agent's capacities in terms of achievements of its own goals (agency attribute) as opposed to more conventional measures of capacities in terms of skills. In the model of empowerment, capabilities are specifically defined as a combination of skills, assets and attitudes that define the range of achievable objectives or targets of an agent. In this sense, capabilities provide also a measure of the range of available options to an agent, and therefore they also provide a measure of its freedom of choice.

The study hypothesizes a feedback relationship between capabilities and achievements, where achievements are considered to be improvements in well-being, as defined by the agent. Capabilities are thought to increase achievements, but achievements may, in turn, influence capabilities through the agent's perceptions or attitudes, as illustrated in figure 1:[68]

[67] Khalid El Harizi: Project Report no 1: *A Model of Empowerment*– IFPRI/DSGD: Empowering The Rural Poor Under Volatile Policy Environments In The Near East And North Africa Region, Draft, Dec. 2003.

[68] This line of analysis is pursued in section B of this chapter.

Figure 1: Feedback relationship between capabilities and achievements



Selection of Villages

Two localities were selected randomly from South Kordofan (Abu Gibaiha and Dilling), and two from North Kordofan (Bara and Gabrat El Sheikh). A number of villages was then selected from each state in proportion to the size of the rural population in the two states (namely 1.5 million in North Kordofan and 1.1 million in South Kordofan), as well as to the number of villages existing in each pair of localities (namely 2,568 in North Kordofan and 1,500 in South Kordofan). The result was a total of 85 villages randomly selected for inclusion in the survey, 46 of them from North Kordofan and 39 from South Kordofan. The sample size represents 2% of the total number of villages.

Table 4 : Capability categories and weights

Level of autonomy (agency)	20 points
Ability to take initiative	15 points
Ability to manage village funds	16 points
Ability to organize	14 points
Ability to manage communal lands	15 points
Level of Achievements	20 points

The Community Capability Index and survey questionnaire

A panel of seven experts identified six main categories of factors, corresponding to a total of 44 indicators weighted to yield a maximum score of 100 points on the overall index. Table 4 lists these categories and their respective weights. The choice of indicators and categories was guided by the definition of capability presented in the above-mentioned model, with a focus on the ability of communities to manage funds and communal lands. Ability to organize and take initiative was taken as a key indicator of the group's attitudes and perceptions concerning its ability to achieve its goals, while the level of autonomy or agency of the community with regard to natural resources was chosen as an index of the

community's control over its assets.[69] Using the instruments of the Social Capital Assessment Tool (SOCAT)[70] developed by the World Bank, a survey form was subsequently designed to suit the purpose of the research, namely to measure and understand the enabling factors behind community capabilities in the realm of natural resource management.

Data Collection

Teams of enumerators from each state were trained to conduct the survey. The training phase included the testing of the survey format in at least two villages in each state. The aim of this testing was to reach a common understanding of the questionnaire and to make sure that questions were clearly asked and easily understood by villagers, as well as actually relevant to the context of Kordofan. This phase resulted in minor amendments to the original questionnaire, after which three teams were deployed to implement the questionnaire in each state.

Hard copies of the questionnaire forms were filled out in the field and later documented using EXCEL spreadsheets. The data were primarily analyzed using SPSS statistical software and then further tested for robustness of the capability index (see Chapter 7) using regression tree analysis (CART software).

The questions in the survey covered the following areas:

1- Community identification or main characteristics of the village, including its location in North or South Kordofan, its participation in donor-funded development projects or lack thereof, its geographic coordinates, etc.
2- Main characteristics of households, including their number in each community, their main sources of income, and the average quality of life.
3- Main infrastructural services present in the village, including potable water, markets (or access to markets), availability of means of transportation, etc.
4- Presence of labor out-migration.
5- Educational services and facilities, including primary schools and adult literacy programs.
6- Healthcare facilities and health situation of the village, including rates of female circumcision, presence of health clinics, doctors, midwives, etc.
7- Main environmental issues faced by the community, such as land demarcation, range and *hafir* management, presence of land conflicts, etc.
8- Agricultural activities, major crops, and agricultural services (including markets and credit services).
9- State of social solidarity networks within the community, including the presence or absence of community development committees, particularly active community members, and reactions to environmental shocks or failures.

[69] Ostrom, Elinor. CIFOR Occasional Paper No. 20: Self-Governance and Forest Resources.
[70] The Social Capital Assessment Tool (SOCAT) is a set of quantitative and qualitative tools to measure various factors that enable collective action in a particular realm. Its focus is on social networks and norms and on the way in which they affect individuals' and groups' opportunities for action and for access to resource, with a focus on community responses to policy changes. The tools include interviews, surveys, and questionnaires to be used both at the household and at the community level. See for instance Christiaan Gootaert and Thierry van Bastelar, eds., *Understanding and Measuring SocialCcapital - A Multidisciplinary Tool for Practitioners*, Washington, DC: The World Bank, 2002.

10- Community Capability Assessment, measured in the form of a score on the Community Capability Index based on the following categories or aspects of capability:

- Autonomy
- Initiative
- Ability to manage funds
- Ability to organize
- Ability to manage communal land resources
- Previous achievements

Main Findings

Interviewed communities averaged 54 points on CCI, with a near-normal distribution across villages (Figure 2). A large majority of communities (73%) had an index comprised in the 45% to 65% interval. One out of seven communities displayed low or very low capabilities (below 45%), while one in nine communities reached very high scores above 65%.[71] Subject to confirmation of the robustness of the index, it can be concluded tentatively that the measure of community capability for self-governance of natural resources is able to capture a wide range of variations between communities. It provides a three-mode picture of community capabilities with a large and compact group around the 55% mark and two roughly equivalent groups of communities on each side of the curve.

Analyzing the 6 dimensions or categories that constitute the original index, marked differences can be observed between the scores (Figure 2): autonomy and initiative categories score at above 85% of the maximum score of their respective categories, while at the other extreme, fund management and organization score very low at respectively 6% and 21% of the maximum score. Finally, land management capabilities at 66% and actual achievements at 40% have somewhat intermediary scores. Overall, Kordofan rural communities seem to have good agency capabilities in pursuing their own goals and ability to take initiative and display reasonably good capabilities for land management, a fact which is not surprising to the extent that the livelihoods of the rural population in Kordofan still depend to a significant level on the exploitation of natural resources. However, their capacity to achieve these goals is limited. This may be explained, at least in part, by the fact that organizational and money management capabilities are inadequate, thus suggesting possible areas for priority attention in building community capabilities.

[71] These extreme cases will be analyzed in the last section of this chapter with a view to provide further understanding of the determinants of community capabilities in comparison with the outcome of the data analysis.

Figure 2: Community Capability Distribution

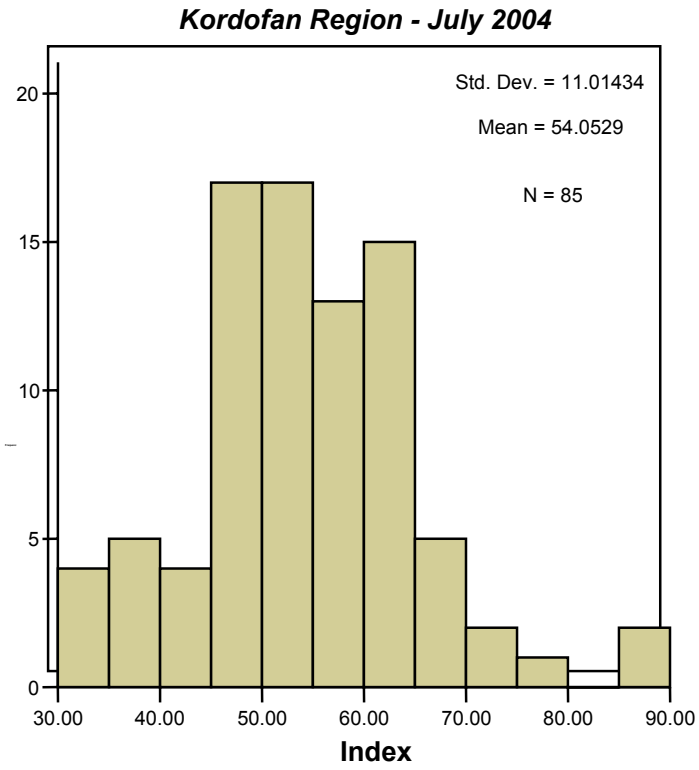
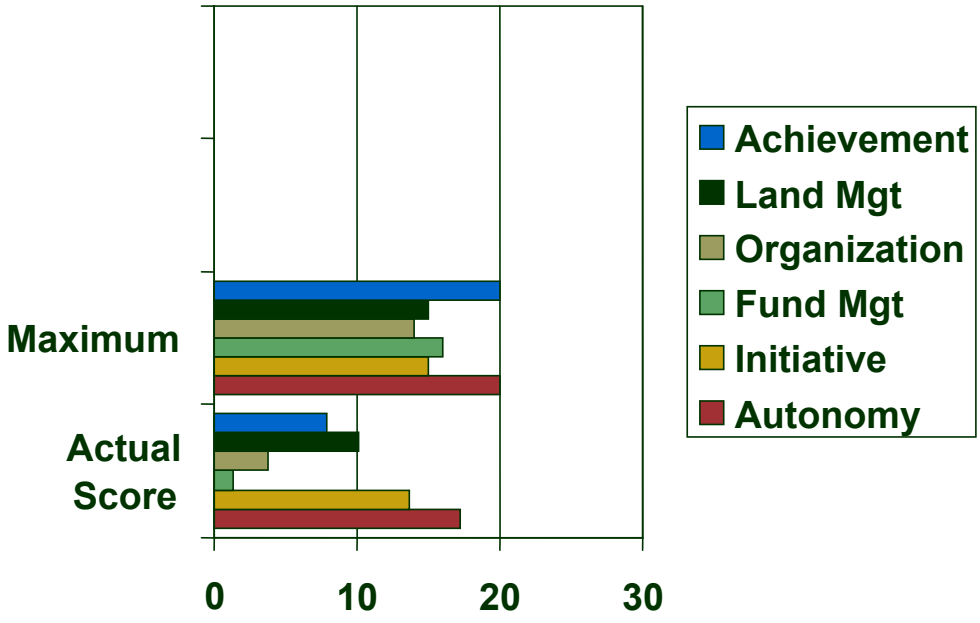


Figure 3: Maximum and actual score by category



Regional variations

The survey results showed significant regional differences with respect to village size and location, household number, access to market, access to primary school, and distance from nearest town, as shown in Table 5. There was also some difference in the sub-regional average scores on the CCI, with 57 points in South Kordofan, where natural resources are more abundant, and 52 points in North Kordofan.

Table 5: Key indicator averages for the 85 surveyed communities (by region)

Variable	S. Kordofan (39 communities)	N. Kordofan (46 communities)	Total (85 communities)
Community Capability Index score	57	52	54
Village size	100-249 households	50-99 households	50-99 households
Primary school access	72%	46%	58%
Village market access	23%	15%	19%
Participation in IFAD project	15%	21%	18%
Pastoralist villages	0%	26%	14%
Distance from nearest urban center	51 km	87 km	70 km

As for other elements of variation, the average village size of surveyed communities was larger in the South, with 100-249 households per village compared with 50-99 households in the North. The South Kordofan sample also had higher rates of primary school access (72% of villages compared to 46% in North Kordofan) and village market access (23% of villages against 15% in North Kordofan). In contrast the sample from North Kordofan was characterized by a higher rate of participation in IFAD co-funded projects (21% of villages against 15% in South Kordofan). Villages surveyed in North Kordofan were also on average more distant from urban centers and included a 26% rate of villages based on pastoralism as a main type of livelihood, compared with 0% in South Kordofan.

Cross-regional findings and concomitant/predicting factors for CCI scores

Survey results also pointed at a number of correlations between CCI scores and concomitant factors among those investigated by the questionnaire.[72] While bivariate analysis is useful for the pre-selection of predictors of community capability, it does not provide a definitive answer to the question of the determinants of these capabilities. This is because the effect of one factor on the dependant variable (here CCI) is different when taken alone or in combination with other influencing factors. The analysis of determinants of community capabilities for self-governance of natural resources requires other methods, in particular multiple regression techniques, the results of which are presented in the next chapter. As a result, the following findings regarding the correlations between CCI and individual factors should be valued more for their contribution to the characterization of the rural communities and their decision making environment rather than as predictors of community capabilities.

[72] More detailed results from the survey can be found in the Rural Communities Capability Assessment Survey reports by Ghada Shields and Babo Fadlalla.

Bivariate analysis showed that CCI varies significantly in correlation with participation in IFAD programs and village size. The positive correlation with village size is presumably linked to better access to services, especially health and education. However, there are also negative factors associated with large village size, notably a higher risk of depletion of range and forest resources due to the excessive demands posed by sizeable population groups on what is often a fragile natural environment. In turn, such depletion tends to lead to socio-economic phenomena that may debilitate community capabilities, notably migration or at least regular commuting of household labor over significant distances for farming or grazing animals. Livestock also tends to be negatively affected by such phenomena, because it has to cover greater distances to reach pastureland and water points. The effects of increased movement imposed onto livestock can be rather significant, as shown by the results of studies conducted in the project area, to the effect that sheep that are forced to move 20 km/day between water and grazing points during the late dry season lose as much as 29% of the energy they get from the scarce and poor-quality herbage on which they graze.[73]

Among other concomitant factors of community capability for self-governance of natural resources, the survey showed that public primary education for both boys and girls is generally low among all communities; only 58% have access to public primary schools that are not always in the village itself. Nevertheless, access to a primary school may hold some value as a predictor of the capability level of a community, in so far as this factor is somewhat correlated with other factors such as size and wealth of a community.

The remaining concomitant factors did not appear to have significant power as predictors of CCI scores.

Availability of services

Preliminary findings did not show a great impact of this factor on the CCI score of a particular village. In general, this may be due to the fact that the state of social and infrastructural services tends to be rather poor across the region, particularly in certain sectors. For instance, the health sector is characterized by poor availability of services, with 70% of the surveyed communities lacking a clinic or hospital, and as many as 99% lacking a sufficient number of physicians (Table 6). Major health problems affecting a sizeable percentage of the population are malaria, diarrhea, and chest infections. Pregnancy and delivery-related diseases are also statistically significant, and together with the recurrence of female circumcision (which is legal in its minor form, but nonetheless widely practiced also in its more extensive, or "Pharaonic" method) they make for a poor health situation of the rural female population across the study area.

[73] Babo Fadlalla, "The dry season nutritional status of transhumant Baggara sheep, Sudan." Proceedings of the International Conference on Animal Production in Arid Zones, Part 2, Damascus (Syria): Arab Centre for the Studies of Arid Zones and Dry Lands and Arab Organization for Agricultural Development, 1987.

Table 6: Availability of health clinics, basic medicines, physicians, nurses, and midwives

Health clinic/hospital	Frequency	Percentage
Yes	25	29.4
No	60	70.6
Total	85	100.0

Basic medicines	Frequency	Percentage
Sufficient	7	8.2
Insufficient	9	10.6
None	69	81.2
Total	85	100.0

Physicians	Frequency	Percentage
Sufficient	1	1.2
Insufficient	3	3.5
None	81	95.3
Total	85	100.0

Nurses	Frequency	Percentage
Sufficient	5	5.9
Insufficient	10	11.8
None	70	82.4
Total	85	100.0

Midwives	Frequency	Percentage
Sufficient	11	12.9
Insufficient	25	29.4
None	49	57.6
Total	85	100.0

Water infrastructure and services also appear to be generally suboptimal, with as many as 49% of surveyed communities stating that the quality of current water services should be classified as poor. While 34% of surveyed communities reported an improvement of these services in the last three years, 37% said that they have worsened, and 29% said that they have remained the same.

Exposure to shocks such as conflicts and food shortages

Exposure to shocks, such as conflict and food shortages, in the last five years did not seem to be a determinant factor for community capabilities in their management of natural resources. This might be due to the fact that the population of the study area is also exposed to other types of shocks, such as plant, animal and human diseases, or sudden fluctuations in market prices for primary commodities. This is not to suggest that these types of shock play a more significant role than exposure to conflict or food shortages in determining community

capabilities, but rather to suggest that insecurity and vulnerability to sudden disruptions of livelihoods are widespread in a variety of forms, hence they cannot determine variation in community capabilities.

Prevalent types of livelihood and perceived poverty level

Other factors that presented little correlation with score variation are the prevalent type of livelihoods (e.g. pastoralism vs. farming) and perceived poverty level. In regard to the latter, the survey showed that perceptions of poverty may vary significantly across communities, in some of which a poor person is one who sells his labor to others (i.e. one who works for a wage), while in others it is rather one who does not own livestock, and yet in others it is one who does not have a sufficient yearly food supply. When asked to rate their level of living according to their own perception of poverty, about 56.5% of the communities reported that they are poor, 40% claimed to enjoy an average standard of living and only 3.5% claimed to live above that average (Table 7). In view of the extremely unsatisfactory amount and quality of services, poverty, as objectively measured by standard indicators, may actually be more widespread than indicated by these figures. At any rate, in so far as perceived poverty is in theory a stronger indicator of capability for self-governance than actual poverty, it is significant that in the case of Kordofan the link between the CCI score and perceived poverty appeared to be weak.

Table 7: Perceived standard of living and perceived poverty

	Frequency	Percentage
Above average standard of living	3	3.5
Average standard of living	34	40.0
Poor standard of living (or perceived poverty)	48	56.5
Total	85	100.0

Labor migration from the village

Labor out-migration is also a factor that is very common in the Kordofan region, where about 99% of the surveyed communities practice it, mostly on a seasonal basis (Table 8). In South Kordofan, in particular, labor migration exists in 97% of communities, against a percentage of 100% in North Kordofan. Much of this is male labor migration, although only 65% of surveyed communities reported no female labor migration. The main destination of out-migration from South Kordofan is other rural areas of Greater Kordofan (61.5%), followed by other parts of Sudan (35.9%). Migrant labor from North Kordofan instead heads mainly to other places in Sudan (84.8%), with only 6.5 % seeking labour opportunities elsewhere in Greater Kordofan.

Table 8: Out-migration in Kordofan

	Do community members migrate in search for work?			
		Yes	**No**	**Total**
South	Count	38	1	39
	%	97.4	2.6	100.0
North	Count	46	0	46
	%	100.0	0.0	100.0
Total	Count	84	1	85
	%	98.8	1.2	100.0

	Do women and men migrate equally in search for work?					
		NA	**More women than men**	**More men than women**	**No women migration**	**Total**
South	Count	1	1	19	18	39
	%	2.6	2.6	48.7	46.2	100.0
North	Count	0	1	8	37	46
	%	0.0	2.2	17.4	80.4	100.0
Total	Count	1	2	27	55	85
	%	1.2	2.4	31.8	64.7	100.0

Availability and prevalent type of means of transportation

Animals are the main means of transportation in 47% of the communities surveyed, followed by walking in 33% of communities. These figures suggest very minor access to more modern means of transportation; however, about 77% of the communities reported that quality and service of transportation has improved in the past few years. This may be due to the fact that more lorries pass by these villages than in the past to collect agricultural produce for markets.

Stability and viability of land tenure at the village and household levels

Villages in Kordofan share certain key tenure characteristics, starting from the fact that they usually have communal village land known as the *haram*. This land typically begins at the immediate periphery of the village, from which it extends outward to a radius of 1 to 5 km at most. Its main purpose is to serve certain common village needs, such as grazing land for young or sick stock that cannot travel long distances. A second type of land ownership common throughout the study area is household or even individual tenure of arable farming land. These holdings are usually located immediately outside the *haram*. A third type of individual land tenure concerns *hashab* gardens for gum arabic production, as well as fruit or vegetable home-gardens. Finally, land that can be utilized by outsiders and/or by community members for communal grazing and for other non-farming related uses (e.g. commercial charcoal-making) is called *ghifar*. The first three types of land are controlled by the community or by household members, while *ghifar* land is regulated by authorities higher than the community level, and is therefore under a qualitatively different system of tenure, in spite of also being in a sense "communal" land in the same way as the *haram*. It is also noteworthy that communal land (including the *haram* and *ghifar* land) often encompasses rangeland and/or forests, however this does not mean that villages that own communal land (i.e. about 84% of villages in Kordofan) also maintain community forests or rather ranges

(given that forests proper do not exist in semi-arid and savannah lands). The latter is in fact true only of 53% of villages (Table 9).

One of the main issues communities confronted regarding communal land is demarcation: about 29% of the surveyed communities demarcate their communal land, while 71% do not. The most common type of demarcation, which is used by some 41% of communities, is a natural landmark, such as a watercourse or a mountain. Around 9% of the communities demarcate their land by using green fencing and another 9% use other types of fencing such as thorns. Fire lines are used by yet a smaller number of communities (2%). A community may, however, use more than a type of demarcation.

Table 9: Availability of communal village land and of community range/forests

Availability of communal village land	Frequency	Percentage
Yes	71	83.5
No	14	16.5
Total	85	100.0
Availability of community range/forests	Frequency	Percentage
Yes	45	52.9
No	40	47.1
Total	85	100.0

A second main issue confronted by many communities is conflict over communal lands, whose occurrence has required recourse to arbitration in as many as 21% of communities in the past five years. Of the cases that have been subjected to arbitration, about 67% have been won by the communities, while the remaining 33% are still pending a conclusion. This suggests that though challenges to the right of communities to dispose of communal lands exist, for the most part this right is recognized by other communities and by the government.

Main environmental issues confronting individual villages

Low correlation also exists between CCI scores and the main environmental issues confronting different communities (e.g. environmental degradation, conflict over resources, etc.). However, the survey yielded significant information about the environmental problems that confront a vast majority of villages in the study area. Apart from land tenure issues, stagnant water and depletion of the forest cover appear to be the two most significant environmental hazards among environmental issues confronting the rural communities.

Stagnant water

The problem of stagnant water was reported by 53% of the communities, and it largely explains the frequent occurrence of water-related diseases such as malaria in the study area. This is particularly the case in South Kordofan, where 79.5% of surveyed communities stressed the importance of the stagnant water problem, compared with 30.4% among North Kordofan communities. This difference may be explained by the fact that South Kordofan as a whole is characterized by more rainfall than North Kordofan. Moreover, South Kordofan

soils are for the most part heavy clays, which are characterized by a poor infiltration rate compared with the lighter and more permeable sandy soils that prevail in North Kordofan.

Depletion of the forest cover

Despite government efforts to preserve and develop forests in Sudan, the forest cover of the country is undergoing erosion at varying rates in different regions. In the surveyed area, clear cutting was reported by 41% of communities, corresponding to about 53.8% in South Kordofan and 30.4% in North Kordofan. Being a richer area in natural resources than its Northern counterparts, South Kordofan has been a target of commercial agricultural investments for several years, which has resulted in the clearing of hundreds of thousands of hectares on its territory for mechanized farming. Further expansion of cultivated areas has taken place in recent years due to an increase in population (both local and displaced from other areas), combined with a decline in land productivity due to depletion of soils and to the quasi-abandonment of sustainable farming practices such as shifting cultivation and respect of fallow years. The effects of such phenomena on the state of forest resources have been compounded by the fact that a significant number of community members in certain areas maintain livelihoods based on the sale of forest products, such as wood and charcoal, which are in high demand as fuel throughout the region due to the relative absence of alternative energy sources.

Besides over cutting, another significant cause of the erosion of the forest cover in Kordofan is forest fires. About 37% of the surveyed communities reported in fact the negative impact of forest fires on their environment and on their livelihoods. Previous figures on forest fires showed that fires may destroy as much as 30-50% of the land surface of South Kordofan.[74] Based on the survey results, it appears that forest fires are a more important environmental issue in South Kordofan (as noted by 59.0% of communities) than in North Kordofan (as noted by 17.4% of communities). The reason for this variation may be first of all linked to the different natural endowments of the two states. In the absence of an effective network of fire lines, the richer and taller vegetation of South Kordofan is more vulnerable to fires than the shorter and sparser vegetation of North Kordofan. There are however also man-made factors behind this problem. Sedentary farmers sometimes deliberately set fire to rangelands to destroy pasture in these areas and thus keep pastoralists away. Whatever the causes, the effects of forest and rangeland fires may be rather severe. For one thing, such fires may deplete huge amounts of vegetation that is needed to feed livestock and to stabilize the soil, protecting it from wind and sheet erosion. Secondly, they also lead to changes in the composition of the plant cover of certain areas, favoring annual plants rather than the more nutritious perennials. Annual plants have actually become predominant today in the ranges of Kordofan because they are short-maturing and shed their seeds within 2-3 months from the start of the growing season, thus maintaining their species rather easily. Perennial plants, on the other hand, tend to respond to fire outbreaks during the early dry season by starting a new green growth out of season, thereby depleting their stored nutrients, and eventually dying either due to lack of sufficient moisture to complete their growth cycle, or to lack of stored nutrients when the next rainy season comes.

Despite these various environmental problems and hazards, about 42% of the surveyed communities reported an improvement in their environmental conditions over the last 3 years, while 40% reported a worsening environment and 18% reported no change. For the first

[74] Bunderson et al.,1984. 'Range/Livestock Activities 1982/83'. WSARP Publication 29. Agricultural Research Corporation. Western Sudan Agricultural Research Programme.

group of respondents, improvement could be attributed to good rainfall resulting improved pasture, higher prices of Gum arabic (which in turn encourages farmers to give more attention to *hashab* trees), government allocation of new areas to forest and range reserves, and improved sanitation thanks to the work of NGOs. Moreover, an important factor behind environmental improvement was the relative stabilization of the security situation in South Kordofan, as this has enabled access to new lands that had been virtually abandoned during the war, thereby releasing pressure over land in which cultivation and grazing had concentrated during the war due to their location in secure areas. Communities who reported a worsened environment on the other hand attributed this to low rainfall, which affected *hashab* trees and pasture in rangelands, increased erosion and depletion of soil, increased population due to inward migration, coupled with lack of improvement in sanitation, droughts, overgrazing near water yards and other water points, forest cutting and charcoal making, garbage and plastic bags accumulation, and finally smoke emerging from brick kilns.

Community organizations, autonomy, and solidarity networks

According to respondents, the most important institutions serving villages are communities themselves (as reported by 94% of the surveyed communities), followed by NGOs (65%), and government and donors (38%) (Table 10). Despite these figures, it should be noted that community organizations are not widespread in Kordofan, which may be the main reason why villages generally scored low with respect to their abilities to manage funds, to organize, and to enjoy and build upon significant achievements. The top ranking by the communities of the institutions chiefly assisting their own members appears to be a reflection of social trust rather than of formal organization. As many as 96.5% of communities stated in fact that their members trust each other and that there are functional solidarity networks in the community.

Table 10: Institutions perceived as assisting the community the most

Institution	Percentage of respondents acknowledging the role of this institution among the top three assisting the community	Ranking
Local government	24.7	4
National government	14.1	8
Government with donors	37.6	3
Politicians	9.4	9
Religious organizations	20.0	6
School teachers	21.2	5
NGOs	64.7	2
Business group	9.4	9
Service club	3.5	12
Prosperous citizens	9.4	9
Community itself	94.1	1
Native Administration	15.3	7

Aside from parent-teacher associations, functional community organizations are found only in less than a third of the communities (Table 11). Despite this relative lack of organization, as many as 91% of surveyed communities reported that they are able to mobilize to address a problem or need felt at the village level, e.g. contribute to the building of a school or clinic, or maintain or repair village infrastructure, such as hand pumps. While ability to manage funds and organize and levels of achievement are generally low, there is also a relatively strong level of autonomy and ability to take initiatives to address community concerns across the region. In particular, breaking down autonomy scores by indicator, 91% of the villages reported being able to define the rules of access to management decisions on natural resources without interference by external authorities; 99% stated that communal lands are recognized both by the government and by neighboring communities; and 93% admitted that there are no challenges to existing tenure and use arrangements on communal land. Considering their ability to take initiative, almost all villages (99%) reported being able to diagnose their problems and 98% reported being able to prioritize their needs, while 82% stated that they are able to mobilize resources and 80% can generally find solutions to their problems. The social groups that are chiefly involved in addressing community problems are primarily men in 57% of villages, while in the remaining villages men and women equally shoulder this responsibility. Unlike what used to be the case until a recent past, all age groups (youth, adults, and elders) appear to be involved in making decisions about community issues in as many as 78% of communities, suggesting that traditional authority relations privileging the role of elders have somewhat eroded in the region. This conclusion is supported by another finding, namely that traditional authorities (e.g. tribal chiefs) lead the decision-making process only in 5% of surveyed communities.

Table 11: Functional community organizations

Community organization	% yes
Community development committee	23.5
Cooperative (Fishing, agriculture, crafts)	3.5
Water user association	30.6
Parent-teacher association	63.5
Health committee	11.8
Women group	26.2
Youth group	21.2
Sports group	28.2
Cultural group	11.8
Civic group	7.1
Other	41.1

VII. DETERMINANTS OF COMMUNITY CAPABILITIES

The previous chapter described the construction of a measure of community capability and presented the outcome of the measurements that were made accordingly. However, prior to engaging into further analysis of the determinants of community capability it was necessary to check the robustness of the construction of the Community Capability Index (CCI). In other words, if other indicators had been selected by another panel of experts, would the conclusions have been different?

In this chapter, a series of analyses is conducted with data gathered from 85 villages in North and South Kordofan as part of the Community Capabilities Survey. These analyses included testing CCI for robustness, examining the determinants of community capability, and exploring the relationship between capabilities on the one hand, and each of community achievements, wealth/poverty status, and ecological trends on the other. The last section concludes with the significance of these results and their implications for future strategies aimed at raising rural communities' capabilities for self-governance of natural resources in Kordofan in particular, and in Sudan in general.

A. Testing and Streamlining the Community Capability Index

The choice of indicators and categories that constitute the CCI was guided by the definition of capability as a set of skills (capacities), assets, and attitudes or perceptions. The ability to manage funds and communal lands were identified as the key skills of interest. Ability to organize and to take initiative gives an indication of groups' attitudes or perceptions. The level of autonomy or agency with regard to natural resources reflects the community's control over its assets. These categories also capture some of the community attributes widely considered important for the success of common property resource management schemes (i.e., salience, common understanding, and low discount rate, even distribution of interests across users, trust, autonomy, and prior organizational experience).[75] The initial conception of CCI also included achievements together with these five categories. However, it may be useful to separate capabilities and achievements to better understand the relationship between the two.

The econometric tests for the original CCI and its components, which are detailed in a separate research paper,[76] were carried out with the factor analysis technique, which is explained briefly, reduces a large set of indicators that describe a generally complex phenomenon into a narrower set of factors, each one of which represents a sub-set of the original indicators, and a particular dimension of the phenomenon under study. This operation is done automoatically by cross-correlations between indicators. The higher the correlation between indicators within each factor, the more robust is the factor. The nature of the indicators that are selected by this method provides a basis for the interpretation of the nature of each factor or dimension. The tests comprized two rounds of analyses: testing the

[75] Ostrom, Elinor. CIFOR Occasional Paper No. 20: Self-Governance and Forest Resources.
[76] K. El Harizi & H. Klemick: Accounting for Community Capabilities in Kordofan, Sudan. IFPRI/DSDG Discussion Paper . Draft August 2005.

robustness of indicators within the original categories of CCI; and testing the robustness of the categories themselves and constructing a streamlined alternative CCI.

Testing the robustness of indicators' weights within each category of CCI

In this first round of tests, the focus is on testing the robustness of the five non-achievement categories represented by 24 indicators. To test the robustness of these weights, a factor analysis is performed on each category to determine whether each group of indicators does represent a single underlying aspect of community capability. As a further indicator of robustness, the correlation is computed between each factor and its respective category index (as constructed with the original weights).

The tests generally support the hypothesis that these 24 indicators can be thought of as representing five factors or categories of community capability, namely autonomy, initiative, ability to manage funds, ability to organize, and ability to manage communal lands. However, the indicators within the autonomy category are found to be weakly correlated between themselves, suggesting that they do not represent a single underlying dimension of capability.

Correlation between the factors and the original indices is high and significant for all except the autonomy factor, which is not surprising, given that few of the indicators load strongly onto that factor. The analysis suggests, moreover, that the initiative, funds management, organizational, and land management factors are robust to different weights of the indicators, since they are highly correlated within each factor. The autonomy factor is less robust since the indicators suggested for this category are not highly correlated.

One approach to addressing the autonomy factor's lack of robustness would be to reassign the indicators to other categories or factors they may better represent. This approach is explored in the next section, which discusses the factor analysis of all 24 indicators to generate alternative categories to the five suggested by the panel of experts.

Testing the robustness of categories and creating a streamlined alternative CCI

Stepping back from the five predetermined non-achievement categories (level of autonomy/agency, ability to take initiative, ability to manage funds, ability to organize, ability to manage communal lands), a factor analysis was performed on all indicators to explore alternative categories of community capability that might emerge from the data. This approach may be particularly useful for addressing indicators that did not load strongly onto the originally proposed category, such as the suggested indicators of autonomy. This analysis reveals five significant factors (categories or dimensions), which collectively explain 97% of the variation in the indicators. Eighteen indicators are included in the final specification.

The five significant factors can be interpreted based on the indicators that load strongly onto each emerging factor. The five new factors identified in this analysis—*mobilization, money management, land tenure security, common vision, and communal land management*—provide an appealing alternative to the five categories originally identified by a panel of experts. These categories are consistent with the definition of capabilities and the main

variables of the empowerment model:[77] money and communal land management represent skills or capacities; mobilization and common vision represent attitudes or perceptions; and land tenure security represents assets. Factor analysis confirms the robustness of these categories, and rescaled scoring coefficients can be used as weights for the indicators within each factor.

The 18 indicators, pared down from the initial 24, used in the factor analysis represent a streamlined set of variables that can be used to create the non-achievement CCI categories. If weights can then be assigned to these five categories, a restructured CCI can be created, which will be useful for testing the robustness of the original CCI. Assigning weights to each category is an inherently subjective task. In addition to the pre-assigned weights (Original Index), equal weights as well as an alternative weighting scheme were considered. The tests showed that CCI is robust to different weights and specifications and that correlation among indicators is sufficiently high to infer that they do represent common underlying aspects of community capabilities, which can be categorized in various ways. While there is a degree of subjectivity in deciding the most appropriate or appealing specification, the results should not qualitatively change regardless of which is chosen.

Based on the robustness analyses, the structure of CCI was revised to create a new index (Figure 3) that requires data on fewer indicators and is robust to different specifications. This streamlined CCI was used for the analyses in the remainder of this chapter.

[77] The model comprises four functions and five states of the agent. These are: access to resources, investment or allocation of resources, framing and learning. The internal states of the agent include desired outcomes, resource position, capabilities and achievements.

Figure 4: Streamlined Community Capability Index

Category	Indicator	Weight	Points
Mobilization	Mobilize resources	0.24	1
	Find solutions	0.36	2
	Total # of groups/associations	0.17	4 (.5 pt each; max is 8)
	Past organizational experience	0.17	2 (0-little; 1-some; 2-substantial)
	Community has organized to address a need or problem in past 3 yrs	0.06	1
Money management	Mobilize savings	0.04	1
	Lend	0.42	4
	Fully recover loans	0.54	5
Land tenure security	Communal land recognized by government	0.16	2
	Communal land recognized by neighbors	0.16	2
	Communal land challenged/used by others	-0.46	4 (if answer no)
	Major land conflicts requiring arbitration in past 5 yrs	-0.21	2 (if answer no)
Common vision of problems	Diagnose main problems	0.5	5
	Prioritize needs	0.5	5
Communal land management	Excludes outsiders from communal land/water through fees	0.39	4
	Excludes outsiders from communal land/water through guards	0.2	2
	Time restrictions on members' access to communal land	0.23	2
	Enforcement through sanctions	0.19	2

B. Predictors of CCI

Having developed a robust measurement of community capabilities, the factors are now explored that determine community capability as measured by the streamlined CCI.

Approach
Regression analysis is used to examine the contribution of various independent variables[78] to total CCI, and the effect is considered of each of these predictors on the categories of CCI, such as money management ability, and security of land tenure. Economic, geographic, and institutional variables are considered, as well as weather, disease, and war shocks, as possible determinants of community capability.

Geographic or environmental variables include *rainfall, soil type, and hydrology.*[79] The distinction between North and South Kordofan, initially identified as important in bivariate analysis, was not significant in any of the multivariate regressions due to co-linearity with other variables.

Local economic conditions are represented by *distance from the nearest town* (with a squared term to account for possible nonlinearity), *presence of a village market*, *access to credit from an agricultural development bank, and main source of livelihood.* [80]

Formal and informal institutions are represented by *participation in an IFAD project, female circumcision practice and village size*.

The original specification included exposure to various shocks within the past five years: *animal disease, human disease, drought, water runoff, fire, locust, famine, war, and price shocks.*

Results
The covariates included in the final specification explain 69% of the variation in CCI.
Economic indicators are highly significant in predicting CCI. Community capability decreases with distance from the nearest town by over a quarter of a point per km. Communities with village markets have significantly higher CCIs (by around 9 points), all else being equal. Villages with access to credit from the Agricultural Bank of Sudan (ABS) have on average an18 point higher CCI.[81]

Institutional variables also make a significant contribution to the prediction of the CCI. Village size is positively correlated with CCI, while participation in an IFAD project has a large and significant effect on CCI, raising it by 9 points. This coefficient must be interpreted

[78] Independent variables are those that may represent the effect of the environment on community capabilities and achievements, but that are not themselves constitutive or an outcome of community capabilities.
[79] Agroecological zone and vegetation class were excluded from the final regression due to high co-linearity with rainfall and resulting lack of significance.
[80] Pastoralism-based versus cultivation-based livelihood systems.

[81] Additional economic and institutional variables such as wealth, inequality, and availability of educational and health services are also expected to shape the level of community capability. However, including these variables on the right-hand side of a regression would likely yield biased coefficient estimates due to a high potential for endogeneity (in particular, the concern is about reverse causality).

with caution, however, due to non-random selection of villages into the program, an issue that is addressed in part D of this chapter.

Environmental variables are equally important in determining the level of capabilities. CCI increases by around 8 points with every increase in rainfall class.[82] CCI is significantly lower in areas with access to groundwater from the A2 aquifer (by 9.5 points), as compared to the A1 aquifer, a much higher quality water source.[83] Cracking clay soils are also associated with a lower CCI, by 13 points. This finding is initially surprising, since cracking clay soils are fertile and have high production potential; however, they are difficult to cultivate without the appropriate technology, so they may exacerbate production problems in areas with minimal access to technology. Non-cracking clay soil also has a weakly significant negative effect. Female circumcision practice and main source of livelihood (pastoral or cultivation) are not significant determinants of CCI.

War and price shocks were included in the final specification. War shocks have a negative and significant effect, causing an 8 point drop in capabilities.

C. Predictors of different dimensions of community capabilities

The analysis carried out in the previous section is expanded by running similar regressions, separating the categories of CCI to see if the identified determinants have the same effects on the different aspects of community capability. The individual category regressions give an indication of how certain key explanatory variables influence overall community capabilities.

Village size has a positive effect on CCI mainly through mobilization. The effect is sensible since larger villages may have more organizations and networking opportunities. However, the relationship becomes negative for the largest villages, suggesting a ceiling effect of village size. This finding is consistent with the comments made on the mixed effects of village size on community capabilities. Overall, and within the most common levels of village sizes, this factor is by and large positive.

Capabilities do not systematically differ depending on the main source of livelihood (pastoralism vs. cultivation). Proximity to the nearest town leads to increased mobilization, land tenure security, and ability to manage communal lands, implying the importance of access to markets and services found in larger towns.

Certain agro-ecological variables are also important across several categories. *Cracking clay soil, which are mostly found in South Kordofan, is negatively associated with land tenure*

[82] Rainfall is indicated by average annual class, with 1=100-200mm, 2=200-400mm, 3=400-600mm, and 4=600-700mm

[83] A1 is the most important aquifer in Sudan. It is found north of latitude 13^{o} in the eastern part, while in the west it extends north of latitude 10. In spite of its huge resources, the aquifer has not been exploited intensively, mainly because of the depth of the ground water table, which makes pumping prohibitively expensive. A2 is the unit that consists principally of the deposits of the Um Ruwaba Formation. Depth of the water table varies from 10m in the South to more than 150m in Northern Kordofan. A3 consists of alluvial deposits from *wadis* and rivers. Ground water quality is relatively good, and the water table is at shallow depth (0-10m). C3 is the most extensive unit in the area. It consists of the rocks of the Basement complex and its acid intrusions. Groundwater occurs only in fracture and faults zones and originates in the north and centre of the country from recharge water of *wadis* and rivers. Groundwater quality can vary widely, but becomes poorer northwards. In many places the C2 unit contains saline stagnant water.

security and communal land management. These categories suggest a few reasons for the negative relationship between CCI and these high quality soils. First, communities' lack of access to the technologies necessary to cultivate this soil may make cracking clay a hindrance rather than a help in land management; and second, outsiders may be more likely to encroach on land with desirable soils, challenging communities' tenure. *Rainfall class is important in predicting money management and communal land management*. Aquifer access is another important determinant of capability. *Access to the poor quality aquifers relative to the high quality aquifer affects mobilization negatively, but has slightly positive effects on common vision of problems and land management*. The effects of aquifer quality are not surprising, given that water quality and abundance are major limiting factors to development in Kordofan.

Interpretation

Economic, institutional, and environmental factors are important in predicting the different facets that comprise community capabilities. Certain variables affect a few aspects but not the overall CCI. For instance, price shocks affect money management (negatively) and communal land management (positively), but not overall CCI. The effects of key variables such as proximity to town, rainfall, and aquifer access are reflected in multiple aspects of community capability, as well as the overall CCI. The importance of these variables highlights the link between economic development, natural resources, and community capabilities.

Table 12: Regressions of alternative CCI and categories on economic, geographic, and institutional factors

	CCI[84]	Mobilization	Money mgmt	Land tenure security	Common vision	Communal land mgmt
Village size (index)	++	+++				
Pharonic circumcision (y/n)						-
IFAD (y/n)	+++	+++				
Village market (y/n)	+++	+++				
Pastoralist (y/n)					++	
Credit access from ABS	+++		+++			
Distance from nearest town (km)	- - -	- -		- -		- - -
Distance from nearest town squared (km)	++			+		+
Rainfall[85]	+++		+			++
Cracking clay soil (y/n)	- - -			- -		- -
Non-cracking clay soil (y/n)	-					
A2 aquifer	- - -	- - -				
A3 aquifer		- -				+
C2 aquifer		- - -			+	
Shocks – price			- - -			+++
Shocks – war	- - -	- -		- - -		
Constant	+++	+++		+++	+++	+
Adjusted R^2	0.64	0.62	0.37	0.31	-0.05	0.66

[84] +++, - - - : $p < 0.01$
++, - - : $p < 0.05$
+, - : $p < 0.1$

[85] Average annual rainfall class is measured as follows: 1=100-200mm, 2=200-400mm, 3= 400-600mm, 4=600-700mm.

D. Treatment effects: controlling for IFAD[86] participation

IFAD initiated Rural Development Programs in North and South Kordofan beginning in 2000 to support the decentralization process through community-driven development. IFAD-funded projects seek to improve the livelihoods of rural pastoralists and traditional farmers, to bring men and women into the development process, and to bolster local community groups and governments.

Activities carried out under the North Kordofan Rural Development Project (NKRDP) and the South Kordofan Rural Development Programme (SKRDP) encompass social and economic development and conflict resolution. Projects' activities, such as literacy and mobilization training, micro-credit, provision of agricultural starter packs, improvement of local water sources, and support to peace building, have been given priority based on the needs identified by communities themselves. Since the inception of the project, participating communities have seen improvement in areas ranging from literacy training to women's participation to credit access.

Approach

Fifteen out of the 85 villages included in the Community Capabilities Survey participate in either NKRDP or SKRDP. Involvement in an "IFAD project" is a key institutional variable that is expected to affect village capabilities. However, IFAD's decisions about where to implement projects are typically far from random; villages were selected into this program on the basis of population density, accessibility, poverty, willingness to cooperate, and other factors that may be positively or negatively correlated with community capabilities. The control for the potential endogeneity of IFAD participation is attempted by using a treatment effects model. A treatment effects model jointly estimates a system of two equations: the first is the outcome of interest (in our case, CCI), while the second is selection into the treatment (participation in IFAD). The model takes any correlation between the error terms of the two equations into account and includes a "correction" term in the outcome equation to control for selection bias, yielding an unbiased coefficient on the treatment variable.

Criteria for village selection used by the IFAD projects included high population density, accessibility, grain availability, poverty, migration patterns, and motivation or willingness to participate, among other factors. The variables this study includes in the IFAD selection equation are village size to proxy for population density, distance from the nearest town as an indicator of accessibility (both village size and distance from the nearest town have squared terms to allow for nonlinearity), main income source (pastoralism vs. cultivation), and seasonal migration within rural Kordofan (as opposed to elsewhere in Sudan) to reflect migration patterns. Controlling for wealth and motivation is difficult, particularly in the absence of time series data. The results show that correlation between the two equations is negative but not significant, possibly because motivation, wealth, and any other unobservable work in opposite directions and cancel each other out.

[86] The projects are strictly speaking Sudan's projects. They borrow from IFAD and contribute a share of the costs. The use of notions such as " IFAD project" or " participation in IFAD" is meant not to overburden the text with more correct but also more lengthy notions such as " IFAD co-financed projects" or " participation in an IFAD co-financed project". In this section IFAD will generally refer to the institutional variable " IFAD-funded projects in the Kordofan Region", unless otherwise specified.

Interpretation

Although it may be premature to conclude that nonrandom selection does not bias the coefficient of IFAD participation in the CCI equation, the statistical evidence indicates that the two equations are independent and can be consistently estimated separately. Therefore, our results still hold: IFAD participation positively and significantly affects community capabilities, increasing CCI by the order of 9-11 points.

E. Extreme Cases Analysis

A qualitative analysis of 14 extreme cases gives additional insights into the factors shaping community capabilities.[87] Information on nine communities with low or very low capabilities (CCI < 40) reveals commonalities that may be inhibiting their ability to manage natural resources effectively and develop capabilities. These communities are largely very remote from town centers, have a high rate of illiteracy, and have a poor natural resource base. Some are small villages recently split off from a larger community. Many are former nomadic pastoralists that have recently taken up settled agriculture, while others continue to move seasonally, based on the instability of resources such as water. The high rate of seasonal migration in these communities also leads to instability in leadership and management.

Five high capability communities (CCI > 70) stand in sharp contrast to the previous cases. These communities enjoy good access to schools and have relatively high literacy rates. They have a relatively good access to funds, as evidenced by *sanduq* (community fund or safe) management. These villages tend to be either close to town centers or have village markets of their own. Natural resources, particularly water, are abundant, allowing in some cases for horticultural or cash crop activities. Finally, two of the communities have participated in IFAD projects.

These contrasting cases support the results of the quantitative analysis to a large extent, confirming the importance of proximity to towns, access to village markets and primary schools, participation in an IFAD project, access to high quality water sources, and participation in the cash economy. However, they also highlight other issues not investigated in depth in the Community Capabilities Survey, such as seasonal migration, recent transition from nomadic pastoralism to settled agriculture, and water abundance. Awareness of these issues will improve the design of future surveys on community capability.

[87] See report on Extreme Cases by Babo Fadlalla for individual community profiles.

F. Relationship between Community Capabilities and Wealth Issues

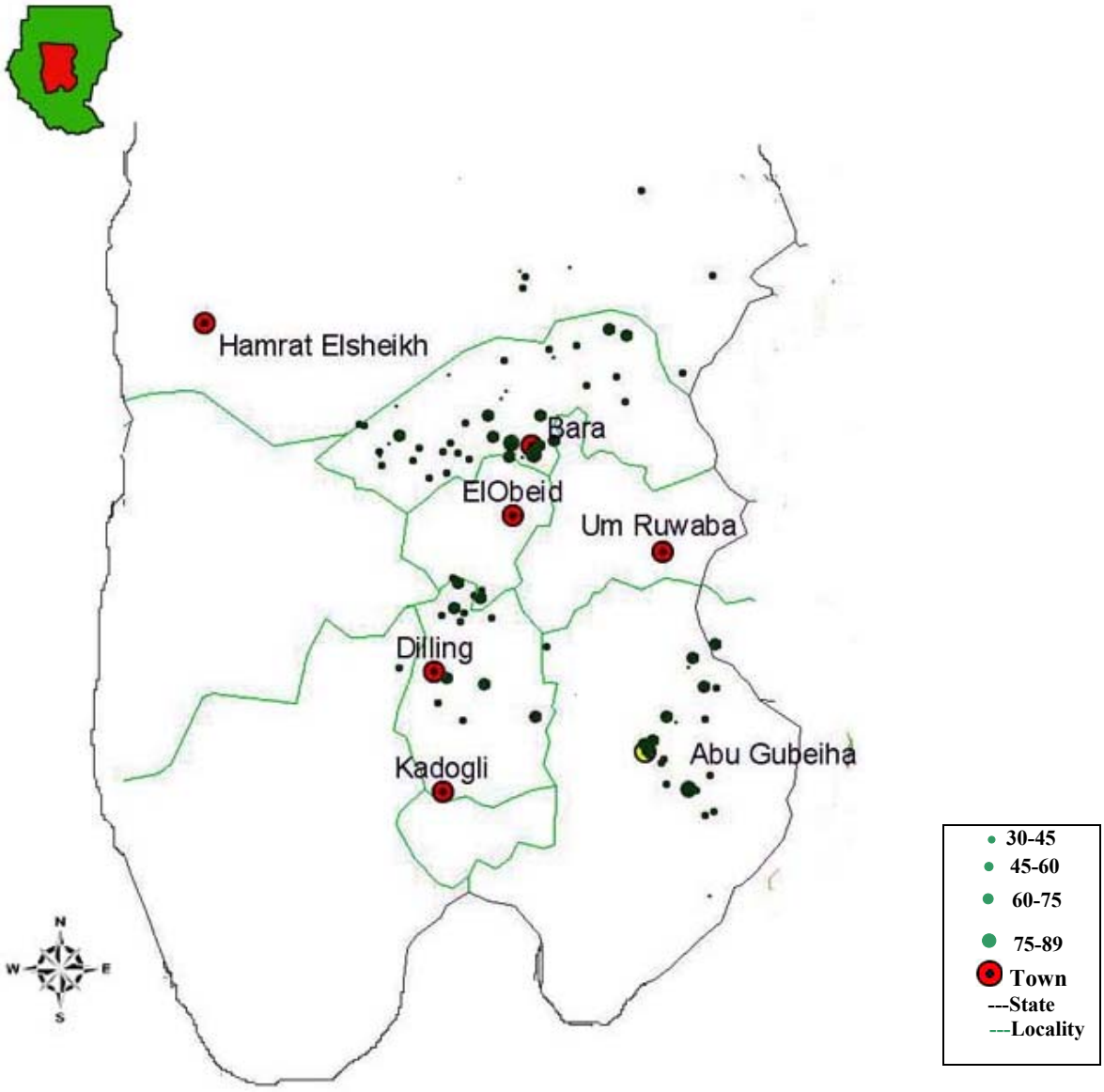
So far community capabilities have been measured, the validity of the measurement has been tested, and some of the determining factors of community capabilities have been identified. The final issue is: How different is the concept of capability from those of poverty or inequality? Are poor capabilities just another form of poverty? In other words, what is the value added of the concept and of its related operational instruments?

This research has in fact established that the phenomena are correlated but that they are not identical;, far from it. To this effect, each community has been ranked according to a simple scale of poverty and inequality of wealth within the community. The ranking was done independently by knowledgeable staff of the SKRDP and NKRDP projects. The results are further illustrated in the following set of maps.

The first map represents the spatial distribution of community capabilities. Each dot represents a sample village of the community capability survey. The size of the dot is proportional to the level of community capabilities for that particular village: small dots correspond to lower community capabilities, while larger dots indicate villages with higher capabilities. The map shows a definite concentration of the larger dots around the main towns, an illustration of one of the key results of this research.

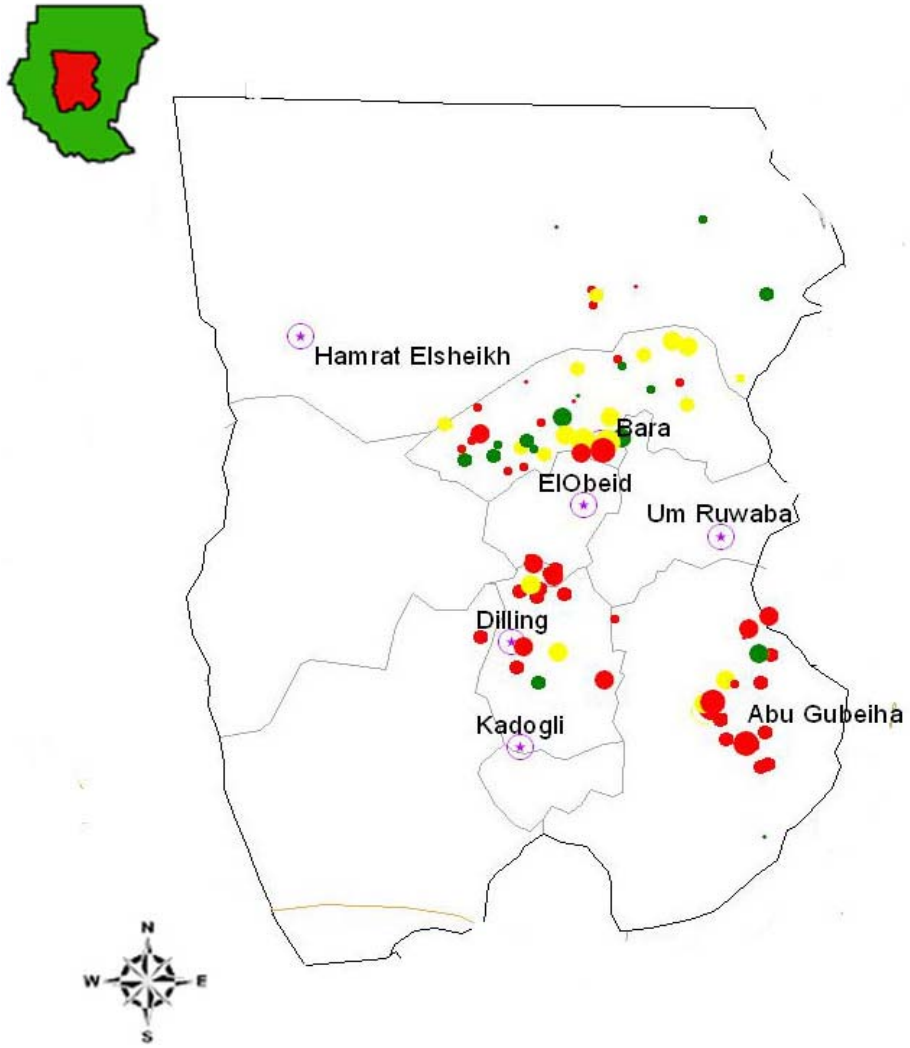
The second map illustrates the distribution of poverty and capabilities. While the size of the dots still represent the level of community capability, the color of the dot represent three categories of village wealth: poor (red), relatively well off (yellow) and average (green). The map clearly shows some concentration of red dots in South Kordofan, but it also shows that there are large and small dots of all colors in both North and South Kordofan. Clearly, small dots do not always correspond to red ones; there are both large and small yellow dots too, indicating that richer villages are not necessarily more capable or interested to take collective action and manage their natural resources. A practical implication of these findings is that selection of communities for participation in development programs will give different results depending on the criterion used. Similarly, for program effectiveness evaluation, the impact of a program on community capabilities may be observed without a significant change in the overall poverty rank. The capability criterion seems to be a more relevant and sensitive indicator of the effectiveness of rural development programs whose impact on the incomes of the rural people, if any, are generally delayed in time and much dependant on other external factors.

Map 4: Community Capability Index Spatial Distribution



Source: IFPRI Empowering the rural poor under volatile policy environment research project, 2005

Map 5: Community Capability Index/Poverty Level Spatial Distribution



Community Capability Index	Poverty Level		
	Poor	Medium	Rich
Very Low			
Low			
Average			
High			
Very High			

Source: IFPRI Empowering the rural poor under volatile policy environment research project, 2005

G. Conclusions

The framework of this research shares with existing collective action and empowerment theories the view that empowerment results from an interaction between internal and external factors to an agent. While taking into account a wide range of factors, including economic, ecological and institutional variables,[88] the model also accounts for the role of dynamic psychological factors and processes, such as learning, perceptions and attitudes, in explaining the responses of agents challenged by changing environments.

In the process of testing the original index,[89] an alternative streamlined index has emerged from the data structure. The five new factors or dimensions of community capabilities identified in this analysis—*mobilization, money management, land tenure security, common vision, and communal land management*—provide an appealing alternative to the five categories originally identified by a panel of experts. These categories are consistent with the definition of capabilities and the main variables of the empowerment model: money and communal land management represent skills or capacities, mobilization and common vision represent attitudes or perceptions, and land tenure security represents assets. There is a degree of subjectivity in deciding upon the most appropriate or appealing specification, but the results should not qualitatively change regardless of which is chosen.

Communities in rural Kordofan were found to be relatively strong in their levels of autonomy and ability to take initiative on average, while their abilities to manage funds and organize and their levels of achievements fall far short of the maximum. The main variables that affect positively or negatively the original CCI include village size, participation in an IFAD project, access to a village market and credit, proximity to the nearest town, rainfall, cracking clay soils, access to groundwater, and war shocks. Village size has a positive effect on the CCI mainly through mobilization. The effect is sensible since larger villages may have more organizations and networking opportunities. Proximity to the nearest town leads to increased mobilization, land tenure security, and ability to manage communal lands, implying the importance of access to markets and services found in larger towns.

The above identified factors may be used as entry points for the design of empowerment strategies and policies. To develop such a strategy is not the purpose of this study. However, for the sake of illustration, a possible strategy would be to invest in rural roads since community capabilities are a function of the distance to the nearest town and to encourage community development activities of the IFAD type, especially in the most unfavored areas. Investing in village markets and credit institutions are also valid options especially in the higher potential areas. In the same vein, since clay soils have a negative impact, it makes sense to develop small farmers' mechanized schemes in relation to the stabilization of land tenure. The latter type of activities is most likely to benefit from a well designed small farmer credit scheme, subject to the verification of the economic and financial viability of such option.

Finally, there are a number of methodological implications regarding the capability measurement tool. A streamlined index has been produced, and the results regarding the predictors of capability may be used in the targeting, design, implementation monitoring and

[88] Both formal and informal (norms, beliefs, customary laws…).
[89] Produced by a panel of experts and tested with the population.

evaluation of poverty eradication projects in similar contexts. The tool is amenable to improvements such as the inclusion of new variables like literacy rate, water abundance and quality, and women's empowerment. As an index specifically designed to measure the capability for self-governance of natural resources, however, it marginally applies in its present form to rural communities that do not depend on natural resources for their livelihood.

VIII. FROM DISABLING TO EMPOWERING POLICY ENVIRONMENTS

A. State building, governance of natural resources and policy volatility

The analysis of the political and policy environment of natural resource management in Sudan presented in the previous chapters shows that Sudan's history has been marked by a long, often conflicted intertwining of state- and nation-building processes, in which policies concerning natural resources have played an important role.

Box 1: Nation and State Building Challenges of Independent Sudan

Like other African countries emerging from colonial domination, Sudan inherited in fact a system of economic, political and social organization characterized by dualism and lack of integration between activities and institutions catering to the needs of an extractive economy well-integrated into the world market on the one side, and activities and institutions supporting a subsistence economy on the other. Faced with such a legacy, which had been functional to the economic policy of British colonialism, but could hardly be so to an integrated, self-sustaining national economy, post-independence state elites had to take up more than the burden of building an independent administration and modern state machinery. At least ideally, the aim of these elites (as well as of other post-colonial African elites) was to reorganize the relations between state, civil society, and the economy, in a way radically different from the colonial model. Such reorganization would partly coincide with state-building in a conventional, Weberian sense, i.e. with the centralization of different power networks and institutions under one sole sovereign authority, and partly with national building, i.e. with the creation of an integrated national market, a uniform school system, unified historical and identity narratives, and so forth. Practically speaking, nation building also meant healing a number of dichotomies upon which the colonial state had rested, notably those between subsistence and export-oriented sectors, urban and rural societies, Native Administration and formal government.

In order to heal such dichotomies and create a fairly homogenous and integrated socio-economic fabric that could be administered by an autonomous, well-organized and sovereign state, ruling elites had to declare a practical commitment not only to dismantling the institutional and administrative setup of a colonial state that fed off such dichotomy, but also to turning national resources into a source of welfare and development for Sudan as a whole. In this framework, policies surrounding key natural resources such as land, water, forests, or precious minerals became the realm in which the complexity of the task of building an integrated national economy at the same time as a modern state machinery appeared with greatest clarity, given the strategic importance of such resources to both the traditional and the export-oriented sectors of the economy.

To the extent that a common thread runs across Sudanese natural resource policies since independence**,** it is a fact that they seem to have generally reflected a desire on the part of policy-makers to negotiate different, even conflicting economic and political rationales through the instruments of natural resource governance. In other words, the ongoing coexistence of the two processes of state-building and of the creation of an integrated, self-sustained national economy has made it necessary, even perhaps expedient, for successive ruling groups to use natural resource governance as a tool that must inevitably serve both political and economic goals. It is important to note that the way such a negotiation has most often taken place also represents a common trait in the history of Sudanese natural resource governance, in that natural resource policies constantly oscillated between two apparently opposite, but in fact complementary orientations. The first of these has been the tendency of natural resource policies to affirm the hegemonic, indeed quasi-exclusive entitlement of the state to all resources located on the national territory as state property.[90] The second has been the search by policy-makers for ways to minimize the costs of enforcing such hegemonic claim, particularly in areas with minor economic significance for the self-reproduction of state elites, including Kordofan.

The implication of the oscillation between these two orientations for natural resource governance is that while the state has repeatedly sought ways to affirm its overarching claims over all natural resources, such an affirmation has been accompanied by various stakeholders and institutions *de facto* "tolerating" substantial autonomy as far as access to natural resources is concerned. This has been the case especially in areas characterized by traditional livelihood systems, such as subsistence rain-fed agriculture and pastoralism in most of Kordofan, which also are the areas where rural poverty is concentrated. In these areas, a variety of stakeholders, including small farmers, pastoralists, and customary or tribal authorities, have been allowed more or less implicitly to maintain practices and norms of access to resources independent of state policies. More specifically, local stakeholders have been allowed to carry on non state-sanctioned practices, so long as these did not conflict with state plans that required the state to enforce its claims over available resources in a given area, as was the case, for instance, during the phase of government sponsorship of mechanized farming schemes and of irrigated agriculture in central Sudan in the 1970s and 1980s and as is still the case today in areas affected by the oil industry. In more or less silently allowing non state-sanctioned practices of access to natural resources to continue, the state in a sense carried on a tradition dating from before independence. During the colonial period, customary institutions concerning natural resource management were in fact openly encouraged to move towards and indeed to formally organize as, a system since then known as Native Administration, which largely dominated access to natural resources in rural areas other than riverain Sudan. After independence, however, and particularly after the rise to power of Nimeiri's "modernist" (indeed "socialist") regime, such formal recognition was no longer seen as acceptable by the state, and indeed many "modernist" elites saw the Native Administration and customary norms in general as complicit in an exploitative colonial system holding back rural Sudan from modernization and development. Nevertheless, various degrees of an at least *de facto* toleration of institutions associated with the Native Administration and with customary law have been preserved in much of rural Sudan well past

[90] Though the rationale for this affirmation has changed over time to encompass nationalist, socialist, developmental, and more recently Islamic arguments, and though the extent to which this hegemonic claim has been enforced in different parts of Sudan has varied and grown over time, the message has remained essentially the same, namely that the state is the supreme owner of all resources (land, water, forests, oil) that are not already registered as private property.

Nimeiri's rule. This has been the case despite the fact that state ownership of all unregistered land and water sources was forcefully declared in 1970, and also despite the formal dissolution and later restoration of a much-weakened Native Administration in the 1980s.

This situation of general, though by no means indiscriminate state "toleration" of non-legal practices concerning natural resources has sometimes been described as a gap between legality and legitimacy. Legality refers to state-sanctioned institutions predicated upon the state's primary claim to resources, and legitimacy to the allegiance of most rural people to customary institutions independent of – and often in contradiction with – those claims.[91] Others have spoken of "failed" or "incomplete" state building, suggesting that the informal continuation of customary practices alongside state policies over natural resources reveals not so much a "tolerant" attitude on the part of state elites, but rather a mismatch between the claims of the state and its ability to formulate and enforce effective natural resource policies. Seen in this light, the persistence of a dual – customary and legal – system of governance of natural resources would be a sign of the fact that the challenge of reorganizing the relationship between politics, society, and the economy in a coherent and equitable manner has not yet been met by state elites. Finally, rather than construing this persisting institutional dualism as a failure of state-building or of the building of a cohesive, equitable national economy, some commentators have concentrated their attention on the attitude of certain state elites vis-à-vis economic resources in general, and natural resources in particular. Some have thus spoken of "predatory," rent-seeking, or neo-patrimonial elites, foregrounding what they see as a tendency of Sudanese policy-makers since early independence to use natural resources as instruments to pursue "private" political and economic goals. Because of such attitude, which at times may appear so pervasive as to constitute a veritable "political culture," the repeated issuing of natural resource policies by successive ruling elites may be seen as a response to the need to accommodate the constantly shifting boundaries of their clientele, however marginal the shift may be.

Whether or not such an attitude can be demonstrated and to what extent it is that widespread so as to constitute an interpretive key for natural resource policies are questions that may be debated at length, perhaps without the possibility of arriving at definitive solutions. However, the interviews with well informed observers and participants in policy-making give some credit to this type of explanations. In particular they reveal the influence of rent seeking and windfall gainers on policy design and implementation (elite capture), where individuals in position of power (leaders) tend to overvalue their own ideas and vision and to ignore the reality of a highly diverse country, environmentally, culturally and ethnically.

However, the predatory political culture explanation stops short of explaining other important factors that contribute to policy volatility. The latter appears to be compounded by a number of factors such as political instability, poor and deteriorating administrative quality, prominence of ideology in rational decision-making, decentralization resulting in fragmentation of policy arenas combined with serious principal-agent problems[92] within the state structure and isolation from, i.e. boycotting, the international community**.** These interactions create a vicious circle, making volatility a self-entertaining phenomenon.

[91] In this framework, fair policies may be considered to correspond to both legal and legitimate policies.

[92] In institutional economics, the principal-agent problem treats the difficulties that arise under conditions of incomplete and asymmetric information between a principal and a hired agent and the mechanisms that may be used to try to align the interests of the agent with those of the principal. The principal is the physical or legal entity/person acting on its own behalf. Principal-agent problems have been also demonstrated to apply within hierarchies such as public administrations and large corporations.

As a matter of fact, the interviews with policy-makers revealed that policy volatility is not so much about frequent changes of policy directions as it is a problem of repeated enactments of laws and regulations that are not enforced, partly because they are not compatible with realities, and partly because the state lacks the enforcement capabilities on a large part of the territory. The first set of reasons points to the issue of lack of democracy in decision-making and to the objective difficulties to ensure the participation in policy making of the rural population, a large share of which is illiterate, live in remote areas, and too concentrated on surviving in very harsh and insecure conditions to think of influencing policies that affect them. On the other hand, the argument of weak administrative capacities should be considered from the perspective of efforts aimed at the building of a modern state and a unified economy. Interestingly, the weak administrative capacity argument has been used by different groups of analysts to advocate for a restrained implementation of devolution, or on the contrary, for a more complete devolution that would include the redeployment of budget and staff resources. Implicit in these views is the assumption that the state can afford to spend the required resources and that this is basically a matter of equitable distribution. What does not seem to be questioned by the respondents is the capability of a country as huge and diverse as Sudan to sustain in the long run the cost of mobilizing the human resources required for an effective decentralized administration, especially a modern capillary bureaucracy.[93] In addition to legitimacy and accountability dimensions, an explanation of policy volatility must in fact also provide a thorough understanding of the nature of the Sudanese post-colonial state which is attempted in this last chapter of the case study.

In sum, policy volatility seems to be ultimately associated with poor political commitment to equitable development, huge inequalities and fragmentation in the social fabric, lack of autonomy of decentralized structures and broken accountability lines. Consequently *the study redefines policy volatility as a policy enforcement issue in a context of state building endeavor that is associated with insufficient legitimacy of decisions, lack of accountability of decision makers and widespread inequalities of agencies.* This latter aspect includes two related but distinct dimensions: inequality of agencies in the policy arenas and inequality of agencies in the operational arena. The interplay of these two sets of factors has had concrete impacts on the outcome of policies aimed at devolving the management of natural resources to the local communities, on the vulnerability of their livelihoods, as well as on their survival strategies.

B. Community capabilities for self-governance of natural resources

Devolving the management of natural resources to the local communities has often been advocated as a solution for ensuring their sustainable and equitable use. The literature that accounts for such experiences has expanded considerably during the last decade. Some of these experiences have taken place in the context of decentralization policies, while others have ostensibly been implemented outside a formal institutional framework. The results that pertain to this latter brand of research indicate that there are indeed conditions that allow local communities to escape from the "tragedy of the commons" scenario and cooperate with the better management of their common land, water and forestry resources under common property regimes. Moreover, these studies also point to the fact that such conditions are

[93]Revenues from oil, if used wisely may help in bridging this gap and contribute to the establishment of effective decentralized institutions that foster economic development .

rather restrictive, in particular on the size and characteristics of both the resources and of the user communities. However, this type of research has mainly used qualitative approaches and been applied at the level of single communities or cluster of communities at a very local scale. While the explorative value of these studies is dramatic, their operational value for policy making appears rather limited by the methodologies they used.

In the context of the present research an index was developed to measure community capabilities for self-governance with particular reference to natural resource management and successfully tested at the scale of two regional states. The average level of community capabilities was estimated to be 54% on a 0-100 capability scale. The constitutive dimensions of community capabilities include a mix of assets, attitudes or perceptions and skills, namely ability to mobilize, ability to manage money, land tenure security, common vision, and communal land management. Communities in rural Kordofan were found to be relatively strong in their levels of autonomy and ability to take initiative, while their abilities to manage funds and organize and their levels of achievements fall far short of the maximum. These capabilities are unevenly distributed depending on ecological, institutional and economic factors, showing a contrasted picture composed of a large majority (73%) of communities at an average level of capabilities, a significant minority lagging at very low levels and an advanced group of communities that score high or very high on the capability scale. While the large majority of the communities rated their capabilities as average, only 56.5% reported that they are poor, 40% claimed to enjoy an average standard of living and only 3.5% claimed to live above that average. In view of the extremely unsatisfactory amount and quality of services, poverty as objectively measured by standard indicators, may actually be more widespread than indicated by these figures. At any rate it is significant that poverty and capabilities are only weakly correlated, which would confirm the fact they are not equivalent realities.

The main variables that affect community capabilities positively or negatively include village size, participation in an IFAD project, access to a village market and credit, proximity to the nearest town, rainfall, cracking clay soils, access to groundwater, and war shocks. Village size has a positive effect on CCI mainly through mobilization. Proximity to the nearest town leads to increased mobilization, land tenure security, and ability to manage communal lands, implying the importance of access to markets and services found in larger towns

According to 94% of the respondents, the most important institutions serving villages are communities themselves, followed by NGOs (65%), and government and donors (38%). It should be noted that community organizations are not widespread in Kordofan – which may be the main reason why villages generally scored low with respect to their abilities to manage funds, to organize, and to enjoy and build upon significant achievements. The top ranking by communities of the institutions chiefly assisting their own members appears to be a reflection of social trust, rather than of formal organization. As many as 96.5% of communities stated in fact that their members trust each other and that there are functional solidarity networks in the community. Unlike what used to be the case until the recent past, all age groups (youth, adults, and elders) appear to be involved in making decisions about community issues in as many as 78% of communities, suggesting that traditional authority relations privileging the role of elders have somewhat eroded in the region. This conclusion is supported by the finding that traditional authorities (e.g. tribal chiefs) lead the decision-making process only in 5% of surveyed communities

While the communities seem to have a real capability to manage their natural resources at village level, the same does not hold true for issues that involve relationships with other user communities, outsiders or the state itself. Being a richer area than its Northern counterpart in terms of natural resources supporting rural livelihoods, South Kordofan has been a target of commercial agricultural investments for several years, which has resulted in the clearing of hundreds of thousands of hectares of its territory for mechanized farming. Further expansion of cultivated areas has taken place in recent years due to an increase in local population, as well those who are displaced from other areas, combined with a decline in land productivity due to depletion of soils and to the quasi-abandonment of sustainable farming practices, such as shifting cultivation and respect to fallow years. The effects of such phenomena on the state of forest resources have been compounded by the fact that a significant number of community members in certain areas maintain livelihoods based on the sale of forest products, such as wood and charcoal, which are in high demand as fuel throughout the region due to the relative absence of alternative energy sources. Besides over-cutting, another significant cause of the erosion of the forest cover in Kordofan is represented by forest fires, which the survey results reveal as a more important environmental issue in South Kordofan (as noted by 59.0% of communities) than in North Kordofan (as noted by 17.4% of communities). The reason for this variation may be first of all linked to the different natural endowments of the two states. There are, however, also man-made factors behind this problem: for instance, sedentary farmers sometimes deliberately set fire to rangelands to destroy pasture in these areas and thus keep pastoralists away. Whatever the causes, the effects of forest and rangeland fires may be rather severe. For one thing, such fires may deplete huge amounts of vegetation that is needed to feed livestock and to stabilize the soil, protecting it from wind and sheet erosion. Secondly, they also lead to changes in the composition of the plant cover of certain areas.

The review of cases of resource-based conflicts in Greater Kordofan suggests that poor governance contributes to them, i.e. (1) as a direct or indirect cause of their outbreak, notably via certain resource management and developmental policies; and (2) by creating an institutional, policy, and legal environment that is not conducive to efficient conflict management and/or resolution. The main traits of Sudanese state politics that appear chiefly responsible for creating an environment conducive to resource-based conflicts are a patron-client approach to politics, failed or ineffective natural resource management and development policies, and top-down government institutions. The first factor can be noted in the state's discretionary allocation of land, farming schemes, and investment concessions among various private interests, as well as the discretionary allocation of various resources by the Federal Government to states and localities. The second factor points instead to the limits of a process of investment in rural development, both in terms of planning and in terms of managing natural resources in sustainable and equitable ways, including the creation of institutions capable of managing and/or resolving potential conflicts. Thirdly, the case studies repeatedly bring up a problem of lack of accountability of institutions and policymakers to rural stakeholders, notably poor farmers and pastoralists, thus discouraging compliance with existing natural resource policies, as well as recourse to formal institutions in cases of unsustainable competition or open conflict among resource users.

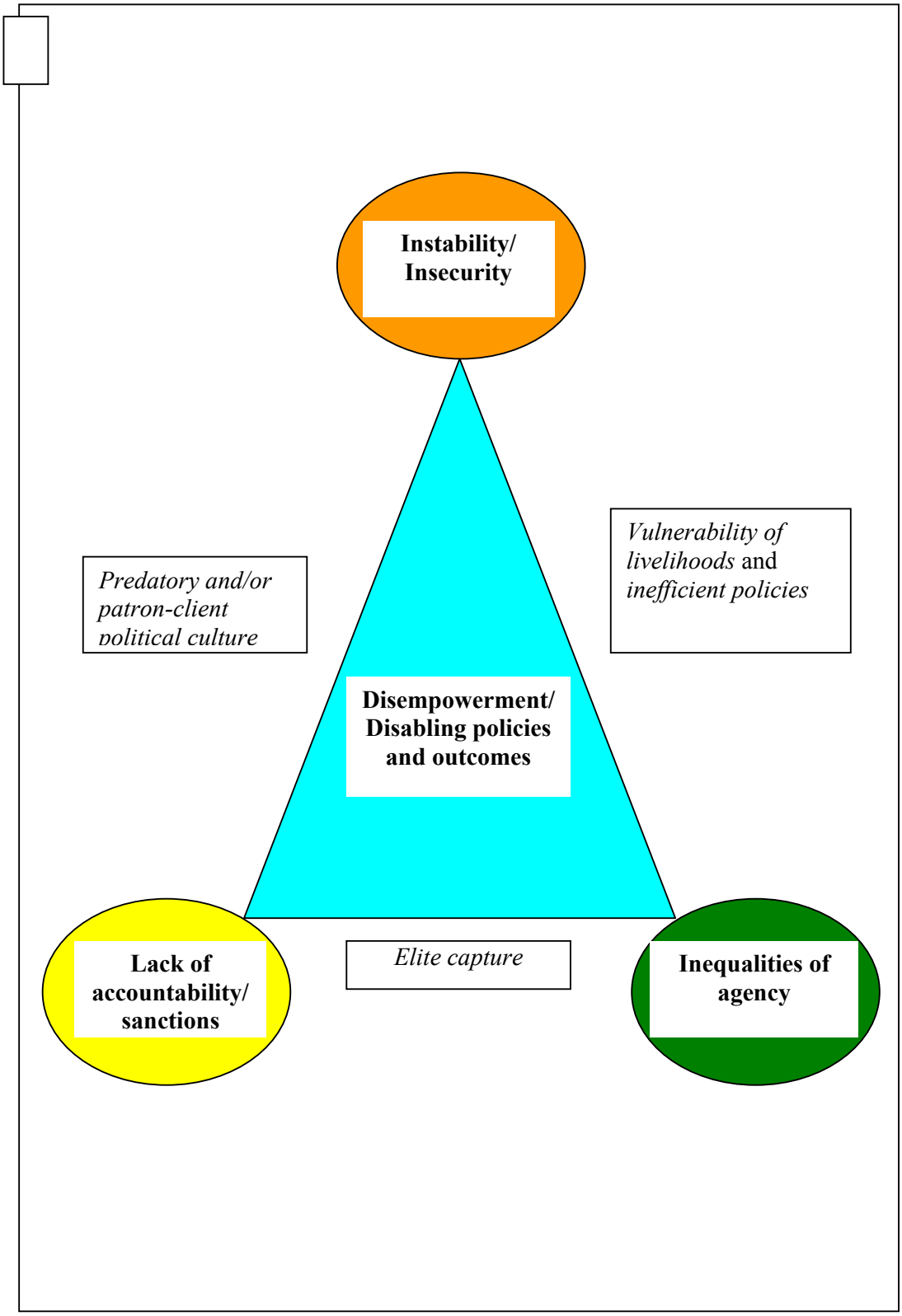
This does not mean that governance factors are the only or primary cause of conflict, as evident from the case studies. In particular, phenomena such as repeated droughts, desertification, and generally speaking environmental degradation have contributed to resource scarcity, paving the way for competition. Having said all that, it seems reasonable to suggest that improving governance may help provide a more favorable environment in which

natural resource management and resource-related problems can be addressed efficiently and equitably without escalating into violent conflict. The recommendations regarding how governance could be improved are put forward in the last part of this concluding chapter. Prior to that, it must be explained how the current environment is in fact disempowering the population in general, and the rural poor in particular.

C. Disabling policy and institutional environment

For synthetic purposes, the peculiar challenges posed by the Sudanese environment for the empowerment of the rural poor can be visually represented as the outcome of a rather stable set of relations among three problematic nodes, namely instability/insecurity, lack of accountability/sanctions, and inequalities of agency. With some adaptation, the relationship between these three "nodes" tends to hold valid in various political and policy realms in contemporary Sudan, including decentralization and natural resource policies and the institutional framework in which power and political responsibilities are shared among different levels of government. Indeed, the adaptability of the three nodes and of the outcome of their inter-relationship with different political and policy realms in Sudan suggests the possibility that this disabling "triangle" (see Chart below) may be taken as an interpretive key of the whole governance system in the country.

Figure 5: Disabling institutional and policy configuration



One main aspect of this triangular "structure" is the central role played by instability and insecurity, with instability bearing a more objective connotation and insecurity reflecting actors' perception of the situation. Not only are they an outcome of the system, but also elements that serve to reproduce it, thanks to the interplay with the other two poles, namely the differential agencies of actors and stakeholders involved in or concerned with any particular policy issue or political domain, and the lack of systematic correspondence between action and sanction, i.e. lack of accountability upward and downward. At the most general level, instability/insecurity can refer to different aspects of the environmental context of Sudan, e.g. the civil war, environmental shocks such as droughts, famines, political instability, and so forth. In relation to a sector as specific as natural resource management, however, this pole may refer to the volatility of policies as well as to the insecurity of property rights. As for the pole labeled as "inequalities of agency," this may refer to asset inequalities, thereby including poverty in the asset-related sense, as well as to inequalities of freedom of choice, hence also of access to information, ability to set one's goals, freedom from clientele obligations, and so forth, in line with the definition of agency and capabilities given earlier in this study. In the realm of natural resource management, this pole captures the unequal distribution of assets (land, technology, financial assets, access to markets) among state, private investors, and communities, as well as the different agency connotations of different stakeholders vis-à-vis the two distinct realms of policy-making and policy-enforcement. In other words, it is within this pole that community capabilities and their relationship with poverty can be identified, though processes of change in capabilities and in their distribution among stakeholders (i.e. empowerment and disempowerment) cannot properly be "read off" the pole of inequalities of agency, but rather result from the relationship between the three poles. Finally, the notion of lack of accountability or lack of sanctions refers to a sort of gap in the institutional fabric of governance, both at the formal and informal level, in the sense that the link between action and consequence/sanction is more often broken than not, whether that means that policy-makers can issue laws or undertake actions that are detrimental to the majority of the population without thereby suffering any political (or legal) consequences, or that a *Dar*-less tribe can settle on the traditional homeland of another tribe without thereby being punishable either by customary authorities or by state courts.

The relationship among these three problematic nodes, which, as noted, tend to reinforce each other both logically and historically in Sudan, has disempowering consequences not only for the rural poor or for the population of Sudan at large, but also for state agents, in so far as they are also primary stakeholders in the governance system. These consequences are evident in natural resource management and in development interventions targeting the rural poor, but they may also be observable in other contexts, such as that of gender inequalities or women's empowerment, when the "triangle" model is applied to them. The disempowering effects of the triangle in development interventions targeting the rural poor (men and women equally) are associated not only with agency inequalities, lack of accountability, and instability/insecurity, but also with characteristic patterns of their interaction. For instance, the relationship between instability/insecurity and inequalities of agency tends to result in vulnerability of rural livelihoods and in ineffective policies depending on whether one looks at inequalities of agency among policy-makers and enforcement agencies or among resource users. In contrast the interaction between inequalities and lack of accountability or sanctions leads to frequent occurrences of the capture of assets by the elites and policy options made available or developed for poverty alleviation. Furthermore, the interaction between instability and lack of sanctions encourages a political culture in which livelihoods and access

to assets are dependent upon predatory, rent-seeking, and/or patron-client relations, rather than on investment, scientific consideration of the respective merits of different policy options, and collaborative work. All of this has a direct effect also on the livelihood strategies pursued by the rural poor, in that resource use patterns and forms of collective action that may have sound developmental potential are discouraged. As a result, despite the periodic injection of resources into the system by international donor agencies or the state, the capabilities of the poor tend to be steadily eroded as a result of their immersion in a set of relationships that tend to perpetuate vulnerability, inequalities of agency, elite capture, non-accountability, and predatory mindset.

Though the three types of relationships or interactions among inequalities, instability, and non-accountability tend to coexist both logically and empirically, the prevalence of one or the other in a specific situation or policy realm suggests a particular kind of intervention. For instance, in realms where problems of vulnerability or ineffectiveness of policy are prevalent, working on instability and on inequalities of agency may be most effective, while when the question of political culture is predominant, instability and lack of accountability may be more urgent areas of focus. In the latter case, however, focusing on addressing inequalities, e.g. via income generating projects, may be a suboptimal strategy, in so far as it will not help to change the "attitude" or "culture" problem that results from lack of accountability and insecurity. What may be more effective in this context is to invest in a solid regulatory framework, which may change actors' perceptions of opportunities, constraints (including potential sanctions), and security.

Given the predominant role played by this kind of triangular structure in many realms of governance in Sudan, investing in initiatives to empower the rural poor may thus take different forms and entry points depending on the prevalence of this or that node and kind of relationships. As shown by the chapter devoted to the analysis of community capabilities, the very presence of, or recent past participation in, donor-funded development projects is highly correlated with high capabilities, suggesting that projects may significantly empower the poor, i.e. strengthen their capabilities, by adopting the right mix of investments. However, generally speaking the interconnectedness of different parts of the structure suggests the need to intervene on various fronts at the same time. In other words, it suggests that empowering the poor under this sort of institutional, political, and policy environment, in which volatility itself is both a cause and result of disempowerment, requires simultaneously investing in directly strengthening the capabilities of the poor, i.e. reducing inequalities of agency, providing more stability/security to their environment by promoting more secure property rights regimes and supporting institutions that can manage conflict, and encouraging more accountability by setting up regulatory institutions either at state level or at the level of voluntary arrangements.

D. Pathways towards an empowering institutional and policy framework

The rationale and objective of the present research was to identify approaches to an improved institutional and policy framework for the empowerment of the rural poor, based on a more in-depth knowledge of the current environment. As it has been amply illustrated, policy and institutional processes are in fact embedded in political processes. The realization of desired changes in the policy and institutional environment that may be identified are, therefore, dependent on political conditions that may or may not emerge in the future. The observation of the recent evolution of the Sudanese political scene provides encouraging signals in this

regard. While it is not clear how the Comprehensive Peace Agreement (CPA) will influence the governance system in Sudan and whether it will result in actual redistribution of authority and sharing of resources also in poor rural areas such as Kordofan, it is likely that its implementation will mark a point of significant discontinuity in the history of governance of natural resources in Sudan. This is particularly because of the unprecedented democratic tone of some provisions of the Agreement, as well as because of the stated intention of the signatories to set up various commissions (including a Land Commission) to oversee the redistribution of contested natural resources particularly in areas directly affected by conflict and displacement. Nevertheless, in light of the striking continuity of some problematic aspects of the policy and political environment in Sudan since independence, the particular configuration of such environment will have to be reckoned with even as CPA begins to be implemented. In particular the legacy of 50 years of misguided policies of natural resource governance, coupled with the effects of Sudan's slow evolution into an oil-driven economy in recent years suggest a strong possibility that neo-patrimonial, rent-seeking, and patron-client attitudes on the part of the political establishment may be expected and may continue to play a significant, though not necessarily predominant or inevitable role in Sudanese natural resource policies. An example of the difficulty to read the current situation is given by the oil factor. Revenues that are derived from oil have caused both the war and the subsequent peace. In the future this can be a curse or an opportunity. It is easy to imagine how it can be a curse, but it can also contribute to the building of a modern state, in which case it may be the determinant factor for progress. Beyond these considerations, one of the most difficult constraints to the reform of the state is the loss of internal and external trust. Trust in the state cannot be taken for granted, but it must be earned especially in societies where individuals and groups have been subject to arbitrary or discriminatory acts of the state. The question is: How can the state and ruling elite earn it back and make it the basis of state and nation building? The answer is: Essentially through credibility, predictability and consistency in the actions of the state combined with unrestricted access to information and effective recourse mechanisms. This implies also controlling the conditions that result in policy volatility.

The following recommendations are based on the findings and analysis presented in the previous chapters. In many ways they assume favorable evolution of the political factors building on the momentum of CPA, but they also provide ideas and concrete proposals that would help realization of the desired outcomes. The recommendations focus on the improvement of the governance of natural resources and related devolution policies, they are also relevant to, and cannot in fact be separated from, the improvement of the overall governance of Sudan considering the strategic nature of natural resources for the building of a cohesive nation, a modern state and a unified economy.

The common thread underlying the recommendations is that appropriate governance reforms should focus on improving both the capacity and the equity of natural resource management and conflict management institutions, and that they should reflect a desire to reconcile as much as possible the entitlements of local users with government concerns about the needs of an integrated national economy. In accordance with the disabling environment framework the recommendations are presented under headings of reducing agency inequalities, fostering security and stability, and strengthening accountability.

Reducing agency inequalities

1) *To reduce inequalities among resource users, appropriate initiatives would include*:

- Formulating natural resource policies that build on local livelihood systems, rather than attempting to replace them altogether.

- Setting infrastructural investments as priorities for public spending, including rural roads, drinking water, village and local marketing structures along the lines discussed in Chapter 7.

- Development of effective financial intermediation services in the rural areas in relation to the promotion of the development of small-scale commercial farming.

- Investing in adaptive research aimed at developing economically viable technical packages for small-scale commercial farming with particular reference to areas with higher rainfall and predominant clay soils.

- Investing in community-level organizations, their capabilities, and their representativeness.

- Strengthening resource-users' organizations such as Farmers' and Pastoralists' Unions and ensuring their representativeness.

- Creating a small-farmer agricultural services company that is publicly funded, but privately operated to ensure its autonomy in decision making and its ability to recover at least its operating costs through the efficient provision of services to small farmers.

2) *To reduce inequalities among government agencies tasked with policy planning and enforcement*:

- Institutionalizing the autonomy of states and localities both in financial terms and in terms of human capacity.

- Streamlining devolution of clear responsibilities down to the local level.

- Empowering states and local government to regulate the oil industry.

- Within the context of development projects, promoting partnerships between the private sector and government agencies at least on a transitional basis to reduce the burden of service provision currently weighing on the shoulders of the state and occasioning predatory behavior and inefficiencies.

- Establishing elected locality planning committees to manage projects and assisting in their formalization as legitimate interlocutors and partners for government agencies.

Fostering security and stability

- Redefining property rights on farmland in an equitable and socially and economically sustainable way.

- Redefining the regimes of rights to mobile resources in a more equitable manner, so as to accommodate the resource entitlements of pastoralist groups.

- Making new space for Native Administration-based and other informal conflict management mechanisms.

- Restoring neutral enforcement mechanisms based on state monopoly over violence.

- Implementing de-mobilization programs in rural areas, including weapon collection and initiatives for reconciliation.

- Moving from a project-focused to a program-focused perspective in the work of development agencies and donors, so as to give a sense of stability and security to the future socio-economic prospects of rural populations.

- Focusing development interventions in the mobilization of local resources, so as to strengthen continuity of impact and reduce vulnerability to external shocks and instability.

Strengthening accountability:

- Making the legal system more transparent and democratic, so as to re-build people's trust in government institutions.

- Clearly defining the respective natural resource management responsibilities of states and Federal Government.

- Creating the conditions for credible long-term political commitment to sustainable and equitable development by the government, notably by broadening its political constituency.

- Investing in the construction of sound administrative capabilities for development planning and implementing and strengthening policy enforcement capabilities.

- Reforming the mode of selection of political authorities at state and locality level, in line with the CPA provisions and in the direction of free election of candidates from a range of parties.

- Streamlining legislation concerning natural resources in such a way that abrogated laws that have not yet been fully repealed and are, therefore, selectively used at the discretion of law enforcement agents and judges are eliminated from the realm of legal practice and making it absolutely clear what laws are in effect and represent a basis for sanctions.

- Promoting awareness of the environmental, social, and economic impact of the existing situation of ill-governance of natural resource management among resource users, policy-makers, and donors. Both the international community and the educational system may play a role here.

- Privatizing part or all of project implementation processes under the Private Company Act, so as to minimize the risk of predatory behavior by state administrators.

- Involving local government structures in future development programs on the condition that they are elected freely and that norms to ensure accountability are in place to ensure their fair and transparent operation in the context of projects and beyond.

- Organizing public policy-design and policy-evaluation forums in the form of educational programs for both policy makers and citizens, so as to help them to familiarize themselves

with participatory methods of decision and policy-making and to sensitize policy-makers to the needs of their constituencies and to the impact of their actions and decisions.

E. The need of a new operational concept for empowering the rural poor

The above analysis and recommendations suggest the need for a new operational concept that both the state and donor agency should turn to in order to contribute to poverty alleviation in a stable and sustainable manner, i.e. by empowering the poor to break the cycle of poverty. In other words, intervening on the various fronts at which processes that result in disempowering the poor take place (per the triangular model presented above in relation to Sudan). Such intervention requires instruments other than those that have so far been used conventionally in development work. This is true of all geo-political contexts in which such work needs to be carried out, though each will be characterized by a particular governance configuration that may be more or less different from the model elaborated for Sudan.

The project concept has been the basic institutional vehicle of an increasingly wide range of development operations over the last 50 years. Initially, projects were often supposed to be part of larger development programs at the sector, country or even regional levels; however, with the end of the era of central planning by the late 1970s these programs came to represent little more than mere aggregations of projects. Regarding rural development, multi-sector and area-based rural development projects still provide the main operational concept to plan and implement rural development and poverty eradication operations, though there has been a significant evolution in project and program approaches and contents over the past few decades.

While the relationship between projects and programs has tended to weaken since the 1970s, their relationship with official policies has become stronger. Development projects have increasingly reflected the policy orientations of their sponsors and been used to experiment with or to up-scale new solutions to developmental problems. As noted in the chapter regarding policy processes, in fact the most innovative project designs tend to turn the project instrument into a policy arena in its own right. As projects have become increasingly innovative and comprehensive, they have also tended to lose in effectiveness and in sustainability, a fact that has led donors and cost-aware governments to question the overall developmental relevance of the project approach.[94]

This study has shown that there is indeed a need to improve governance in order to make developmental efforts more effective and sustainable, i.e. to achieve poverty alleviation by empowering the rural poor. In Sudan, in particular, such need has been unpacked into three components, each corresponding to a key node of the current governance system in natural resource management, as well as in other key political and policy realms, namely insecurity, lack of accountability and sanctions, and agency inequalities. As noted, neither the project concept nor programs that are mere agglomerations of projects can serve to design and implement appropriate initiatives that will transform this governance system. The question then emerges: What kind of operational instrument, if any, may enable such integrated interventions, and who may be involved or entitled to wield such an instrument?

[94] Some of this analysis applies also to older type of projects, such as those in the Gezira that embraced a radical change in agrarian structures through large scale irrigation.

To summarize: The required features of such an innovative instrument comprise the following:

- An approach to development work marked by temporal and logical continuity, cultivating ties with concerned stakeholders beyond the short term.
- A breadth of scope, not necessarily in the type of interventions, but in the type of considerations that enter design and implementation, as well as in the range of partnerships and choice of implementing tools. These interventions should be based on a careful study not only of the immediate manifestations of poverty, but also of the environmental conditions in which the rural poor live and that determine their livelihood strategies, notably the economic, political, and social institutions that perpetuate poverty.
- Continuity of presence and operations not only to counter instability/insecurity, but also to have an effect on the political culture and on the institutional and asset-related sources of vulnerability of livelihoods for the rural poor.
- Involvement of a variety of stakeholders at various scales and of various specializations (vertical and horizontal breadth of scope). These include, in particular, state actors, the private sector, and civil society organizations, including local organizations with a specific role in all stages of defining, planning, and implementing initiatives, and held equally accountable for their role without thereby relinquishing the power differentials that derive from their specialization.
- Aiming at transformation of relations among stakeholders, rather than merely asset endowments. In particular, it should include a strong mediation function supported by a communication function capable of developing targeted communication campaigns aimed at changing the perceptions of policy makers and the general public (or at accelerating these changes) and at expressing the range of stakeholders' voices.
- Focus on capacity building of concerned parties, including stakeholders and facilitating or implementing agencies/partners.
- Partnership-based approach to the definition of the overall rationale of activities, rather than only to implementation.
- Given the relative unavailability or ineffectiveness of direct regulatory instruments which will prevail in Sudan in the foreseeable future, promotion of accountability in collective action by "voluntary" approaches at least at the community level, through co-regulation or auto-regulation processes relying on a number of institutional instruments, namely:
    - *Unilateral commitments* made by agents at their own initiative or as a response to suggestions by a third party without any binding commitment. This type of approach is relevant to extension services or for the design of self-enforcing conventions when the users find it in their direct interest to comply.
    - *Public voluntary schemes* based on an agreement by participating agents (firms, groups, households, agencies) on certain standards of performance, technology, or organization developed by regulatory agencies (e.g. environmental standards). The conditions of participation in the scheme include respect for the agreed upon standards and the existence of clear monitoring criteria. Incentives are represented by the existence of these very monitoring and evaluation criteria, as well as economic benefits stemming

from participation (e.g. research and development subsidies, public infrastructure, technical assistance, use of eco-label, reputation, etc.). This kind of transaction fits well with development programs that provide incentives for improved environmental services by communities and/or firms.

- *Lease or rent agreements* i.e. contracts between the owners of a public or common resource, and entrepreneurs (individuals, firms or cooperatives) that produce a mix of private and public goods. The lease agreements would encompass environmentally-friendly objectives and be based on a schedule for implementation negotiated by the parties. While such agreements involve the possibility of coercion to enforce the lease, they are nonetheless based on a free decision of entry by the parties. In addition, such contracts can rely on mediation and arbitration mechanisms to ensure mutual accountability of signatories rather than recourse to formal courts.

An operational tool that would present such characteristics may take various forms, however the most appropriate is likely to be that of a network of partners and relations, in which different stakeholders, such as state agencies, donors, private sector, and civil society, would retain specialized, hence in a way "unequal" power, but would be equally accountable to each other and to the public based on the goal and standards set by the network. The network may operate in certain situations as a coalition; however it would also have other functions, notably circulation of information among partners and transparency of such circulation vis-à-vis the public, as well as implementation of specific development initiatives or governance reforms and exercises.

The basis upon which such a network operates may be a revised version of programs as currently defined, built on an analysis of governance systems prevailing in each program area in realms that are key for rural livelihoods (notably, but not exclusively, natural resource management). Program designs should be reflective of the problematic nodes and relations in those systems and devise appropriate entry points and partnerships to engage and transform those relations as much as possible. This would require broad-based negotiations and inclusive consultations with local stakeholders.

Unlike in current programs, which are usually based on a rather static analysis of institutions, stakeholders, and socio-economic indicators, the starting point for these network-based programs would be an analysis of the dynamics that result in a particular governance structure, which may lead to a configuration more or less similar to the triangle elaborated above. Based on this sort of dynamic analysis, relevant problematic nodes will be benchmarked through participatory assessments that accommodate a degree of perception and subjectivity, in other words qualitative benchmarking will play a significant role. As a reflection of the governance structure and of benchmarks on its salient nodes, strategic entry points will be identified in collaboration with a variety of partners whose respective role in the governance system will also need to be transformed as a result of the initiatives envisioned in the program. Hence the program itself will need to be conceived not only as a mechanism to channel resources as effectively as possible, but also and perhaps primarily as an incentive structure that may progressively alter relations among stakeholders and thereby the governance framework that these relations collectively produce. Given this transformational focus, evaluation of such a program would also need to be based on the same kind of largely qualitative analysis used for benchmarking. Ultimately, the success of a program will not be measurable in absolute terms but rather in its relative ability to generate a

dynamic process whereby the poor, as well as a number of other stakeholders involved in the program, can empower themselves to break the cycle of poverty in a progressive and dynamic manner, rather than simply benefiting from higher scores on static poverty level or development indicators.

ANNEX 1: CHRONOLOGY OF KEY POLICY DECISIONS

Year	Political event	Policy Decision	Remarks
1899	Beginning of the Anglo-Egyptian Condominium	Title to Land Ordinance	The Title to Land Ordinance recognized as private property individually registered cultivated lands in the extreme north and central riverain Sudan.
1925		Land Settlement & Registration Ordinance	The Ordinance consolidated a 1903 Land Acquisition Ordinance, which empowered the government to acquire land for irrigation schemes and other public purposes, and a 1905 Land Settlement Ordinance, which established an adjudication system to settle claims to waste and unoccupied lands. Such lands were declared government property barring evidence to the contrary.
1932		Native Courts Ordinance	The Ordinance consolidated a series of previous documents defining the respective roles of Native Administration authorities in the judicial sphere, setting up a system of local courts alongside state courts. Different authorities (e.g. *Sheikh, Omda*, and *Nazir*) were to chair different levels of tribal or sub-tribal courts.
1951		Local Government Act (or Ordinance)	The Act came in the wake of a series of initiatives paving the way for local government-building during the 1930s and 1940s, and it reflected a desire by the Colonial Government to circumvent demands for self-determination on the part of the Sudanese nationalist movement. In particular, the Act represented a continuation of a process of devolution of powers that started roughly at the end of WWII, when colonial authorities created a Consultative Legislative Assembly and established the first Kordofan municipality in El Obeid, capital city of the province. The Ordinance sanctioned the creation of local councils appointed by the Colonial Government and entrusted with collecting taxes and providing social services. At the same time, local security and conflict management remained responsibilities of the Native Administration, and courts headed by the Native Administration (NA) and with both rural NA and urban members retained judicial authority and large discretionary powers, only in some cases subordinate to the authority of Commissioners and the formal legal system.
1955	Mutiny of Southern army forces		In preparation for a transition from British domination to independence, a series of changes were undertaken in the system of administration of Sudan prior to 1956, which often resulted in the marginalization of Southerners, particularly within the ranks of civil service and the army. The replacement of British officers with Northern Sudanese led to a mutiny during which Southern soldiers killed hundreds of Northern officers and civilians.
1956	January 1: Independence of Sudan and formation of a coalition government under PM Azhari June: Azhari's government is replaced by an Umma-People Democratic Party's coalition	Transitional Constitution	

1958	February: First general political elections confirm Umma-PDP government, despite Southern opposition. November: Coup led by General Abboud	Ratification of an aid agreement with the US	The agreement with the United States aimed to stimulate the development of infrastructure in Sudan, and also to help the Sudanese economy reduce its dependence on cotton exports. However, the agreement did not significantly help Sudan confront its economic problems, notably the scarcity of foreign exchange reserves, which was worsened by a government decision to sell cotton above world market prices and by an Egyptian embargo on imports of dates, camels, and cattle from Sudan.
1958-1964	Military government led by Gen. Abboud		Among other important policy initiatives, the Abboud government created a Central Council appointed by the government with members from different parts of the country. The Council was to advise the government on selected issues, notably foreign policy and the budget
1961		Local Government Act	The Act established local councils at the district (recently re-termed "locality") level, led by a government-appointed commissioner and with members chosen from among local rural and urban elites, the NA, and leading civil servants. The main implementing party was the Ministry of Interior, which took over local government responsibilities from the Colonial Administrative Secretary.
1963	Southern forces resume armed struggle, led by Joseph Lago and the Anya Nya		
1964	General strike and riots lead to fall of Abboud government		The main causes behind the fall of the Abboud government were reportedly his harsh and inconclusive handling of rebellions in the South and of the Southern question in general, and his unsuccessful economic policies.
1964-1969	Civilian government. 1965: National elections and (failed) government-sponsored peace conference on the Southern problem		This phase of civilian government was led by a series of prime ministers and parties each for a short term, due to great instability in party coalitions and divisions within parties. This period also witnessed the emergence of some important parties representing the South, notably the Sudan African National Union (SANU) led by William Deng and Saturino Lahure. Part of SANU entered Parliament in 1965, while another part went into armed exile in Uganda. Anya Nya remained outside the formal political arena and was plagued by internal divisions. Under the Mahjub government (starting in 1965), the army led a major repressive campaign against Southern rebels. Conversely, the following government, led by Sadiq al Mahdi, briefly attempted to negotiate a peace agreement envisioning a degree of autonomy for Southern provinces.
1968		Establishment of a Mechanized Farming Corporation	The Mechanized Farming Corporation (MFC) was established by the government as an autonomous agency operating under the Ministry of Agriculture and Natural Resources. Among other things, the MFC managed state farms and provided technical assistance, credit, and market support to farmers in mechanized rainfed areas.
1969	May: Military coup by the Free Officers' Movement led by Colonel Jaafar Nimeiri	Creation of a Revolutionary Command Council (RCC) committed to "Sudanese	The RCC banned political parties and nationalized industries and banks. Under Nimeiri, the government initially included several Communist members, while later the Communists were persecuted. Under the umbrella of the Sudan Socialist Union (SSU), Nimeiri initially promoted top-down ideologically driven policies of state-building and development, similar to most single-party post-colonial regimes. However, SSU and its program

		socialism"	witnessed significant transformations during Nimeiri's rule, including a transition from state-led "socialism" to a combination of political Islam and economic liberalization.
1970		a) Native Administration Act b) Unregistered Lands Act	a) The Native Administration Act is generally considered as a watershed in government policy towards customary authorities and institutions, as it replaced such authorities with inexperienced tribal leaders chosen on a political basis. The NA was then formally abolished in 1971. b) In line with colonial land policy, the 1970 Unregistered Lands Act declared all waste, unregistered, and forest land to be government property, thereby stating the right of the state to withdraw de facto recognition of customary land claims other than as usufruct rights. Moreover, the Act formally abolished the power of the NA to allocate land rights in rural communities and dissolved the legal basis of the notion of tribal homeland, or *Dar*. In practice, the Act was mostly applied in riverain areas, while traditional rain-fed agricultural areas retained customary holding arrangements. From a legal point of view, however, the 1970 Act provided grounds for the state to challenge such arrangements, and this remained de facto the case even after the Act was repealed by the 1984 Transaction Act. One of the immediate purposes of the Act was apparently to enable the state to have full control over the settlement of newly irrigated lands, particularly in the Rahad and El-Suki schemes. In particular, the state intended to avoid the intricacies of the private ownership approach taken in the Gezira Scheme by preemptively declaring all land to be state-owned and thereafter granting usufruct rights to land claimers, mostly small-holders with 5-10 acres of land.
1971	Joseph Lagu proclaims the formation of the Southern Sudan Liberation Movement (SSLM)	People's Local Government Act	After abolishing local government structures set up by previous governments, the Nimeiri government set out to redefine the structure of local administration with the 1971 Act. Among other things, the Act abolished NA and its various functions (notably natural resource management and conflict resolution), and established a four-tiered system of councils. This system included elected community councils in villages, neighborhoods, and pastoralists' camps, followed by rural and urban councils, district councils, and finally ten provincial commissions. The Act essentially reflected the populist "socialist" bent of the initial phase of the Nimeiri regime, while also serving to ensure a capillary presence of the SSU. One of the lasting effects of the Act was the loss of the institutional capital of the NA both in terms of natural resource management and in terms of regulating relations (including conflict) among resource users in rural areas. Furthermore, the 1971 Act marked a transition from at least partial reliance of local agencies on local taxation to financial dependence on the central government.
1972	March 27: Peace agreement between SSLM and GOS at Addis Ababa		The agreement granted autonomy to three southern regions under a Southern Regional Assembly, a High Executive Council, and a Regional President appointed by the President of the Government of Sudan (GOS) .
1974	Coup attempts and strikes against Nimeiri, followed by purges and state of emergency	Survey Department Act	The Survey Department existed since the beginning of the 20th Century, but the Act reflected a desire to modernize its work and regulate the use of then new technologies, such as aerial photography and remote sensing.
1974		Livestock Routes and Veterinary Service	The aim of the Act, whose implementation was the responsibility of the then regional Ministries of Agriculture, Natural Resources, and Irrigation, was essentially twofold. On the one hand, it aimed to establish stock routes for a safe passage of transhumant herders

		Stations Act	and their animals from areas of livestock production to local and international markets. Secondly, the Act regulated veterinary services and standards to ensure the good quality of cattle, goats, sheep and camels to be sold on the market. Both goals reflected a primary preoccupation with the market (notably a desire to boost meat exports to oil-producing countries), rather than with livestock production as such. Production stock routes remained indeed largely unregulated by the state at this stage.
1975		Mechanized Farming Corporation (MFC) Regulations	This policy decision essentially served to define MFC responsibilities in relation to the proper utilization of natural resources in areas of rain-fed mechanized farming. Such responsibilities included land clearing, land surveys, granting credit to licensed farmers, and managing state farms. Affected areas included what today corresponds to the states of Blue Nile, White Nile, South Kordofan, Southern Part of North Kordofan, and South Darfur.
1980		Regional Government Act	The Act divided the country into six regions, in addition to Khartoum as national capital. These were Darfur, Kordofan, and the Central, Eastern, Northern and Southern Regions. Each region was to be led by a governor chosen from among three candidates elected through an electoral college tightly controlled by the Sudan Socialist Union. Regional Councils were also formed, with members chosen by locality councils and also included representatives of professional, trade, and women's unions. Despite this apparent effort at decentralization, the political system remained based on autocratic principles, which greatly limited the space for power-sharing and participation.
1981		Peoples' Local Government Act	The Act divided regions into localities, more or less corresponding to the rural councils of the colonial era. Each locality was headed by a Commissioner and by an advisory Locality Council structured in the same way as Regional Councils. Accountability, financial capacity and autonomy, and participation remained seriously limited in these institutions no less than in regional institutions.
1983	June: re-division of the Southern region into three provinces, opposed by the SPLM. September: Sharia is proclaimed as the basis of the legal system, triggering a resumption of civil war in the South.	Civil Transaction Act (amended in 1990)	The Act repealed a series of previous acts, including the 1970 Unregistered Land Act, without thereby invalidating regulations and laws issued under such acts. In particular, the Act re-stated government ownership over all non-registered land. Furthermore, it regulated different matters related to civil transactions over land, including title to land, means of land acquisition, and various aspects of land use. In particular, the Act forbad the use of privately-owned land in ways that might harm others or conflict with the provisions of the 1935 Public Health Act, and it declared the responsibility of the government to conserve surface and underground natural resources. In so far as the Act to some extent reflected the Islamic ideological orientation of the late Nimeiri period; its application and that of other laws from the same period was temporarily suspended during the democratic period between 1985 and 1989. The Act was later re-enforced in amended form by the current government starting in 1990.
1983-1985	Protracted droughts and famine in the Sahelian Belt		The Sahelian droughts of the mid-1980s led to serious famine and to a disruption of farming and herding livelihood systems in much of Western Sudan, notably Darfur and parts of Kordofan.
1985	General strike and demonstrations in protest for food and gas price surges. April: Coup led by General Al-		Al-Dhahab's transitional government inherited an economic situation marked by famine in much of Southern and Western Sudan, with rising international debt and food prices and plummeting agricultural production. On the political front, the dissolution of one-party role led to an over-proliferation of parties.

	Dhahab.		
1986	February: IMF declares Sudan bankrupt. March: GOS and SPLM issue the Koka Dam Declaration calling for a constitutional conference and for repealing the Sharia as basis of the legal system. June: Sadiq al-Mahdi forms a first coalition government that will last until August 1987 despite much factionalism.	Land Appropriation Act	The Act defined the right of the government to sell and rent government land, as well as to allocate it for specific uses and to grant licenses to investors. Land included in the Act included that registered as government property according to the 1925 Land Settlement & Registration Act, as well as land expropriated for the public benefit or considered as belonging to the state by default based on the 1970 Unregistered Land Act. The Act did not have a specific implementing agency; rather implementation responsibilities rested with the entire Council of Ministers.
1989	March: Sadiq al-Mahdi dissolves his second coalition government (formed in 1988). June: Coup led by Colonel Umar al-Bashir and later by the Revolutionary Command Council for National Salvation, in coalition with the National Islamic Front led by Hassan al-Turabi	Forestry National Corporation (FNC) Act	This Act repealed the 1932 Central Forests Act and Forests Subordinate Directorate Act, without thereby invalidating legislation issued under these two Acts. The main objective of the Act was to define the functions of FNC, notably the formulation of general policies concerning forests and environmental protection. In addition, the Act aimed to increase the size of areas to be preserved as forests to a minimum of 20% of the territory of Sudan. Implementation was entrusted to FNC, to the Ministry of Agriculture, Natural Resources, and Water, and to Commissioners and local councils in various regions.
1989		Forests Act	This Act is the most important in the field of forest protection. It resulted from the merger of two previous Forests Acts issued in 1932 and 1974, all aiming to regulate the protection of tree species, soil and water resources, pastures, and any other natural resources present in forest areas. Under the 1989 Act forest areas were for the first time classified with respect to different kinds of entitlements over them, including private and community entitlements. Implementation was entrusted to the FNC and to locality Commissioners (who were also empowered to enforce the Act), while stakeholders also included the Ministries of Agriculture, Natural Resources, and Water, the regional governments, landowners, and producers and traders of forest products such as wood and honey.
1990		Irrigation & Flood Control Act	The Act asserted state authority over the Nile and surface waters in general. In particular, it affirmed the power of the state to issue licenses for any activity concerning irrigation and discharge into surface water, as well as to specify the amount of water that each licensed party can draw and what time. Implementation was entrusted to the Ministry of Irrigation and Water Resources, and stakeholders were primarily farmers and schemes owners.
1990		Agricultural Council Act	The Act aimed to establish an Agricultural Council that would organize and develop the agricultural sector in coordination with

			concerned agencies (including research institutes). However, there is no evidence that this Council has been operative and/or effective to date.
1991		4th Constitutional Decree and Local Government Act (LGA)	Under the Constitutional Decree and the LGA, Sudan was declared a federal country with nine states (including Kordofan), 66 provinces, and 218 districts or localities. Furthermore, the Act redefined to some extent the setup, functions, and financial bases of localities, State Councils and Ministries, Governors, and various central government agencies such as those responsible for Local Government, Finance and the z*akat*. In particular, financial sources of local government expanded to encompass returns from investments and transactions, local taxes (e.g. on sugar trade and royalties), state transfers to localities (usually through the State Support Fund (SSF), and borrowing.
1992		Organization of Nomads and Farmers Act	The Act aimed to establish institutional structures to organize nomads and farmers and to assist in the implementation of government programs for rural development. In particular, a Higher Council for Farmers and Pastoralists was supposed to be established to implement the Act. However, to date the Act is still by and large awaiting implementation, while the organizational structures of pastoralists and traditional farmers remain very poor. On the one hand, the Farmers' Union mainly represents irrigated scheme farmers and mechanized farmers/traders, and it constitutes a strong lobbying group on their behalf. On the other hand, the Union represents at best minimally the interests of the small, traditional rain-fed sector. Finally, though a Pastoralist Union also exists, it has very limited influence especially at the federal level.
1995		a) National Water Commission Act; b) Water Resource Act: c) Local Government Act	a) The National Water Commission Act repealed the National Commission for Rural Waters Act and the National Commission for Town Waters Act of 1986, without thereby abrogating regulations issued under them. Its objective was to establish a national water commission that could undertake water planning, coordinate water use, protect the environment, and carry out research on water sources and their sustainable exploitation. The National Water Commission was to be set up in the Ministry of Irrigation and Water Resources. b) The Water Resource Act is the main piece of legislation concerning freshwater. It states that water is government property and entrusts primary responsibility for its management to the Ministry of Irrigation at federal level and to the *walis* and the Ministries of Engineering Affairs at state level. c) The Act canceled the 1991 LGA without invalidating regulations issued under it. One main aim of the 1995 Act was to plan village lands according to a Disposition of Lands and Physical Planning Act. Moreover, the Act aimed to define stock routes so they would remain clear of agricultural lands, as well as to provide for the development of pastureland, pest control, and development and conservation of farmland and forests.
1998		a) Constitution of the Republic of Sudan b) Local Government Act	a) The Constitution came into force in June 1998 after a referendum, reaffirming among other things the federal structure of the country (with 25 states) and the foundational role of the *Shari'ah* in Sudanese laws and political institutions. The Constitution also determined the respective responsibilities and financial resources of the federal government, states, and local councils. b) The Act canceled previous LGAs without abrogating regulations issued under them. Its main goal was to organize the activities of local government authorities in each state. One of its provisions was the establishment of Provincial Councils based on

			criteria of population size, and with borders the economic and social variables and the suitable number of the localities.
1999	Crisis of political coalition between President al-Bashir and Hassan al-Turabi, removal of the latter from power, and temporary suspension of the Constitution	a) Nomadic Stock Route Act of North Kordofan b) Rangeland and Pastures Act	The southern part of North Kordofan represents an interface for cattle and camel herders, who settle there after the rainy season particularly in the locality of Shikan. Cattle herders have traditionally followed well-demarcated stock routes when migrating south. However, these were partially abandoned over the 1990s due to lack of investment in water points, rangeland, and markets along the routes, as well as due to war-related insecurity and the encroachment of traditional and mechanized farming into the path of stock routes. Camel herders on the other hand have not traditionally had well-demarcated routes, preferring to move rather freely to wherever pasture is available and to reach agreements with other tribes on where to move after each rainy season. At the time of the Act, government intervention was much-needed to regulate use of resources along stock routes due to emerging competition and even open conflict among herders and farmers. However, the State did not have enough resources to demarcate stock routes and to provide adequate water and markets along them, to protect rangeland from fires, and to sensitize stakeholders to the need to work together for stock-route development and rehabilitation. b) The main objective of the Act is rangeland conservation and development, however implementation has so far been seriously hindered by the fact that Rangeland and Pastures Departments are generally very poor in staff, mobility, equipment and budget.
1999		Livestock Production Organization Act and Animal Disease Control Act	These Acts aim mainly to organize the production of livestock for internal and export markets, whether this occurs on a mobile (nomadic or transhumant) or sedentary basis. In particular, they provide for a series of services to be made available to livestock producers, including veterinary and marketing services operating on the basis of revolving funds. The record of actions undertaken under the Acts is rather mixed to date: for instance, initiatives to concentrate livestock in small, "disease-free" grazing areas has had a negative environmental impact in some areas, while initiatives such as free animal immunization programs have been quite successful, also thanks to the support of livestock owners.
2000		a) Abolition of Crop Taxes, Presidential Decree b) Law Organizing Farming & Pastoralism in South Kordofan; c) Law Organizing Native Ad-ministration in South Kordofan	a) The Decree was passed by the President of Sudan at the advice of the Federal Minister of Finance and in the absence of approval from the National Assembly, on the expectation that reduced taxes would increase agricultural produce prices at the farm gate, thus stimulating agricultural production, while at the same time reducing opportunities for the erratic levying of taxes on farmers on the part of various agencies at state level. Despite the fiscal loss that would be caused by the abolition of the taxes, it was expected that rising oil revenues would more than offset the loss. In reality, since many states depend economically and financially on agriculture, their fiscal basis was greatly eroded by the decree. On the other hand, its expected beneficial effect on farm prices and agricultural production was only felt by traders and large producers in the mechanized sector, thanks to their highly elastic supply functions. The Federal Government has since attempted to pay adequate compensation to states for the fiscal loss, but federal transfers tend to be erratic and insufficient, preventing solid planning on state budgets. As a consequence, some states have searched for alternative sources of revenue, including indirect taxes on agriculture, which are sometimes levied at collection points disseminated along roads in rural areas. Moreover, states have generally reduced spending on agricultural services, since

			farmers no longer directly contribute to their budgets. Partly in response to this situation, the Federal Government in 2004 attempted to reinstate crop taxes, but faced strong resistance by large mechanized farmers, traders, and foreign investors formerly enjoying limited tax holidays.
2001		a) Local Government Act b) South Kordofan State Water Corporation Law c) Environment Protection Act	a) The LGA repealed some aspects of the 1998 LGA, notably by stating that *walis* can allow NA authorities to pass judgment in criminal and land acquisition cases, as well as to carry weapons in the pursuit of these judicial responsibilities. c) This Act replaces the Higher Council for Environment and Natural Resources Act of 1991, and focuses on the role of various authorities at federal and state levels in terms of environmental protection, entrusting overall responsibility in this realm to the Higher Council For Environment and Natural Resources. In reality, responsibilities for environmental protection are often taken up by various agencies involved in resource use rather than by the Higher Council.
2002		a) Rural Development Organizations Act; b) South Kordofan State Law Organizing Agriculture & Pasture; c) Forest and Renewable Resources Bill; d) Agricultural Implements Use Act; e) Zoning of NK for Agricultural Production.	a) The Act aimed to give a legal status to village-level organizations concerned with training and institution building, community-based users' groups, and rural micro-finance facilities created by development projects. Implementation was entrusted to State Councils of Ministers and respective state agencies. b) The Bill replaced the Forests National Corporation Act and the Forests Act of 1989, without thereby invalidating regulations issued under them, and also established a Forests and Renewable Natural Resources Corporation with the same functions defined by the Forest National Corporation Act. The main goals included the organization of a Forests and Pastures Administration, enlarging the area allocated for forest reserves in Sudan to 25% of its territory, and paving the way for a Pastures Act in Sudan. Moreover, the Bill sought to settle disputes between states and Federal Government over the ownership of forest resources and royalties derived from forestry products. The formula adopted to solve such disputes has been one of revenue sharing whereby states get 40% of revenue from forests located on their territory, while the FNC receives 60% of it (out of which one third is to be reinvested in forest development). One main problem faced in implementing the Bill is the lack of clear rationale and sensitization campaigns in support of the 25% goal (forest land is only 11% of the territory), so that mechanized farmers for instance tend to ignore regulations that require that they keep 15% of their land under tree cover and investors tend to use the trees for production of charcoal. Oil exploitation has also taken a toll on forest reserves since many trees have been felled to make room for pipes and roads (it is estimated that a million hectare of forests was lost to oil production in less than 7 years). d) The main goal of this law was to prohibit the use of heavy agricultural and tillage implements such as the disc harrow on fragile sandy soils. However, there are high rates of violation of this law and penalties are not adequate. e) This policy decision set 13N as a demarcation line between farming and pastoralist areas, declaring the area north of this line as not suitable for farming due to its high vulnerability to drought and desertification. This decision met considerable resistance from the farmers north of 13N, who were not provided with the instruments to change livelihood system, not compensated for income lost as a result of the decision. Moreover, the decision was not accompanied by appropriate measures to ensure the availability on local markets of agricultural goods whose local

			production was affected or prohibited.
2003		Local Government Act	The 2003 LGA called for more devolution of power to the locality level, while simultaneously reducing the number of localities (or rather "administrative units") to about 20% of what they formerly were. The Commissioner was declared the head of the executive branch of the locality government, along with five administrative departments (Agriculture, Animal and Natural Resources, Finance and Planning, Health, Education, and Public Affairs, Engineering and Town Planning). Appointment of the Commissioner remained in the hands of the President, acting upon advice from the State Governor. The Locality Council was granted the possibility of filing a petition with the Governor for the removal of the Commissioner. As for other local government institutions, NA was not mentioned in the 2003 LGA, and indeed states were instructed to withhold any initiative in this regard until framework legislation was issued at the federal level. Major constraints to local government, such as lack of autonomous financial and human resources of localities, were also not addressed by the 2003 Act.
2004	Comprehensive Peace Agreement between GOS and SPLM/SPLA (signed 9 January 2005)	Law Organizing Native Administration in North Kordofan	Among its various provisions, the CPA calls for a transitional period of co-existence between two distinct but integrated parts of the Sudanese Federation (a Northern and a Southern part), and it affirms principles of power-sharing, devolution of authority and resources, equitable redefinition and restoration of land tenure rights, and sustainable use and sharing of natural resources.

ANNEX 2: POLICY NARRATIVES

Twelve interview narratives on policy volatility from the Sudan

A. Overview

The following pages present twelve narratives built on interviews conducted with representatives of various Sudanese public institutions more or less directly involved in the policy process concerning natural resource management and/or decentralization. While not being fully representative of the broad cross-section of institutions the interviewing team engaged during fieldwork, the selection of twelve respondents for this document nonetheless reflects a concern with inclusiveness and breadth of scope. The interviewees were members of various institutions at the federal level and from greater Kordofan, including legislative and executive government agencies, parastatals, the Native Administration, and NGOs. As a result, each respondent was or had been participating in the policy process in different ways, and brought a different perspective to the analysis of the problematic aspects of such process, notably in regard to its volatility. Despite the variations, and without minimizing the document's specific significance for the relative fragmentariness of the governance structure and contemporary political culture of Sudan, some common elements have emerged from the interviews that deserve to be mentioned. These may be summed up as follows:

1. *A consensus on the volatility of the policy process*: Almost all respondents regard the policy process as marked by volatility in all its aspects, including its rules, participants, outcomes (i.e. concrete policy decisions and initiatives), and mechanisms to implement and enforce the policy decisions. In particular, it appears that virtually all respondents regard outcomes, implementation, and enforcement as volatile, in the sense that they are marked by unpredictability, frequent changes, the public's lack of awareness or legitimacy of the decisions, and insufficiency of resources for implementation. Only one or two of the respondents addressed specifically the rules of the policy process and its participants. Most of them indirectly hinted at the relative informality of the rules governing access to the policy process and the possibility that influencing the process seemed to depend on the lobbying capacities of different interest groups, which are in turn linked to personal or party connections with individuals in top decision-making posts.

2. *A relative consensus on resource degradation, lack of a stable and equitable regime of property use and rights, and lack of strategic vision regarding resource development and sustainability as the main problems Sudan faces with respect to natural resources*: Most respondents' view of the main natural problems Sudan faces combines environmental and resource-related factors with those of governance. In particular, they stress resource degradation, such as desertification, deforestation, and droughts, but they do so only within the framework of complex governance problems that include the lack of clear and equitable definitions of property and user rights and the lack of a strategic vision for resource use and development, based on their understanding of current and potential use patterns. In addition, some respondents mention the recently-concluded conflict between the Federal Government and Southern rebels (as well as the ongoing conflict in Darfur) as a factor that has shaped

patterns of access to and use of natural resources in a major way, and altered the natural and social environment of rural Sudan. These must be taken into account in any future natural resource management policies.

3. *A consensus on lack of political will and of coherent resource allocation mechanisms as the main problems Sudan faces in relation to decentralization*: Respondents generally agree that the Federal Government has hindered the decentralization process by resisting to yield actual decision-making power to states and to local governments, despite the formulation and implementation of a series of Local Government Acts from the mid-1990s to 2003. There is also a consensus that decentralization policies have had negative, even paralyzing effects and has not envisioned mechanisms for the financial autonomy of local governments. In fact it has been accompanied by financial initiatives, such as the abolition of agricultural taxes that undermine such autonomy. The incoherent policy process has devolved increasing responsibilities to local governments and financial and budgetary initiatives have been taken that undercut the independent resources of local governments. As a result, the quality of public services in many regions has significantly eroded.

4. *A relative consensus on some governance problems that compound volatility, notably the decline of civil service, an ideologically-driven political culture, and a predatory or patrimonial attitude of policy-makers towards public resources and political power*: Though only explicitly mentioned by a couple of respondents, the problem of a weak or declining civil service is one that is hinted at by many of them, particularly in discussions on the weakness of local government institutions in human resources. The causes for such weakness are complex and go beyond the realm of policy volatility strictly speaking. However, one cause repeatedly mentioned by respondents appears to be the particular approach to the government that characterizes the current regime, as well as other previous regimes in Sudan. This is an approach marked on the one hand by a predominant concern for ideological affiliations, both in the content of policy decisions and in the selection of policy-makers and even civil servants. On the other, it is a rather predatory or at least patrimonial approach to power and to the administration of public goods, whereby top-level policy-makers or the ruling Party can openly treat the latter as sources of rent or even as "private property." Both of these approaches, which are complementary aspects of the same governance situation or political culture in contemporary Sudan, compound volatility, because they make policy revolve around changing predatory/patrimonial interests vis-à-vis the administration of public resources and power. Moreover, a political system based on this sort of political culture tends to fill policy-making and implementation posts with political appointees that are in turn driven by patrimonial interests and/or ideological concerns, rather than by professional competence.

5. *A relative consensus on the significance of the democratic deficit in relation to policy volatility*: With few significant exceptions, most respondents stressed the lack of popular participation in decision-making and the lack of (or limited) accountability of government institutions as two main factors not only of poor governance but also of volatility, particularly in the domain of natural resource management. Lack of popular participation in decision-making leads in fact to poor generation of information about existing patterns of resource use and user rights, as well as about the interests and concerns of primary stakeholders, with the effect that policies are often suboptimal or even misguided. Moreover, policies decided upon without sustained input from stakeholders are more difficult to implement, difficult to fund properly, and even more difficult to enforce, since stakeholders may not have incentives to

comply with them or pay for their implementation. Limited accountability of policy-makers and of institutions, particularly vis-à-vis the interests and concerns of populations living far from the main urban centres where the ruling party finds the bulk of its constituency, is also a factor of volatility as well as of poor governance more generally. Limited accountability results in fact in slow and inefficient mechanisms for adjustment of suboptimal policies or of their negative externalities, with the result that the implementation process may stagnate and be redressed only via abrupt policy changes.

To sum up, the picture of the policy process that emerges from these interviews in the domains of decentralization and natural resource management is marked by a number of problematic features, among which volatility is a cross-cutting, though not perhaps the dominant aspect. The main problem that emerges is in fact that of a weak, centralized but at the same time very under-institutionalized system of governance, where democratic deficit, lack of strategic vision, patrimonial or patron-client approaches to public management, lack of a capillary and equitable system for resource generation and service provision, and lack of mechanisms for information gathering and circulation feed off each other.

B. Interview Narratives

1. TST, Northern Kordofan

Identity and background of the respondent: TST is the *Mutamad*, or "Commissioner" of the locality of Shaikah, as well as a member of the National Congress Party for the State of North Kordofan and of the State Legislative Council, and the Chairman of the State Cooperative Union. He is a professional politician with over 33 years of experience in local government, starting at the municipality level in 1972 and moving up to the locality level, where he has worked since 1994. Most of his contribution to the interview comes from his experience as a Commissioner, reflecting not only his participation in the policy process proper, but also his work as a local administrator.

Respondent's interest and involvement in the policy realm: TST's experience and concerns with the policy realm rest mostly with decentralization, whose cornerstones he identifies as the 1980 Regional Government Act, the 1981 People's Local Government Act (which divided regions into localities headed by Commissioners), and various Local Government Acts issued in 1991, 1995, 1998, and 2003. (Another Local Government Act was issued in 2001 that granted some judicial authority to the Native Administration, but this was not mentioned by TST.) In particular, he seems to value the thrust of the 2003 Act, which reduced the number of pre-existing localities and granted more powers to Commissioners as heads of their executive branches, though he also stresses the negative effects of lack of appropriate devolution of financial powers to localities, which depend on top-down transfers for their operational costs. His involvement in the policy realm is mostly confined to the level of implementation, for the very performance of his tasks as a Commissioner is in a sense a form of implementation of decentralization policies. His account of the policy process is therefore essentially an account of how he carries out his responsibilities, which he claims to do by seeking constant collaboration with various stakeholders such as Native Administration, other local leaders, and unions representing farmers and pastoralists. In his view, the main obstacle to such "collaborative policy implementation" is recurrent competition between pastoralists and farmers over stock routes and farmland, combined with resistance by Native Administration and local stakeholders to changes in property or user

rights over land. Such problems are worsened by the weak organizational structure and high poverty level of stakeholders, notably farmers and, to a lesser extent, pastoralists.

Respondent's view of policy volatility: TST's view is that volatility is mostly present in the process and outcomes of decentralization policies, due to lack of careful and informed planning, failure to properly consider the likely repercussions of policy decisions, the marginalization of civil service in the policy making process, and the lack of clear hierarchies based on actual competence in decision-making circles. Put differently, poor distribution of roles and responsibilities in the policy process, incompetence of policy makers, poor leadership vision, and lack of awareness of natural resources issues are regarded by TST as the main sources of policy volatility. To these must be added a tendency of the policy process to be driven by ideological and political commitments rather than by competence, while lack of information, risk aversion, and lack of interest in innovative policy solutions on the part of policy-makers combine to yield a repetitive, non-innovative policy process.

Respondent's views on natural resource policy issues: In TST's view, the main problems to be addressed in regard to natural resource management are conflicts over resource use, misuse of resources (e.g. overgrazing and over-cutting), and droughts and desertification. These problems all result mainly from human and political/administrative factors, notably "irrational" patterns of resource use and failure of institutions to take timely and effective decisions to improve such use. According to TST, this situation requires policy interventions that concentrate on improving patterns of use, give primary stakeholders and the NA a substantive role in the policy process, and improve regulation of use rights, with a view to environmental sustainability. In particular, local stakeholders must gain awareness of the environmental consequences of existing patterns of resource use, and they must be helped to overcome their poverty so they can become able to invest in livelihood strategies based on environmentally sustainable resource use, as well as to participate in representative institutions (including Farmers' and Pastoralists' Unions). At present, these are not initiatives that are being undertaken by policy-makers. However, this does not mean that positive policy decisions have not been taken in the realm of natural resource management. For instance, TST was involved in the passing of a decision by the state of North Kordofan in 2002 to consider latitude 13 degrees north as the dividing line between pastoral and farming lands. In his view, this was a positive decision, and the State Ministry of Agriculture also provided to some extent for its positive implementation, e.g. by reseeding rangeland in areas allocated to pastoral use. However, the results of this decision were poor, due to the apparent lack of conviction of stakeholders (notably traditional farmers) that this was a good policy. Moreover, scant funding was allocated for implementation by the Bank of Sudan and the State Ministry of Agriculture, and no effective provisions were made to raise funding directly from stakeholders, e.g. via animal and land taxes.

Respondent's views on decentralization: TST's discussion on decentralization concentrates on the decision undertaken by the state of North Kordofan in 2003 to earmark 70% of resources allocated to localities for salaries, leaving the remaining 30% for social expenditures. TST was only indirectly involved in this decision, as an observer to discussions in the North Kordofan Council of Ministers along with other Commissioners. Like the latter, he was against the decision because he regarded the percentage allocated for social services as insufficient. Possibly as a result of the Commissioners' arguments in favour of changing the balance between operational expenditures (e.g. salaries) and social expenditures, the decision was later amended to allot 50% to each. The source of these revenues remained

essentially the State Ministry of Finance, though localities are also empowered to raise their own fees and taxes.

Respondent's evaluation of policy outcomes: TST's evaluation of a policy outcome focuses on the 2003 LGA mentioned above, whose goals he describes as establishing a clear and equitable division of resources between states and localities, laying out a comprehensive vision for the development of localities, and making provisions for basic social services (e.g. health and education) at locality level. The outcome of the policy appears to the respondent to be positive as concerns devolution of decision-making power. However, lack of correspondence between this kind of devolution and devolution of financial resources is a key problem of the 2003 Act particularly in certain localities, though others apparently get more than their share of financial resources.

2. BMHA, Southern Kordofan

Identity and background of the respondent: BMHA is the *Amir* (highest Native Administration tribal authority) of the Hawazma/Awlad Abdul Aal, as well as a member of the Executive Committee of the Pastoralist Union. His background reflects the changing attitude of the Sudanese government vis-à-vis Native Administration since the late 1960s. From 1969 to 1985, i.e. more or less coinciding with the period of open de-legitimization of the Native Administration by the state, BMHA was an administrative officer in the local government. In 1985, when the attitude of the Sudanese government had become more favourable to some form of participation of Native Administration leaders in local administration, he became *Amir*, i.e. the government-appointed equivalent/substitute of the tribal *Nazir*. It is not clear from the interview whether BMHA or his family already held such title informally or had held it before 1969, but it is a reasonable assumption that the title was indeed in his family.

Respondent's interest and involvement in the policy realm: BMHA's interest and involvement is mostly both in the realm of natural resource management, with a particular stake in the role granted by government policies to the Native Administration. In this regard, he believes that the most important policy decision taken in relatively recent years has been the planning of mechanized farming schemes and the allocation of farmland to scheme farmers, which at least originally took place without consideration for the impact of such allocation over stock routes. Second in line among important policy decisions is the declaration of state ownership rights over all unregistered land, including forest areas and rangeland, which also encouraged concessions for private use of forests as sources of timber. Another important decision, in whose implementation BMHA has been involved as a member of the Executive Committee of the Pastoralist Union, is the 2004 Pastoral and Farmlands Act. It is not clear how he evaluates this involvement, since his account of the participation in the Union as well as in other institutions (including the Native Administration) in the policy process deals only in part with the past couple of years. It is nonetheless evident to him that neither the 2004 Act nor the Unions, in so far as they have been interlocutors for the government in the policy process leading up to the Act, represent strong, representative, and competent institutions for natural resource management, let alone for managing the social dimensions of resource use. Traditional farmers and their institutions are especially weak, partly because of the poverty level of these farmers. However, the situation of the Native Administration is not much better: as an *Amir*, BMHA appears to have been rather isolated in the policy-making arena so far, and/or to lack the ability or perhaps the

incentive to work with other players to influence the policy-making process. In his view, this is not only a problem of the Native Administration or of himself personally, but rather a general problem of South Kordofan, where he claims there is little political awareness and organization.

Respondent's view of policy volatility: BMHA's belief is that there is volatility in all dimensions of the policy process, due to a variety of factors, including incompetence and experience of policy-makers and their lack of proximity and contact with local stakeholders; a dominant concern with political and security issues, at the expense of administrative and management concerns; multiple and overlapping sources of authority in the policy realm; and lack of facilities, implementation powers, and resources in institutions entrusted with policy implementation. When asked to rank a set of possible causes of volatility mentioned by the interviewer, BMHA's choice of the most significant one fell on poor leadership vision, followed by suboptimal distribution of roles and responsibilities in the policy process and by insufficient information and awareness about natural resource management issues. The problem of poor vision may be linked to a prevalence of ideological motivations over rational considerations (including scientific evidence) in policy decisions on natural resource management. Another problematic aspect of such vision is risk aversion, which combines with lack of information and force of habit to yield a rather stagnating policy process, without discussion of innovative options.

Respondent's views on natural resource policy issues: According to BMHA, the main problems of natural resource management are a series of recent changes that deprive certain resource users (notably pastoralists) from access to water, pastureland, and forest trees. This situation results from a variety of factors, including over-cutting of trees, burial of ponds, farmers' encroachment into and cultivation of pastureland, and blocking pastoralists' access to water sites. All of these factors are symptoms of management problems, notably of a lack of appropriate administrative organization of natural resources, and of lack of consultation of stakeholders by natural resource management authorities. In the past, situations that may deprive certain users from access to resources were dealt effectively by the Native Administration (e.g. through inter-tribal conferences). After the temporary replacement of the Native Administration with popular committees by the May Revolution regime, it became more difficult to solve conflicts among resource users because the legacy of expertise and legitimacy attached to traditional institutions for conflict management and resolution was rejected by the government. At present, though the Native Administration has been reinstated in a weakened role in some aspects of natural resource management, there is still a need for policies based on sound assessment of the socio-economic conditions of resource users, and most of all on policy makers' consultation with these users. Furthermore, sound policies must be complemented with adequate financial resources for implementation, as well as by investment in the productivity of land and livestock, so as to discourage resource overuse. These are not features that characterize existing policy decisions, as exemplified by a 2000 decision organizing the relationship between grazing and farming. Unlike arrangements traditionally devised by the Native Administration, this decision did not clearly demarcate stock routes, nor was it applied to all of them (or to water sites), leaving much room for encroachment by farmers onto areas needed by pastoralists for grazing and resting. Furthermore, implementation of the decision is hindered by inadequate or inappropriately used funding, which is only in part raised from fees on animal sales and services offered to pastoralists who do not appear to believe they have much of a stake in this policy decision.

Finally, no monitoring and evaluation mechanisms, nor systematic collection of information needed for enforcement, have been set up in the context of this policy decision.

Respondent's views on decentralization: BMHA regards conflict between local government and Native Administration and insufficient resources and field presence of government administration as the two main problems to be faced. In his view, these problems are partly due to lack of experience of government administration in natural resource administration, contrary to the situation of the Native Administration, and partly to misuse rather than unavailability of financial resources by this administration. Some recent policy decisions in the realm of decentralization have brought positive contributions to the situation. For instance, the 2003 Local Government Act represents a positive step, though it has limits, such as the fact that the highest authorities at the locality level are appointed rather than elected. In terms of implementation, moreover, the Act suffers from inadequate sources of funding and poor facilities at the locality level, particularly since localities have a very limited ability to generate funds through taxes.

Respondent's evaluation of policy outcomes: BMHA's evaluation of the outcome of a policy process in which he has recently been involved, namely the above mentioned 2004 Organization of Pastoral and Farmlands Act, is overall negative. The goal of the Act was essentially to decrease or prevent conflicts among resource users and to develop pastoralism and farming activities. This was in theory a positive and equitable goal; however, the implementation of the Act did not facilitate its achievement, partly because envisioned sources of funding (such as the Pastoralist Union and the Animal Resource Department) did not contribute sufficient resources, and partly because implementation was not planned with due consideration for circumstances such as the farming and herding calendars. BMHA's view is that if Native Administration were better organized and vocal, it could play a positive role in the implementation of the Act, and the same applies to resource users' unions. However, at present this is not the case on either front.

3. AAA, Federal Government

Identity and background of the respondent: AAA is currently a member of the Higher Education Council and a member (or former member) of a number of educational and political institutions. He is former Vice-Chancellor of the University of Khartoum, former Chairman of the Agricultural Engineers Association of Sudan and of the Agricultural Research Corporation, former Minister of Agriculture and Natural Resources, former Governor of the Northern Region, and former Ambassador of Sudan to the United States, a country where he also achieved post-graduate education (MSC/MA and PhD).

Respondent's interest and involvement in the policy realm: AAA has been involved in various policy realms, including those of decentralization (as the former Governor of the Northern Region) and natural resource management (as Minister of Agriculture and Natural Resources and as the Chairman of the Agricultural Research Corporation). In addition, he was involved in policy-making in different realms as a member of the National Assembly under Nimeiri. He believes that the most important policy decisions in decentralization taken by the Government of Sudan in the past 30 years have been the 1980 Regional Government Act (which divided the country into six regions, each ruled by a Governor and a Regional Council) and the 2003-2005 Peace Process and Agreement. Among a list of other recent policy decisions in the realm of natural resource management, AAA ranks as most important

the ongoing revisions of the Land Act and of the Gezira Land law, which will turn tenancy into usufruct leasehold for Gezira Scheme tenants. These are followed in importance by the Environmental Conservation Act, the Improved Seeds Act, and the Forests Act, all of which concern issues of environmental sustainability and development. Among these Acts, AAA has been most directly involved in the reforming of the Gezira Scheme, where he played an advisory role as the Chairman of the Gezira Reform Committee appointed by the Minister of Agriculture in cooperation with FAO and water users' associations. In this role, he collaborated with a number of players to encourage what is now an innovative policy-in-the-making, contributing to the formation of a coalition of stakeholders pressing for change, including the Farmers' Union, Water Users' Associations, FAO, and the World Bank. Thanks to the lobbying power of these institutions (notably that of the Farmers' Union), the Committee has been able to carry on innovative work despite some resistance from the Gezira Board, whose members feared loss of power from changes in the Scheme, as well as from the Ministry itself, whose members have been reluctant to support innovative possibilities involving redistribution of key economic assets.

Respondent's view of policy volatility: AAA regards the policy process as volatile in all its aspects, from outcomes/decisions taken to process, to implementation and policy environment. In his view, sources of such volatility primarily include poor information and awareness of natural resource management issues by policymakers, poor leadership vision (including reliance on ideological rather than factual considerations in setting policy), and insufficient public involvement in decision-making. Some of these factors may be decreasing in importance. For instance, government participation in the peace negotiations has highlighted the need for much improvement in its information collection and management capacity as a precondition for its ability to define appropriate and viable new legislative and executive arrangements for the country.

Respondent's views on natural resource policy issues: According to AAA, the main problems affecting the Sudan in the field of natural resource management include the social, economic, and environmental effects of recurrent droughts, deforestation, and a non-viable land tenure system. While not much has been done so far to address these problems in an integrated fashion, it is nonetheless possible to ameliorate the situation significantly via appropriate policy, particularly by promoting institutional reform within implementation agencies, and by investing resources in field-based research and development, which is inadequately funded and relies minimally on input from local stakeholders. Furthermore, greater financial resources should be invested in agriculture (meant as a sector in which livestock production and farming are mutually integrated activities), rural market development, and physical infrastructure. The question of financial allocation for agricultural development and natural resource development is consequently a key one, which the government has only begun to tackle with policy initiatives such as the 2000 Abolition of Crop Taxes. Such policy decision, in which AAA was also involved in a consultative capacity as then Chairman of the Agricultural Research Corporation, aimed to reduce agricultural taxation that was then too heavy, so as to facilitate more investment in agriculture (notably mechanized farming) and improve agricultural productivity and competitiveness of Sudanese crops on the export market. Despite its good intentions, this piece of policy was negatively affected in its quality and feasibility by the fact that it was issued by the President and Minister of Finance with minimal consultation of other parties, and it also suffered from resistance on the part of states, whose budgets significantly depended on agricultural taxes. At present, reinstating agricultural taxes may perhaps be a good option, so long as the revenue collected through

these taxes are invested directly in action-oriented research and development involving local stakeholders, with the aim of improving agricultural productivity.

Respondent's views on decentralization: According to AAA, decentralization of natural resource development faces a series of obstacles on the governance front, essentially due to the weak human and financial capacities of states, their poor infrastructure, and their financial, political, and technical dependence on the central government. Some attempts were made in the past to develop the policy-making capacity of states and localities, by creating planning units and devising mechanisms to generate independent revenue at state and locality level. However, what is still needed is a reinvigoration of the regional government system, building upon past policy decisions, such as the 1980 Regional Government Act. At the time of the latter, AAA was the Deputy Chairman of the Decentralization of Government Committees chaired by Sudanese Vice-President Abdel Aleir, and in this capacity he was involved in the Act, which he regarded as a necessary step for the development of a decentralized system (i.e. the only possible kind of system for a country as large and diverse as Sudan). While this policy was on the whole positive in content, and though it was approved with virtually no opposition in the government, its effective implementation was hindered by inadequate funding through the federal budget. Enforcement mechanisms were instead better provided for, ranging from suitable land legislation to resource surveys, to research studies at the regional level in collaboration with the National Council for Research. It is not clear however whether such studies and surveys have become the basis for the planning of natural resource management at the regional level, nor to what extent they have actually served as enforcement mechanisms for the 1980 Act.

Respondent's evaluation of policy outcomes: AAA's view of decentralization policies during the period from 1980 to 1985 when the focus was on developing a regional government system is that they responded to a real need to develop the different potential of individual regions, invest in their socio-economic development, and empower their population to manage their own affairs. Unlike other policies, these were apparently well planned and studied according to the respondent. For instance, a committee was set up under the then Vice-President and AAA himself (then Minister of Agriculture) to study the most appropriate structure to devise for a regional government system. Implementation was to take place through a series of policy documents, including the 1980 Act and the 1981 People's Local Government Act, and a gradual process of development of regional institutions was also envisaged (e.g. governors would initially be appointed and later elected). Despite this careful planning, however, the policy did not have a successful outcome because of the centre's resistance to release decision-making power and resources to the regions, as well as qualified cadres' reluctance to relocate to the regions. In addition, regional governments were unable to develop their own competent cadres or effective mechanisms to raise financial resources sufficient to cover their costs. Lacking sufficient resources and concrete support from the political leadership in Khartoum, the regional system set up in the early 1980s was vulnerable to fail as soon as changes in the political environment took place. Indeed, the change of leadership that took place with the advent of the Al-Mahdi regime marked the end of this regional experiment, despite its apparent popularity with regional constituencies.

4. AAO, Southern Kordofan

Identity and background of the respondent: AAO is Rain-fed Agriculture Manager at the South Kordofan State Ministry of Agriculture, as well as former Director General of the same

Ministry and of the Mechanized Farming Corporation of Darfur and former Chairman of the Economic Committee of the Northern Kordofan Legislative Council. He holds a university degree in agriculture and is currently working on a MSC in the same field.

Respondent's interest and involvement in the policy realm: AAO's involvement in the policy-making arena has been through his participation in the institutions mentioned above, as well as participation in the state legislature of North Kordofan. His interests range from agricultural to decentralization policies, and he regards decentralization and economic liberalization as the two most important policy processes that have taken place in Sudan over the past couple of decades. In terms of specific policy decisions, He regards the dissolution of the Nuba Mountain Agricultural Corporation and of the Mechanized Farming Corporation as the most important policy decisions followed by the abolition of boarding schools and of the Native Administration in 1970 (later reinstated). His account of his involvement in policy-making in the agricultural realm stresses positive collaboration with a variety of players (notably ministerial agencies and government committees, the Farmers' Union, the Native Administration Commissioners, and also NGOs and donors). However, this account also highlights the disparity of agendas and of power among these players as concerns agricultural policy. For one thing, NGOs, the Ministry of Agriculture, and the ruling party often have different views and interests in regard to agricultural policy. Secondly, there are wide gaps in power, wealth, and interests between traditional and mechanized farmers, whereby the latter group alone is generally well represented in the policy process (notably through the lobbying work of the Farmers' Union), while traditional farmers and pastoralists are very marginal players. This situation, which allows traditional farmers and pastoralists to provide only minimal (or no) input into the policy process, is often conducive to suboptimal policy decisions. For instance, lack of such input in decisions concerning the creation of mechanized farming schemes, notably as regards mechanisms for land allocation, has led policy-makers to be often taken by surprise by the negative socio-economic impact of such mechanisms, including conflicts between scheme-holders and pastoralist groups.

Respondent's view of policy volatility: In AAO's view, the policy process is marked by volatility on all levels, due to the fact that most policy-makers are ideologically-driven appointees, and also as a result of Sudan's difficult socio-economic, security, and natural environment. Poor leadership vision, the weight of power coalitions and of party politics, and inadequate capacity for planning and coordination among policy-makers also contribute to volatility, along with insufficient public involvement in the policy process. Inadequate resources and risk aversion of policy-makers tend to render this process rather predictable, however, since new policy solutions are rarely sought.

Respondent's views on natural resource policy issues: The main problems in the natural resources policy realm in Sudan are lack of clear and systematic information about natural resources, lack of clear rules for ownership, tenure, and use, unstable government policies, and suboptimal utilization of land and other resources from a socio-economic point of view. On the tenure front, in particular, there are no master plans clearly demarcating pastoral lands, forests, water sites and stock routes, and multiple authorities exist for the allocation of tenure rights, both government-related and in the Native Administration. Tenure problems are particularly acute in areas allocated by the state for mechanized farming, since these tend to grow horizontally as a result of lack of investment to improve productivity, eat into land that could be used for other purposes or that is needed by other resource users. To address some of the negative socio-economic and environmental consequences of such horizontal

expansion, mechanisms for the allocation of scheme land have changed over time to accommodate to some extent the entitlements of local stakeholders and reduce the size of individual plots. These mechanisms have sometimes entailed coordination with local institutions, such as local committees for land distribution with power to issue recommendations to government authorities. However, the success of these initiatives has been limited, often due to the poor financial situation of local stakeholders and institutions. Moreover, what has not yet been addressed is the need to rationalize land use, choosing use patterns and technologies appropriate to the characteristics of different areas (e.g. level of rainfall, type of soil, access to non-local food markets such as those of Northern Kordofan and Darfur, etc.). The government attempted to stabilize tenure and user rights with the 2002 Organization of Pastoral and Farmland Act, in which AAO was involved in his capacity as Director of the South Kordofan Mechanized Farming Corporation. This policy decision was appropriate, but it was not accompanied by adequate funding for implementation nor was it designed in consultation with stakeholders. As a result, farmers and pastoralists were reluctant to comply with the Act, because its costs (including fees and penalties) did not appear to them to be balanced by services actually reflecting their needs. On the other hand, these groups were sanctioned in a small way for non compliance, since enforcement mechanisms for the Act have been very weak, lacking mechanisms for joint enforcement and monitoring by Commissioners, the Native Administration, the police, and the Pastoralists Union.

Respondent's views on decentralization: The main problems facing decentralization of natural resource management are that relevant authorities at the state and local levels may have decision-making power without thereby also having the necessary competence, and that the role of natural resource management authorities is popularly perceived as consisting merely of land distribution, rather than also of resource planning and development. In part, this is due to the government's failure to allocate appropriate human and financial resources to manage decentralization in the Ministry of Agriculture, resulting in weak capacity and natural resource management planning at the local level, and also in limited resources to fund development projects and infrastructural rehabilitation. It is not clear that this situation can be amended in the framework of the 2003 Local Government Act, which has created a dual authority system, whereby some departments in localities are under the authority of the Commissioner while others depend on relevant Ministries. Furthermore, the Act has not granted a stable financial basis to localities, nor has it devised clear mechanisms for information gathering and for monitoring and evaluation of its own implementation.

Respondent's evaluation of policy outcomes: As an example of natural resource management policy, AAO focused on the decision to redistribute agricultural land under mechanized farming schemes, with a view to granting a significant percentage of this land to local stakeholders, demarcating commons and stock routes to resolve conflicts between pastoralists and farmers, and finally improving food production. Some of these objectives have been achieved: the share of land plots allocated to local people has increased, as opposed to that of external investors in scheme areas, and some scheme land has been allocated to villages to be held as commons. Conversely, scant progress has been made in improving food production, in part because of security concerns on the part of investors and also due to war-related market instability. The decision to bring about a more equitable distribution of land and also to the directly involve some farmers in advisory committees that played a role in the implementation process enjoyed significant popularity among local farmers at least in its initial phase. This does not mean, however, that farmers participated in the policy process

leading to this decision or shared the government's view of its objectives and implications, nor does it mean that policy-makers were accountable to farmers either when the decision was taken or during the implementation phase.

5. IDN, Southern Kordofan

Identity and background of the respondent: IDN is Deputy Secretary General of the South Kordofan State Government and Director of Local Government Administration, as well as a former Director General of the Transitional Council for Peace in the Nuba Mountains. He holds an undergraduate degree in Economics and is pursuing post-graduate education (MA and MBA) in sociology and business administration.

Respondent's interest and involvement in the policy realm: IDN's interests and experience in the policy arena are mostly in the realm of decentralization. He regards the 1980 Regional Government Act, the 1981 Local Government Act, and the establishment of the current federal system in the early 1990s as the most significant initiatives undertaken by the government in the past few decades. Following these initiatives in order of importance are the Presidential Decree to redistribute mechanized farmlands and the signing of the Comprehensive Peace Agreement that marked the end of peace negotiations between thee Government of Sudan and Southern rebels in 2005. IDN's policy experience includes participation in these negotiations, as a member of the negotiating teams working on the Nuba Mountains peace arrangements in 1997. This experience, while probably not too representative of the policy-making process in Sudan, was nonetheless significant in terms of governance, as it involved sustained collaboration among GOS and various local institutions and civil society groups, notably the Farmers' Union, Women and Youth Federations, and the (Public) Workers' Union; the latter was apparently the strongest interest group in the negotiating process. This collaboration was not without limits, partly because of the resistance of some unidentified "community leaders" to working with the negotiating teams, and partly because of the organizational and socio-economic weakness of certain groups, notably traditional farmers. Moreover, this sort of collaboration has not led to the formation of interest coalitions that may survive beyond the context of negotiations to influence "normal" policy processes. IDN believes that more effective forms of popular participation in the policy process may arise in the context of present promises of democratization, which are also partly linked to the outcome of the North-South peace negotiations.

Respondent's view of policy volatility: Like other respondents, IDN believes that there is volatility in all aspects of the policy process, due to the influence of personal interests and of attempts to alter the status quo because of its connotations of social, political and economic inequality. Insecurity due to war and other emergencies, poor information and awareness of natural resource management and weak planning and coordination among policy-makers are also volatility-inducing factors, along with a suboptimal distribution of responsibilities in the policy process and a leadership vision that is driven by ideological commitments. This vision affects in particular the quality of civil service staff, who have often been chosen (at least until recently) because of party affiliation rather than for their competence. Lack of information and awareness, insufficient resources to plan and implement policy initiatives, and the presence of overlapping and non-coordinated policy arenas further complicate the picture on the policy-makers' side, discouraging the search for innovative policy solutions.

Respondent's views on natural resource policy issues: The main problems Sudan faces on the natural resource front are linked to growing competition between sedentary and nomadic groups and among resource users in general, leading to conflict and to growing pressure on resources, notably land located in secure areas. This is largely due to the state of conflict over the past several years in much of rural Sudan, which has limited the size of resources accessible without security risks. However, the recent peace agreement may also contribute to social instability in relation to natural resource management, by mobilizing people's awareness of the inequitable distribution of power and authority that currently shapes access to natural resources. In the past, competition over resources was contained through annual conferences in which user and ethnic groups came together to plan for resource use and resolve conflicts. Furthermore, stock routes were monitored to ensure their viability and the availability of adequate services (notably water points) along their path. The Native Administration played a substantial and even leading role in these initiatives, and was generally able to ensure their effectiveness in preventing conflict and containing pressure over the environment. However, after the dissolution of the Native Administration the civil administration was not able to perform a similar role, and even after the Native Administration was reinstated natural resource management mechanisms that had been functional until the 1970s never regained their past effectiveness, partly because government involvement led to the selection of Native Administration leaders lacking the experience and necessary social standing to impose natural resource management decisions onto their communities. Under the terms of the current Peace Agreement, this situation may be redressed through the work of a Land Commission that should regulate land tenure and resource use. In addition, what is needed is a clearer and more systematic devolution of authority over forests from the Federal Government to the states, which must address problems of over-cutting and reforestation with the necessary authority. The most significant recent government policies regarding land tenure is the Presidential Decree to redistribute mechanized farming schemes. IDN himself was involved in the making of this decision in his capacity as the Director of Local Government in Abbassiya, in the Eastern Mountains. His view on this decision is decidedly positive, both in terms of goals and of implementation. The goals were in fact to make land distribution more equitable, to facilitate farmers' investment in land by granting them land titles, and to accommodate to some extent the interests of village communities by allocating plots for village commons. In IDN's view implementation was effective, thanks to the formation of integrated political/administrative committees managing the implementation process, and in spite of the inadequate funding set aside for this purpose by the government. Moreover, the decision enjoyed wide popular support particularly at the local level, while commercial producers, who had originally benefited the most from farming schemes, naturally opposed redistribution in favour of local farmers.

Respondent's views on decentralization: Contrary to the frequently expressed view that decentralization policies are hindered by the Federal Government's lingering attachment to centralized administration, IDN suggests that the main challenges to such policies are at the local level, notably in the poor human and financial resources of local institutions. This lack of resources results in limited public awareness at the local level, in the tendency of local institutions to be driven by narrow local interests rather than taking into consideration national interests, and even sometimes in the disregard of national laws in favour of local decisions and procedures. What is primarily required is capacity building of local administration particularly in terms of human resources, e.g. through appropriate training programs, salary and incentive packages, flexible contractual arrangements, etc. Whether or not this will be done at the state level partly depends on developments linked to the Peace

Agreement, though the main policy framework on this front remains the 1994 Constitutional Decree No.5 on the Adoption of a Federal System of Government, a policy decision in which IDN was also indirectly involved as a member of various unions (student unions, regional unions, etc.). His position in relation to the Decree was favourable even then, as he saw, and still sees federalism as the only way to facilitate popular participation in government and to meet the aspirations of various groups in Sudan (e.g. the people of the Nuba Mountains). IDN claims that along with other representatives of interest groups and institutions, he worked to influence the decision-making process in 1994 and later on the implementation of the Decree. However, it is not clear how that took place. In any case, he evaluates the policy and its implementation as positive, though he notes the persistent weakness of administrative cadres at the regional and local level and the fragile resource base of regional and state governments, which depend on the Federal Government for their budgets.

Respondent's evaluation of policy outcomes: Considering again Constitutional Decree No.5 and the creation of a federal system from an outcome-focused perspective, IDN offers a more critical view of this decision than earlier on in the interview, noting first of all that its expected outcome was not only to facilitate popular participation in government, but also to achieve socio-economic progress towards development, equality, and justice for all Sudanese. In light of these ambitious goals, the creation of a federal system created great expectations in the public, which was difficult to meet. In particular, the high costs associated with the implementation of this policy weakened certain institutions and the quality of certain public services, and resources were insufficient to sustain a broad-based process of development. Some progress on this front was nonetheless achieved, notably in health, education, and agricultural development. The main achievement of the Decree, however, was the creation of at least a formal framework for some form of participation in policy-making at the state level. It is not clear how systematically the government has monitored this or other achievements enabled by the Decree, and how early and in what manner it has become aware of gaps in its implementation. According to IDN some attempts have been made by the government to earmark more resources for regional development and to deepen political participation in state institutions. On an ongoing basis, states send their own delegations to Khartoum to present to the government their needs and make their requests, but there appear to be no mechanisms to systematically feed this sort of feed-back coming from the states into the policy framework that governs the federal system (notably the relative power of federal and state authorities), nor is it clear that delegations represent and voice the concerns of a broad section of society in their respective states, hence they can hardly be seen as instruments of accountability.

6. HMNA, Federal Government

Identity and background of the respondent: HMNA is Director General of the Administration of Planning and Animal Resource Economics of the Federal Ministry of Animal Resources and Fisheries (MARF), as well as a member of the Veterinarian Trade Union and of the Sudan Veterinary Society. He holds a PhD in Animal Production and a Master of Social Sciences' Degree in Development Administration.

Respondent's interest and involvement in the policy realm: HMNA's experience in policy spans the realms of natural resource management and decentralization, where he regards all the various decrees and acts undertaken for the devolution of powers to states, regions, and localities as the most important policy decisions taken over the past few decades. Regarding

natural resource management and agricultural development, on the other hand, the most important policy decisions in his view have been market liberalization, the recent reinstatement of the Ministry of Animal Resources, and the consolidation of research units from various ministries to establish a new Ministry of Science and Technology. In some of these decisions, as well as in the policy process concerning natural resource management more generally, HMNA has been directly involved in various capacities in the Ministry of Animal Resources and Fisheries. His account of his experience points to a collaborative effort on the part of the MARF vis-à-vis other Ministries (Irrigation, Agriculture and Forestry, Science and Technology, Finance and National Economy), various producers' associations (Unions of Pastoralists, Livestock and Meat Exporters, Dairy Producers, Poultry Producers, and Fishermen), the National Assembly's Committee of Agriculture, Animal Resources, and Irrigation, and finally a series of individual professionals. However, the account also points to the existence of conflicts of interest and divisions among some of these groups and institutions (e.g. representatives of livestock and meat exporters vs. ministry representatives when the latter push for policies favouring the domestic market). There seems to exist a rather keen awareness of different interests on the part of individual groups and agencies, as shown by the recurrent formation of coalitions to push for the approval of certain agricultural and natural resource management policies. In particular, agricultural engineers have been very effective in mobilizing support for their interests while HMNA's was at the Ministry, partly thanks to their significant presence in government circles and in the bureaucracy. Conversely, veterinary professionals as a group have traditionally enjoyed much weaker ties with the political and bureaucratic elites, which, combined with the organizational weakness and minimal participation of pastoralist groups in policy-making (despite the relative weight of a narrowly representative Pastoralist Union), resulted in insufficient attention to the pastoralist sector in agricultural development and natural resource management policies.

Respondent's view of policy volatility: As other interviewees, HMNA regards the policy process in Sudan as generally marked by volatility in all its aspects. In particular, volatility is manifested in frequent changes in policy decisions, typically coinciding with changes in staff occupying decision-making positions in authoritative institutions. Rather than trying to build on existing policies, each newcomer to a decision-making post seems to carry with him a series of individual interests and beliefs that he seeks to serve or translate into policy. As a result, individual policy decisions are rarely left in place for a sufficient time to enable proper implementation, let alone to achieve significant impact. Poor leadership vision, incompetence, and this type of personal approach to policy making, combined with limited attention to factual evidence and a tendency of policy-makers to be driven by ideological considerations are thus key problems in relation to policy volatility. This situation also makes policy-makers reluctant to explore innovative policy solutions, due to risk aversion, as well as to resistance to innovation by entrenched interest groups. To this must be added structural factors, such as the fact that different policy arenas are not sufficiently well-demarcated or coordinated with each other and resources are inadequate to implement innovating initiatives.

Respondent's views on natural resource policy issues: Sudan's situation on the natural resources front is quite problematic at present, notably because of the deterioration of resources, from land degradation to deforestation and desertification. This is due to a combination of human and natural factors, including misuse of resources, droughts, poverty, population pressure, and lack of political vision and will to implement natural resource management policies. Many attempts have been made by the Government of Sudan to address the situation, including a series of development projects (e.g. the Jebel Marra Rural

Development Project), the allocation of mandatory minimum percentages of federal and mechanized scheme land to forests, the issuing of acts to regulate relations between farmers and pastoralists and their respective resource use in certain states, and the setting of demarcation lines (e.g. latitude 13 degrees North in North Kordofan) for traditional crop farming vs. rangeland. Among these various initiatives, development projects were rather successful but short lived, as was the creation of a livestock route to transport cattle from areas in Western Sudan to markets in Central Sudan. Other initiatives, notably the issuing of acts to regulate the relation between farmers and pastoralists, have been hindered by lack of will for enforcement. Mobilizing such will is thus key for good natural resource management policy in the future, along with greater attention to scientific research and a willingness on the part of policy makers to consult with resource users and community-level institutions when making policy decisions that directly affect them. Ironically, Dr. IDN's example of a good policy decision directly affecting a great number of resource users in Sudan (notably meat producers) is not one marked by broad-based consultations. This example is that of the 2003 agreement between the Sudan Ministry of Foreign Trade and the Saudi-owned "Arabian Livestock and Meat Company," by which the latter acquired a monopoly in marketing Sudanese livestock and meat (except for sheep) in Arab markets. Though not involved in the policy decision, HMNA and his Ministry regarded it favourably, as did the Ministry of Foreign Trade, the Council of Ministers, and some Sudanese exporters, because the agreement appeared to them to be the only way to find a powerful ally within Saudi Arabia that may help Sudan break through a ban imposed by Saudi Arabia in 2000 on the import of its meat. Some leaders of the Livestock and Meat Exporters' Union and the Business and Trade Union were opposed to the agreement because it ran against the principles of a liberal market by sanctioning a monopoly in the Sudanese export market, by relying on the intermediation of a Sudanese private company, and also by requiring subsidization by the Ministry of Finance to compensate meat exporters for losses incurred due to the ban. Nevertheless, the fact that a sufficiently powerful coalition of interests could be mobilized behind the agreement within relevant Ministries and parts of the private sector allowed the government to move forward with this decision.

Respondent's views on decentralization: HMNA regards the main problem faced by decentralization in Sudan as consisting in the mismatch between delegation of formal responsibilities and devolution of authority and resources to meet such responsibilities. This problem is not recent; it has marked all previous attempts to decentralize responsibilities on the part of the Federal Government, which has never been ready to actually yield control over Sudanese resources to regions and states. What is needed, therefore, is a more robust form of devolution of authority, featuring semi-independent states and democratic participation at all levels of government. Whether and how this will take place in the near future depends in part on the Peace Agreement. For the time being, there are some positive policy initiatives to build upon, such as the 2003 Local Government Act, which granted at least in theory some substantive powers to localities, though it stopped short of devising fully democratic mechanisms for the selection of representatives at the locality level. However, this initiative, like other decentralization policy decisions, is seriously limited by lack of adequate funds for implementation, dependence of localities on the federal budget, and the heavy cost of local administrations staffed with political appointees. Moreover, the Act did not empower localities to develop adequate institutions to enforce their decisions, gather information, and monitor the performance of various local institutions involved in its implementation.

Respondent's evaluation of policy outcomes: Looking at decentralization policies in general, HMNA judges their outcomes as poor, despite their positive goals, i.e. democratization, popular participation, good and transparent governance, and good quality of services and infrastructure. Hardly any of these goals have been achieved to date, and in fact the situation has in some cases worsened as a result of decentralization policies; e.g. social services have collapsed in many areas, migration from peripheral areas to Khartoum has increased, and conflict among resource users seems to have intensified. Moreover, the Federal Government has remained the main, or even the sole player in setting policy, and its main response to the poor outcomes of the decentralization process has been to continue with a policy of top-down appointment of leaders at the state level, without accountability to local constituencies nor proper attention to the competence of such appointees.

7. MOS, Federal Government

Identity and background of the respondent: MOS is former Director General of the Mechanized Farming Corporation (MFC)and currently Advisor/Consultant to the Ministries of Finance and Agriculture and to various organizations. His career includes over 30 years of experience in civil service within the agricultural sector.

Respondent's interest and involvement in the policy realm: MOS's involvement in the policy arena is mostly linked to his work within MFC. In particular, he was tasked with implementing the decentralization of the Corporation in his former capacity as regional manager of MFC for the states of Gadarif and the Blue Nile, and when he was Director General he also participated in the formulation of decisions about decentralization to set up state-level MFCs with powers delegated from headquarters.. His perception of the most significant points in the recent history of natural resource management policy in Sudan is also filtered through his former affiliation with the Corporation, as he gives pre-eminent importance to the establishment of MFC in 1975 as a sort of driving engine for mechanized rain-fed agriculture, and to its dissolution in 1992 as part of a general turn towards market liberalization in Sudan. Since then the most important policy decisions taken by the government in the rain-fed agricultural sector have been various initiatives to encourage large-scale private investment and the establishment of a unit under the Ministries of Agriculture and Finance to coordinate its development. Additional important initiatives have been the promotion of improved extension services to farmers to raise productivity, the improvement of agricultural infrastructure, the reduction of the size of mechanized rain-fed plots, and the re-demarcation of un-demarcated farming plots. The question of land demarcation has been one aspect of the policy process in which MOS has been directly involved. As Regional Director of MFC between 1981 and 1987, he was involved, in collaboration with local communities and authorities and with representatives of the Farmers' Union and of MFC employees, in the implementation of policy decisions concerning the demarcation of un-demarcated areas under mechanized farming at state level,. His account of such collaboration is rather positive, though he acknowledges that the process of policy implementation, which essentially involved allocation of demarcated plots to aspirant scheme owners, largely excluded poor farmers, as these did not meet set criteria for land allocation on an individual basis. These farmers were nonetheless able to exert some influence on the implementation process by protesting and putting pressure on politicians, which apparently contributed to a subsequent decision to adjust land allocation criteria to accommodate somewhat more the needs of traditional farmers.

Respondent's view of policy volatility: MOS does not regard the policy process as generally speaking volatile. In his view policy volatility is limited to the outcomes and process of policy decisions; implementation/enforcement and the external environment of the policy are not volatile. Sources of volatility are the high level of autonomy and discretion granted to individual policy-makers, followed by insufficient public involvement in decision-making and by the weight of balances of power and coalitions in the political arena. Overlapping and poorly coordinated policy arenas on the one hand and the risk aversion of policy-makers on the other impair the pursuit of innovative policy solutions.

Respondent's views on natural resource policy issues: According to MOS, the main issues requiring policy intervention in regard to natural resources are in part socio-economic (e.g. poverty, poor infrastructure), but most are governance-related, such as lack of awareness of natural resource management, conflicting interests of resource users, absence of solid planning and regulations concerning land use, mismanagement of resources. Government responses to these issues have so far included a variety of interventions, including integrated development projects, initiatives for resource conservation, such as forests, and the establishment of a Supreme Council for the Environment and Natural Resources, as well as of Soil Conservation and Natural Resource Management Departments. Some of these initiatives have been development- or poverty alleviation-oriented, while others have been more geared towards environmental conservation. Most of them have been rather sound in their approach, and they have also led to somewhat positive results despite recurrent problems of insufficient funding. However, the integration of concerns for development and environment into a strategic vision for natural resource management, including the elaboration of comprehensive land use maps and the creation of appropriate implementing agencies and mechanisms for coordination with all resource users, is still beyond the reach of present policies. Rather, existing policies tend to be partial and in some cases even misguided. Such, for instance, is the 1992 dissolution of MFC in which MOS was directly involved. MOS was against this decision arguing that the continued existence of an entity like MFC was needed to regulate a special sector such as mechanized farming, to collect and share resources to develop this sector, and considering the vital role that the Corporation played in providing technical assistance and backstopping to individual states. In his view, the decision to dissolve MFC was mistaken. This he claims was also the opinion also of all those who had technical expertise about the mechanized farming sector. Nonetheless, he and other opponents of the decision joined efforts to ensure its effective implementation, though it is not clear how successful implementation was, given the inadequacy of funds made available by the government for this purpose and the weak capacity of regional MFCs, not to mention their frequent failure to implement regulations concerning their sector. Also related to the 1992 decision was that of establishing shelterbelts with trees over 10% of all mechanized rain-fed farming areas, a decision that the respondent supported and in which he was involved as then MFC Director General. Like other natural resource management decisions, this was also well-meant, but suffered from poor implementation, despite the fact that there were no interest groups opposing it. In particular, implementation was hindered by insufficient government funding and the licensees of mechanized schemes were not willing to pay for establishing the shelterbelts, even though these would ultimately have enriched the quality of soil on their plots. This situation was made more difficult by the fact that exemptions from licence fees have become the norm rather than the exception among licensees as a result of government's desire to promote investment, as well as by the inability of government agencies to follow up on implementation and monitor compliance.

Respondent's views on decentralization: Lack of resources is a key problem also in regard to decentralization policies in general, along with the poor state of infrastructure in most states and low public awareness of the goals of the decentralization process. In particular, the respondent believes that a policy that entails the creation of as many as 26 states is bound to fail due to the excessive cost of maintaining all these structures in operation. His vision is rather that of a Sudan where regional and federal systems are better integrated with each other and managed more democratically, with balanced attention to all sectors in a national perspective. As an example of the problems faced by existing decentralization policies MOS brought up again the 1992 Dissolution of MFC, which envisioned a proliferation of state-level MFCs deprived of the strong coordinating and capacity building role that the federal-level MFC played along with a sort of "nation-building" role. In MOS's view, a reform of MFC and of the mechanized farming sector in general was indeed necessary by the early 1990s, but this should have been based on a careful study of the experience of the Corporation and of sectoral and institutional needs in mechanized rain-fed agriculture. Instead, the 1992 decision reflected political, rather than technical or even economic considerations. Since then the government has made a positive attempt to reintroduce some central coordination among the work of different agencies dealing with mechanized rain-fed farming through the creation of an entity under the Ministries of Agriculture and Finance to plan, monitor, and coordinate technical support to mechanized farming institutions at the state level, jointly funded by the Ministry of Finance and by the states. At least in theory, this funding should be sufficient to enable this coordinating body to operate efficiently, so long as the structure remains small and professional, rather than political. However, the non-politicization of this body is rather unlikely, given the general features of the policy arena in contemporary Sudan.

Respondent's evaluation of policy outcomes: The 1992 Dissolution of MFC was a decision taken by the Council of Ministers, while implementation was in the hands of a Committee for the Disposition of Public Sector Entities, supported by technical committees providing assistance in implementing different aspects of the dissolution. The main outcome of the decision was the very dismantling of the Corporation, closure of its headquarters and the transfer of its former responsibilities to the states, all of which had costs that were not proportionate to benefits in the respondent's view. Compared to the stated goals of the decision, which were to give states a chance to build their agricultural and natural resource management capacity and to encourage agricultural production, achievements were rather poor due to lack of funds, trained personnel, and sensitivity to national interests in most states, combined with the disappearance of a central technical and coordinating unit to which states could turn for assistance. Witnessing this achievement gap and possibly following attempts by some concerned parties (e.g. the Farmers' Unions) to draw attention to the problems of the mechanized rain-fed sector after the 1992 dissolution, the government has taken action by establishing the already mentioned unit under the Ministries of Finance and Agriculture. However, this does not evidence government's accountability to the stakeholders.

Respondent's perception of rules in use in the policy process: Direct participants in the 1992 decision were only members of the Council of Ministers who acted on the basis of recommendations from the Committee for the Disposition of Public Sector Entities. Their authority derived from their role in government; however their relative power may also reflect their belonging to a certain group (i.e. a particular ideological current within the ruling party). Though the respondent was not part of the setting in which the decision was made, his

perception of the way in which roles and responsibilities were distributed in this setting stresses the role of personal interests and sources of power, as well as the importance of personal skills in playing the "power game." At the same time, his view of a "typical" decision-making process includes a task-oriented list of responsibilities, which gives the impression of a reasoned, information-based decision-making process, including the elaboration of alternative scenarios prior to the selection of a particular policy solution. Nevertheless, he also suggests that participants in the decision-making process may selectively withhold or decide to emphasize certain information with other participants, depending on the impact it may have on them or on the decision-making process itself. The possibility of non-participants influencing the process is essentially confined to lobbying with individual participants.

8. FAS, Federal Government

Identity and background of the respondent: FAS is Undersecretary at the Ministry of International Cooperation, as well as a former employee of the Ministry of Finance and an economist by training. His main area of expertise is macroeconomic policy.

Respondent's interest and involvement in the policy realm: FAS has been involved in the policy arena both in natural resource management and in decentralization. In the realm of natural resource management he was responsible for negotiations on land and subterranean natural resources as part of the government's team negotiating with the SPLM and was also previously involved in questions regarding natural resource investments while serving in the Ministry of Finance within the Economic Policy Directorate and in the Foreign Loans and Grants Directorate. In the realm of decentralization, he was involved in intergovernmental transfers between the Federal state and individual states (through the States Support Fund) while serving in the Ministry of Finance, and was also in charge of discussions over state jurisdictions and wealth-sharing among different levels of government in the peace negotiations. He regards the creation of the States Support Fund as the most significant policy in the realm of decentralization in recent years, though it is preceded in importance by the 2003 Local Government Act, the 2000 abolition of agricultural taxes, and the abolition of excise and sales taxes at the state level to be replaced by a VAT system 47% of whose revenue goes to the states and 53% to the Federal Government. FAS's account of his involvement in some of these policies suggests that coordination among concerned parties in the policy process is mostly confined to government departments at the federal level and international donors if they are directly affected by a certain decision. Even among federal agencies, however, the process is not without conflicts of interest, notably between the Ministry of Federal Relations (which oversees the process of distribution of resources between federal agencies and the states) and the Ministers of Defence, Interior, and the Director of Security. In addition, conflicts of interest and competition are frequent between federal officials and their counterparts at the state level and between officials from different areas in case of policy decisions that affect some areas positively and others negatively. Since development policies are still largely set by the Federal Government, states that have different of economic activities and endowments may find themselves lobbying for different or even mutually conflicting policies. In general, however, the policy-making process is consistently skewed in favour of federal agencies over those of states, and in favour of states whose economies are based on irrigated agriculture over those that depend on rain-fed farming, and in favour of urban centres over rural areas. The most influential interest groups are indeed urban-based and include security forces (army and police) and civilian elites. In

terms of general ability to influence the policy process these are followed by the population of states with large irrigated farming areas, where political awareness and organization are generally stronger than in states depending on rain-fed agriculture and pastoralism. The population of the latter is the least represented in the policy-making process at the federal level, despite the fact that they are a majority of the Sudanese population.

Respondent's view of policy volatility: As most other respondents, FAS regards the policy process in Sudan as volatile in all its main dimensions, notably due to a "patrimonial" approach to government on the part of policy-makers, which results in policy changes with each change in personnel in decision-making posts. Insufficient public participation in policy-making and incompetence of decision-makers are also sources of volatility, as is the fact that the search for policy solutions is driven more by ideological belief and a desire to preserve vested interests than by factual evidence, information, and a willingness to take risks to experiment with innovative policies.

Respondent's views on natural resource policy issues: FAS's account of the most important issues in the natural resource policy domain foregrounds the lack of a regulatory framework on resource access enjoying legitimacy among all stakeholders, along with the weakness of planning and management institutions and negative environmental phenomena such as droughts. This situation is partly the result of the fact that policy decisions in the realm of natural resources have traditionally favoured certain interest groups over others, notably groups linked to Khartoum-based elites over rural stakeholders. However, also important is the poor vision of traditional interventions undertaken by the government with support from international donors, which have often discounted the importance of governance factors in development and natural resource management, and also focused on relief aid rather than long-term planning for development. So far, Sudan does not have much to show in successful natural resource policies, whether in regard to investing on natural resources or in regard to regulatory interventions. In particular, the need to empower stakeholders to participate in more equitable and effective forms of natural resource management has not yet received due consideration. As a result, some policies have turned out to be misguided or unsustainable, because stakeholders are neither consulted nor involved in the implementation process and in bearing their costs. A clear example is that of initiatives for reforestation. Another example is the abolishment of agricultural taxes, which increased the financial dependence of states on the Federal Government. Such a decision was not necessary in the respondent's view, and in any case there were more economically viable alternatives. Moreover, contrary to appearances it did not serve the interests of farmers, only those of traders. Nevertheless, neither the respondent nor other individuals or groups mobilized to try to reverse or modify this decision.

Respondent's views on decentralization: The main problems faced by the decentralization process are due to lack of political will to have real devolution of power and financial resources, resulting in non-representative, non-accountable local authorities and in the financial weakness of local institutions. Such problems have not been addressed by the Local Government Acts (LGA) passed so far, which are limited to some "superficial" aspects of decentralization and do not deal with its key problems, due to political resistance on the part of the regime. This is despite the fact that there are policy options that would address such problems and that are socially and economically acceptable. Hence the process of decentralization marked by the LGAs remains fragile both politically and financially. States depend on intergovernmental transfers even for their operational budgets; and even though

they are theoretically entitled to levying taxes on livestock and to collect land rents, they either face collection problems or the amounts gathered are so low that they do not add significantly to state budgets.

Respondent's evaluation of policy outcomes: FAS's evaluation of policy outcomes focused on the 1970 abrogation of the Native Court Ordinance, which formerly enabled tribal leaders to settle disputes among groups and individuals in forums recognized by the state. The ostensible goal of this decision was to encourage a transition to a system of dispute resolution based on statutory law. To this goal, a system of local courts was introduced as an alternative to Native Administration courts in the same form across the country, irrespective of local traditions and of different institutions for resource and conflict management. However, in reality people did not swiftly turn to this alternative system or to statutory laws for various reasons, ranging from traditional attachment to certain norms and institutions to the relative inaccessibility of the new system to many people, both in financial physical terms (since courts were located in centres of a certain size). As a result, disputes were often unsolved and natural resource use was unregulated, with consequent social and environmental damage. In addition, this policy decision set in motion a process of inequitable redistribution of resources, altering the previous balance between government, local resource users, and non-local private interests. Nevertheless, the government continued this policy for a significant period of time, apparently pushed by certain interest groups. It realized its negative impact with much delay, as demonstrated by belated efforts to reinstate the Native Administration in a modified form. Most local stakeholders negatively affected by the 1970 decision refrained from openly manifesting their dissent, largely limited themselves to continuing to follow their traditional systems that did not grant them the authority they previously had.

9. EOS, Southern Kordofan

Identity and background of the respondent: EOS is Director of SCOPE (Sudanese Community Organization for Empowerment, NGO), and an agricultural extension officer on leave from the Ministry of Agriculture of former Western Kordofan. He holds a post-graduate degree in development planning.

Respondent's interest and involvement in the policy realm: The respondent's involvement in policy is limited to the realm of implementation of agricultural policies, notably as regards extension services. His account of the most important policy decisions taken by federal and state governments over the past several years focuses on the agricultural policy realm, and it includes the Farmers Organization Act (Western Kordofan), the 1970 modernization of the rain-fed sector, the organization of mechanized farming and distribution of mechanized farmland, the 2004 Organization of Pastoral and Farmlands Act, and the series of laws and policy initiatives associated with decentralization (from 1980 to 2003). In some of these decisions EOS was directly involved in implementation between 1990-2002, in coordination with other parties such as cooperative unions, localities, local communities (including the Native Administration), the Agricultural Bank, various government agencies and technical departments, the Joint Monitoring Committee, and several international organizations, such as the International Rescue Committee, UNDP, and FAO. He finds such coordination in implementing agricultural policies rather positive. It appears that all parties, except the state security apparatus, maintained a rather smooth partnership. Different interests and unequal power to further them were nevertheless visible among these parties. The Farmers' Union, representing mechanized farmers, was the most influential interest group both because of its

economic power and hold over land and because of its links with the ruling party. Conversely, traditional rain-fed farmers were the least organized, more dispersed, hence the weakest group, despite the fact that they represent a large majority of the population of Kordofan. The influence of this social group has grown somewhat after some farmers experimented with organizing into cooperatives. Attempts have also been made in recent years to integrate traditional farmers into land tenancy organizations and to strengthen their land rights by registering village lands and granting clear tenancy rights to individuals. Nevertheless, this group remains by and large without stable channels to access the policy-making process, which is a constant potential cause of instability and revolt.

Respondent's view of policy volatility: The policy process is regarded by the respondent as characterized by volatility in all its aspects, as a result of constant changes in leadership and in institutions and of the autocratic nature of the government, which discourages circulation of information and resists decentralization of decision-making. Insufficient public involvement in policy-making, followed by an inappropriate distribution of responsibilities in the policy process and by the level of autonomy of participants is also factors of volatility, along with a tendency to make policy a reflection of ideological preferences, rather than of factual/scientific considerations. Conversely, policy decisions are rarely innovative due to the effects of uncoordinated and overlapping policy arenas, the risk aversion of decision makers, and lack of information about alternative possibilities.

Respondent's views on natural resource policy issues: EOS regards conflicts among different holders of entitlements to natural resources, compounded by scarcity of resources and lack of development, as key problems in the natural resource arena. These problems are largely a result of insufficient definition and legal recognition of property and user rights over land, water, and pasture. Among various solutions attempted in the past, only the transfer of management of water points from the state to resource users' groups in Western Kordofan achieved significant success, but even this initiative suffered from volatility, became vulnerable to changes of officials in decision-making posts, who may be more or less favourable to certain forms of water point management. The respondent is of the opinion that an appropriate solution to these problems would require not only the devolution of management over natural resources to primary stakeholders, but also a process of stable legalization and demarcation of resource rights with the involvement of primary users. This conclusion is borne out in the discussion of the 2004 Organization of Pastoral and Farmlands Act. EOS states that he has a "neutral" position in this regard, for despite its positive goals and the fact that it was necessary to take a policy initiative in this realm, the Act did not reflect a profound, up-to-date, and dynamic understanding of the situation of stock routes, patterns of resource use, and changing relations among users. Only a participatory approach to mapping out the situation on the ground and to building appropriate policy scenarios would have provided the necessary knowledge to policy-makers, by revealing the growing importance of access to water, rather than to land or pasture, in relations among resource users. He regards this approach to be socially, economically, and politically feasible, but policy-makers did not opt for it. Hence the performance of this policy has been poor.

Respondent's views on decentralization: In EOS's view, decentralization of natural resources is still far from being a reality in Sudan, partly because decisions are mostly taken in a centralized fashion, and partly because local institutions have responsibilities but not the financial resources needed to carry them out. Inadequate implementation of existing laws on decentralization is also a problem along with lack of popular participation in the political

realm, resulting in lack of accountability and weak capacity of states and local institutions. It should be noted that the respondent was not aware of the existence of the 2003 Local Government Act at the time of the interview, which suggests that poor public awareness of decentralization policies may be a widespread problem.

Respondent's evaluation of policy outcomes: EOS's evaluation of a sample of policies focused on an undated decision to redistribute agricultural land (presumably in the context of the reform of MFC), with the ostensible goals to increase the number of people with access to farmland, encourage agricultural investments, and improve food security. These goals were to be achieved through the redistribution of farmland to ensure that at least 60% of mechanized farming plots would be assigned to local farmers. However, redistribution was not realized to this extent, nor were land allocation decisions made on sound economic grounds, such as making ownership of sufficient financial resources for investment in the land a precondition for obtaining it. In EOS's view a measure of cost-effectiveness, equitableness and good performance have characterized this policy, despite its limitations and incomplete implementation. Limitations have emerged, notably due to the fact that many farmers who received land actually lacked financial resources to invest on it and the government has not responded positively to them. As a result tenants themselves have had to cope with the situation by selling or renting land, seeking financial support from relatives or banks, or otherwise losing their newly acquired land. This may be not only the result of poor policy planning or implementation, but also a problem of accountability, for the emergence of such a problem may well have led to a different, more effective and supportive response by local or central government institutions. Had there been a political culture of grassroots rural organization and institutional accountability, groups representing poor farmers may have articulated clear demands.

10. ARBM, Federal Government

Identity and background of the respondent: ARBM is currently Advisor to the Minister of Agriculture and Forests and to the Director of the National Forest Corporation. He has a PhD in agricultural economics and 38 years of experience in various realms of the agricultural sector, from policy planning to implementation. He is a former Undersecretary to the Ministry of Agriculture, in which capacity he was involved in decentralization policies in the context of the 1998 constitutional rearrangement of responsibilities between federal Ministry of Agriculture and their correlates at state level, including collaborative formulation of sectoral policies and plans, training for agricultural officers at state level and control of national pests.

Respondent's interest and involvement in the policy realm: ARBM's involvement in the policy realm is rather in the field of decentralization broadly speaking than in natural resource management. His assessment of the most significant policy decisions undertaken by the Government of Sudan over the past few decades is, however, focused on agricultural policy rather than on decentralization. In particular, he stresses the importance of various development plans, strategies, and programs (e.g. the 5-year plan 1970-1975, the 1978-79 Economic Stabilization and Financial Restructuring Program, the 1988-1992 Four Year Program for Salvation and Economic Reform, the 1992-2002 Comprehensive National Strategy, and the 2004-2025 Twenty Five Year Strategy). Regarding macroeconomic policies he gives primary importance to the unification of the exchange rate, the liberalization of agricultural prices, the abolition of export licensing and taxes, and the privatization of state-

owned enterprises such as the Oil Seeds Company and the Gum Arabic Company. All of these were part of a liberalization policy package approved in 1992 by the Council of Ministers with little forewarning, which apparently took many by surprise, except those directly linked with the initiators of the package (notably the Minister of Finance, closely linked to Dr. Hassan al Turabi, and the Governor of the Bank of Sudan), but raised only ineffectual opposition from a less well-connected Minister of Agriculture. Only after the declaration of this package, the government made an effort to garner the support of at least some key stakeholders in those aspects of the package that directly affected agriculture, notably the Farmers' Union (which received ownership of the Cotton Marketing Company and of the Sudan Commercial Bank). This effort did not reach farmers as a broad socio-economic category, however, but only the Union per se. Farmers and other key stakeholders remained marginal to the policy-making process even after the adoption of the package by the government, and they were mostly negatively affected, especially by the liberalization of agricultural prices, which benefited only intermediaries and traders.

Respondent's view of policy volatility: ARBM's view is that all aspects of the policy process in Sudan are volatile, essentially as a result of political instability, lack of consensus on priorities, the effects of conflict and droughts, and strained relations with donors, neighbouring countries, and the international community in general. Ideologically-driven elite is also responsible for policy volatility. Special interest groups have large margins of influence over policy and information that may support sound policy-making is unavailable or does not circulate efficiently, which also results in little open-ness to innovative policy.

Respondent's views on natural resource policy issues: Erosion of the natural resource base (notably deforestation, desertification, soil compaction, overgrazing, water pollution, and erosion of river banks) is the main problem faced by Sudan in relation to natural resources. Responsibilities for this situation are born both by resource users, who lack coordination and awareness or sensitivity to environmental sustainability, and by policy-makers, who have failed to develop comprehensive land use plans and to enforce existing natural resource regulations. Partial solutions were attempted by the government in the past, including the allocation of minimum percentages of land in rain-fed and irrigated agricultural schemes for forests, or the de-stocking of the Gum Arabic belt. Some of these initiatives (notably the latter) have been successful; however, in general they have not been the result of careful diagnoses of problems and of participatory searches for appropriate solutions. Partly under pressure from donors and NGOs, local stakeholders have become aware in recent times of their rights and obligations in regard to natural resource use and management. However, devolution of clear management and planning responsibilities to lower levels of government, as well as capacity building to enable broad-based participation in the policy realm (e.g. via elected planning committees at locality level) is still lacking.

Respondent's views on decentralization: According to ARBM, the main obstacles to effective decentralization are limited capacity (human, technical, financial, etc.) of local administrative units, persisting centralized decision-making power at the federal and state levels, and the tendency for decision makers to be political appointees with little or no accountability to the public. Dividing the territory of Sudan into 26 states and 137 localities has not been an appropriate response to this situation; rather it has contributed to the rise of tribalism and offered opportunities for a proliferation of patron-client politics down to local levels of government. The establishment of a federal system, therefore, has not been a sufficient or even altogether positive initiative for Sudan, either in governance or in poverty alleviation

and development. The decision to establish such a system was indeed symptomatic of governance problems; it was a decision taken in haste without careful planning or consultations with the public, and despite the fact that many "experts" pointed to more viable and effective alternatives, not to mention the fact that a political opposition existed to the division of Sudan into so many states, as this was feared by some to be an initiative that would further weaken Sudanese national unity. Moreover, ARBM points to the insufficiency of provisions made for the Federal Government to fund this policy, which has left most states in a situation in which they hardly have funds to cover staff salaries and wages, with little or no resources for social services.

Respondent's evaluation of policy outcomes: Evaluating the outcomes of the above-mentioned decision to establish a federal system with 26 states and 137 localities, ARBM notes various gaps between the stated goals of this decision to "bring government closer to the people" and to enable the latter to be involved in decision-making and the manner and outcomes of its implementation. The manner has in fact been marked by single-handed decision-making, limited flexibility, and top-down definition of priorities in the budget of state governments. The outcome has been marked by minimal participation of the public in decision-making, deterioration of public services, inequitable sharing of resources unreflective of either the relative needs of different regions or their relative contributions to the national economy, nepotism, and tribalism. The gap between promises/expectations and goals of the federal system has led some groups to rise up in organized, sometimes violent protest, and the government has not been able to appreciate the negative consequences of this policy decision in a timely fashion, nor to take appropriate measures to redress them. ARBM believes that the recently signed North-South Peace Agreement may be an opportunity to reconsider the situation and to devise a more effective system of decentralization. However, this can only occur if the basis of governance shifts from an autocratic approach to politics to a participatory and democratic one.

11. EZ

Identity and background of the respondent: EZ has been a consultant with various international agencies since 1990, with expertise in a number of sectors including rural and agricultural development and planning. He has a PhD in agricultural economics and a long history of on and off affiliation or collaboration with the Ministry of Finance; he is also a former Minister of Finance and Economic Planning.

Respondent's interest and involvement in the policy realm: EZ is involved in the policy arena of decentralization, rather than in natural resource management, and especially in aspects that concern budgeting and planning. In his view, the most important policy initiative undertaken by the government in the decentralization process was the 1980 Regional Government Act, by which Sudan was first divided into six states. EZ was not directly involved in the formulation of this policy decision, but in its implementation, as well as in that of the 1981 People's Local Government Act that followed and complemented the 1980 Act that provided for devolution of authorities from states to localities. His involvement was due his being head of an advisory subcommittee in charge of the legal aspects of the relationship between states or regions, localities, and federal state. The committee included members of different government agencies, such as the Ministries of Agriculture, Justice, Finance, Local Government, and others, along with representatives of the only legally recognized party (the Sudanese Socialist Union), but did not include representatives of localities. Some

international organizations were also involved in some form in the implementation process, mostly by offering their assistance in planning and capacity building in regions in which they already had a significant presence. The rationale of the 1980 and 1981 Acts is not altogether clear; EZ's view is that the ruling party desired to give some appearance of power-sharing without thereby legitimizing other parties. This played a major role in pushing it to establish regional governments, and defused the political significance of granting a degree of autonomy to the Southern region, which was at the time in a sort of lull period between different phases of conflict. The main difficulty in implementing the Acts was the insufficiency of resources that could/would be made available to set up regional institutions and, even more so, to fund development projects and services at the regional level. Most of these resources came from budget transfers from the federal government, though the committees headed by EZ strongly recommended regional resource mobilization rather than resource transfer. Particularly problematic was the question of human resources, which were also often transferred from the centre rather than mobilized locally. In this respect, the obstacle to effective decentralization was the resistance of civil servants based in Khartoum to relocate to regional capitals and localities. Even when appointed to other regions, many civil servants continued to live in Khartoum with their staff (including state ministers), only paying visits to the regions they were in charge of administering. Finally, not all social groups were represented in the consultative process that led to planning for the implementation of the Act. In particular, traditional farmers were very marginal to the policy process, despite their ostensible representation by Native Administration authorities. Things were different for organized categories of farmers (mostly from mechanized rain-fed or irrigated schemes), who could make their voices heard, since the Farmers' Union was able to cater to successive regimes thanks to the presence of various party currents in its ranks, each of which could be mobilized in turn to take the Union's lead whenever a change in regime brought a certain party to power.

Respondent's view of policy volatility: EZ argues that the policy process is volatile in all its aspects in Sudan. The decentralization policy process has been volatile, constantly swaying between centralization and decentralization. For instance, the regime change in 1985 completely reversed the decentralization process. This was followed by a redefinition of relations between centre and regions under the Al-Mahdi regime. In recent years the decentralization policies have succeeded one another too rapidly without leaving sufficient time for each policy to be properly implemented. In addition, political conditions have made it possible for certain aspects of decentralization policies (e.g. regulations concerning the election of governors) to be bypassed or ignored. People even at the very local level have clearly perceived the effects of this volatility. Successive changes in mechanisms for resource generation in regional governments (e.g. agricultural taxes for states) have resulted in the deterioration of public services, since the central government no longer takes primary responsibility for their provision. EZ attributes the causes of volatility to poor leadership vision, the inadequate skills of policy-makers and insufficient public involvement in decision-making. An important factor is also the fact that policy implementation may be skewed along ethnic or professional lines, depending on the group identity or affiliations of decision-makers and of civil servants implementing the policy.

Respondent's views on decentralization: According to EZ, Sudan's main problem in decentralization is de-concentration of power and control, rather than actual devolution of authority, which would entail increasing accountability of government institutions to the public. And related to lack of accountability, is the fact that people in positions of power in

local or central government have an equally "predatory" or at least self-serving attitude towards public resources, including government budgets and other resources they can generate as a kind of rent by being in decision-making posts. Also, decentralization has not been planned to be built upon the strengths of non-state authority systems at the local and regional level, notably the Native Administration. On the contrary, the latter has been first dissolved, then restored in a much-weakened form, and finally politicized by the government and by parties, so that it now operates without real legitimacy, either as a representative body for local populations vis-à-vis the state or as a source of regulatory and conflict-management authority at the local level (particularly in relation to natural resources). To give at least a participatory veneer to decentralization initiatives, different solutions have been attempted in the past, including the re-establishment of the Native Administration, the formation of party-affiliated Popular Committees (later "Salvation Committees"), and the formation of development committees in the context of generally donor-funded development projects. None of these solutions has yielded progress in effective decentralization for a variety of reasons. First and foremost is the fact that the power structure has not changed its basic feature of a predatory or patrimonial approach to public resources and power and a centralization of authority within the Federal Government and the ruling party. Secondly, local communities have not demanded, as may have been expected, accountability from local and state-level institutions, partly because they were overwhelmingly preoccupied with poverty and also because in many areas the adult male population is away much of the time, working in central areas and in Khartoum. This situation requires massive investment in the provision of infrastructural and social services in these areas, as well as in the fight against unemployment (especially among youth and soon-to-be demobilized Popular Forces). These are the two primary steps in a more equitable redistribution of resources (including oil-based resources) and in the struggle of rural Sudan against poverty. Only if such investments are made can an institutional set-up operate effectively that would support political participation and representation, yielding good policy decisions and good popular choices of representatives. Furthermore, policies and institutions should be devised in such a way as to prevent the appropriation of special privileges and rents on the part of any interest group or other (e.g. the military vis-à-vis customs).

Respondent's view on perceived rules in use in the policy process: Given the history of independent Sudan, which has been marked by a series of violent discontinuities in ruling regimes, entry rules in the policy process are not dependent upon legitimate codification as much as they are a result of the rather abrupt pattern of regime alternation. Put differently, entering into the policy arena requires direct association with a group that at some point takes control over the entire arena through a popular uprising, a military coup, or another similarly "unregulated" process. As for exit rules, many, perhaps most, of the actors that have been involved in the policy process at some point or other in Sudan's post-independence history have never really "exited" the process, though they may marginal, or prominent, depending on the ruling regime and other circumstances. Entering the process to have a concrete chance to influence policy-making requires direct affiliation with the top echelons of the power structure, namely with the ruling party and/or with the clientele of its top figures, all of which results in a highly unstable system for entering and for remaining actively present in the policy process. Exiting is usually the result of a decision on the part of some powerful individuals or groups within the party or at the top of the power structure linked to it. In other words, people may be "pushed out" or excluded from the policy process on a more or less permanent, more or less overt basis. A spontaneous exit from this process is a rare occurrence. Even more than "entering," such forms of "exit" are usually marked by

instability and unpredictability, and they usually reflect personal dislikes or clashes of individual interest rather than respect or violations of formal rules. The key roles in the policy process in regard to decentralization lie first and foremost with the President, followed by his formal or informal "assistants" and, at the state and locality levels, the governors and the Commissioners. All are appointed by the President at the recommendations of states and of the ruling party. His experience in the advisory committee on decentralization makes EZ to suggest that among committee members responsibilities for information-gathering and for developing recommendations may be based on people's expertise and competence, and that recommendations by committee members may influence committee decisions at least in part depending on their consistency, factual accuracy, and feasibility. Even in gathering information and in developing reports within advisory committees, however, individuals may rely not only on competence, but also on the mobilization of personal networks, including their subordinates in their ministries and their personal, party-based, or tribal networks. Moreover, political affiliation, i.e. personal affiliations with powerful figures in the ruling party, plays an important role in granting particular weight to the recommendations or reports produced by this or that member of an advisory committee. This is not a novel feature of the current ruling party, but rather a feature of the Sudanese political scene at least since Nimeiri's times. This tendency has intensified since the coming to power of the current regime, interplaying negatively with the decline of the quality and preparation of civil service, partly due to "brain drain" of professionals to Gulf Countries or to the Unites States particularly since the 1980s. This may be in turn one reason for the fact that implementation of policy decisions is often faulty, incomplete, or sheer impossible. This fact also reflects the little consideration policy-makers give to building implementation scenarios when they decide on policies.

12. FHS, Northern Kordofan

Identity and background of the respondent: FHS is Chairman of the State's Legislative Council and a member of the National Congress Party. A lawyer by training, he has professional experience in practicing law and as a former administrator of the African Muslims' Agency, besides serving in government since 1989 in various capacities (e.g. as Deputy Chairman of the Kordofan State Popular Committees, Minister of Education, Minister of Social and Cultural Affairs, and Deputy Wali in the White Nile State).

Respondent's interest and involvement in the policy realm: FHS's involvement in the policy arena spans the realms of decentralization and natural resource management. This involvement differed at different times in his public career, depending on the nature of his various assignments and on the particular political climate of subsequent periods. In his view, the most important agricultural development policy decisions taken by the government and by the states in the past couple of decades are the setting up of mechanized farming schemes in South Kordofan during the 1980s and the related reallocation of agricultural lands for investment, followed by the distribution of agricultural projects in Jebel ed-Dair and the revival of the Khor Abu Habil project. The recent key decisions have been the setting of latitude 13 degrees North as a dividing line between lands to be used for pastoralism and for rain-fed farming, initiatives in support of livestock production and pastoralism North of that line, changing the of crops and seeds in areas cultivated by traditional methods, and the series of Local Government Acts issued between 1998 and 2003. FHS was involved in some of these decisions, as a member of the State's Popular Committee and subsequently as Chairman of the State Legislative Council. In these capacities, he coordinated with other members of

the state executive and legislature, as well as with members of the National Congress Party (NCP) and, to some extent, with civil society organizations such as the Farmers' and Pastoralists' Unions and the Businessmen's Federation. In general, his account of this coordination is positive especially as concerns the relationship between Federal Government, Legislative Council, and NCP. Occasionally there was opposition from various interest groups, such as various producers' unions, which were allowed to participate in policy-related discussions in the context of a committee for agricultural affairs attached to the previous Legislative Council (1999-2003). FHS argues that quite powerful groups were both Farmers' and Pastoralists' Unions, the Businessmen's Federation and trade unions. Conversely, he acknowledges that traditional farmers (i.e. the majority of the population) as well as rural women were minimally represented either in the Farmers' Union or in the Legislative Council itself. This situation may change with the implementation of the Peace Agreement, which FHS believes may bring back some kind of framework for popular participation similar to the Popular Committees that existed at the beginning of the National Salvation Regime (NSR).

Respondent's view of policy volatility: FHS regards the policy process in Sudan as one characterized by volatility in all its aspects, partly due to insecurity and political uncertainties and to some "irrationality" and haste in decision-making on the part of the NSR particularly at the beginning of its rule. Crises and conflict are thus the main sources of volatility, followed by poor planning and coordination in the policy-making arena and by the influence of changing political coalitions. Conversely, there is no significant problem of lack of attention to factual information vs. ideological motivations in policy-making, nor is the search for innovative, more effective policy solutions to solve outstanding problems linked to lack of interest or resistance by special interests. On the contrary, such search is simply hindered by inadequate availability of resources for implementation, lack of information about alternative possibilities, and sheer lack of better alternatives to the actions of policy-makers.

Respondent's views on natural resource policy issues: According to FHS, Sudan's main problem in relation to natural resources is the poor, irrational utilization of its resources, which he attributes to lack of strategic, scientifically-based planning and to a tendency to react to events after they occur, rather than planning ahead to prevent problems. Also significant is the lack of input by direct stakeholders in the decision-making process. So far, no truly effective initiatives have been undertaken at the policy level to address these problems, and the decentralization process has also not been an effective response due to the financial weakness and limited staff capacity of states and localities. However, some awareness of the situation and of possible solutions is emerging not only in the leadership but also among educated farmers, whose capacity for thinking innovatively about how to respond to their needs must be encouraged and receive political support. In addition, effective policies regarding natural resources should be based on clear demarcation of resources and use patterns, as well as on an effort to rationalize such patterns. A positive example of state policy in this respect is the State Legislation concerning land utilization and conservation, in which the respondent was involved and which he supported in his capacity as Chairman of the State Legislative Council. In his view, the decision was necessary because of the deterioration of natural resources in the state, but it was not implemented effectively because of inadequate financial resources to implement and monitor compliance. More effective initiatives would have required intervention on a variety of levels, i.e. not just that of legislation and enforcement on limits and regulations, but also those of extension services and

awareness-raising. However, the resources to undertake this sort of comprehensive initiative were lacking, and in any case no open opposition to this initiative, nor to other, successively more debated ones like that concerning latitude 13 degrees N, was voiced within the Legislative Council, so that there was no solid reason not to issue the decision or to modify it.

Respondent's views on decentralization: In FHS's view, the main problems Sudan faces in decentralization are the mismatch between devolution of powers to states and devolution of independent financial powers. Under the Peace Agreement, this situation may change as states may benefit more from their position in the national economy. For instance, oil-producing states may benefit from the presence of oil refineries and pipelines and/or be compensated for the environmental and social impact of oil plants on their territory. So far, however, the Federal Government has managed the policy-making process rather single-handedly, including decisions on the budgets and resource base of states. Coherent progress is needed in the direction indicated by the 2003 Local Government Act by strengthening local government institutions, rather than states alone, paying attention to enabling the provision of community-level services and improving accountability of authorities at the locality level (e.g. Commissioners). Despite its limitations, FHS evaluates the 2003 Act positively, in whose issuing he was only indirectly involved as part of the State Legislature's contribution to a national conference to evaluate the experience of the federal system. In his view, the Act represented a positive step towards a well-functioning system of local authorities, with due separation between legislative and executive institutions (notably a Legislative Council and a Commissioner), and despite the weakness of these institutions in terms of financial, human, and infrastructural resources.

Respondent's evaluation of policy outcomes: The respondent's evaluation of policy outcomes focused on the series of Local Government Acts issued from the 1990s to 2003. In his view, the expected outcomes of the Acts, especially those of the 2003 Act, were the establishment of a strong system for local government entrusted with the delivery of services formerly provided by the state, and of a functional system of legislative and executive institutions that could operate in autonomy from federal and state governments. It is probably too early to judge the performance of this policy (of the 2003 Act at least); however it is clear that legislative and executive cadres at the locality level are too weak to operate independently of states, nor do they have efficient mechanisms for budgeting and accounting. The main achievement of the Act is perhaps that localities have provided a framework for some popular participation in the public sphere, including the public voicing of popular dissatisfaction over initiatives undertaken by localities, such as the imposition of new taxes and service charges. Moreover, policy-makers have proved accountable to the public in relation to the 2003 Act, and they have sought to redress some of the problems encountered in its implementation. In turn, the public has contributed to demanding such accountability due to their high degree of awareness of their needs and to their political savvy, which pushes their representatives in the Legislative Council to be responsive, though it is not altogether clear why this is so since so far election rules do not give constituencies the right to discharge the representatives.

REFERENCES

Bannon, I and Collier, P (eds), 2003, *Natural Resources and Violent Conflict*, The World Bank, Washington, D.C..

Birner, Regina. 2003. *Devolution and Collaborative Governance in Natural Resource Management: Theory and empirical evidence from developing countries.* Habilitation Thesis, Institute of Rural Development, Georg-August University of Göttingen

Blomquist, William, and Elinor Ostrom 1985. "Institutional Capacity and the Resolution of a Commons Dilemma." *Policy Studies Review* 5(2):383-393.

Buckles, D. (ed.) 1999. *Cultivating Peace: Conflicts and Collaboration in Natural Resource Management*. London, IDRC.

Bunderson et al.,1984. 'Range/Livestock Activities 1982/83'. WSARP Publication 29. Agricultural Research Corporation. Western Sudan Agricultural Research Programme.

Caballero, R.J. (2000). "Macroeconomic Volatility in Reformed Latin America: Diagnosis and Policy Proposals". Washington, D.C.: Inter-American Development Bank.

Castro, A. P., Nielsen, E. (eds.) 2003. *Natural Resource Conflict Management Case Studies: An Analysis of Power, Participation and Protected Areas*. FAO, Rome, Italy.

Chaudhry, K. A. 1997. *Price of Wealth: Economics and Institutions in the Middle East.* Cornell University Press**.**

Craig, G., Hall, N. and Mayo, M. "Managing Conflict through Community Development," *Community Development Journal,* Vol. 33, No.2, p.79.

Duffield, M. 2001. Global Governance and the New Wars: The Merging of Development and Security. London: Zed Books.

Easterly, W. , R. Islam and J.E. Stiglitz (2000). "Shaken and Stirred: Explaining Growth Volatility". In The World Bank Annual Conference on Economic Development, Washington, D.C.

El Harizi, Khalid. 2003. "Empowering the rural poor under volatile policy environment: A model of Empowerment". International Food Policy Research Institute – Project Report No1.

El Harizi, K. and H. Klemick (2005): Accounting for community capabilities in Kordofan, Sudan. IFPRI, DSGD Discussion Paper (forthcoming).

Evans, P. 1995. *Embedded Autonomy: States, Firms and Industrial Transformation*. Princeton, Princeton University Press

Fadlalla, B. 1987 "The dry season nutritional status of transhumant Baggara sheep, Sudan." Proceedings of the International Conference on Animal Production in Arid Zones, Part 2, Damascus (Syria): Arab Centre for the Studies of Arid Zones and Dry Lands and Arab Organization for Agricultural Development.

Gootaert, C. and van Bastelar, T. eds., *Understanding and Measuring SocialCcapital - A Multidisciplinary Tool for Practitioners*, Washington, DC: The World Bank, 2002.

Gorringe, P (1994e) *The Commitment Model - Framework*, Unpublished Paper, Wellington: The Treasury.

Hussein, K. 1998. "Conflict between farmers and herders in the semi-arid Sahel and East Africa: A review. Pastoral Land Tenure Series No. 10, IIED, London 94 pp.

Kaplan, R. 2000 "The Coming Anarchy: Shattering the Dreams of the Post Cold War. New York:Random House.

Kaldor, M. 2001. *New and Old Wars: Organized violence in a global era*. Polity Press/Stanford University Press.

Keen, D. 1998 "The Economic Functions of Violence in Civil Wars". Adelphi Paper 320. London: IISS

Klare, M.T. 2002, *Resource Wars*, New York: Henry Holt & Co.

IFAD: Appraisal Report for the Western Sudan Resource Management Programme, IFAD, Rome, May 2004, Working Paper 1: "Socio-economic characteristics and targeting," pp. 19-20.

Ilchman, W. F., and N. Uphoff. 1998. *The political economy of change.* New Brunswick (USA) and London (UK): Transaction Publishers.

Lal, D., 1985. *The Poverty of Development Economics*. Harvard University Press. Cambridge, MA.

McGinnis, M. D. ed. 1999. *Polycentric Games and Institutions: Readings from the Workshop in Political Theory and Policy Analysis*. Workshop in Political Theory and Policy Analysis - Volume 3.

Means, K., Josayma, C., Nielsen, E. and Viriyasakultorn, V., *Community-based Forest Resource Conflict Management*, Rome, FAO, 2002, p.13.

North, D.C. 1981 *Structure and Change in Economic History*, New York: Norton.

Olson, M. 2000. *Power and Prosperity: Outgrowing Communist and Capitalist Dictatorships*. New York: Basic.

Ostrom, Elinor. 1996. "Institutional Rational Choice: An Assessment of the IAD Framework." Presented at the 1996 Annual Meetings of the American Political Science Association, San Francisco, August 29-September 1, 1996.

Ostrom, Elinor, 1998. Self-Governance and Forest Resources. CIFOR Occasional Paper No. 20.

Ostrom, Vincent. 1982. "A Forgotten Tradition: The Constitutional Level of Analysis." In *Missing Elements in Political Inquiry: Logic and Levels of Analysis*, eds. Judith A. Gillespie and Dina A. Zinnes. Beverly Hills: Sage Publications, 1982, 237–52.

Ostrom, Vincent. 1998. "Cryptoimperialism, Predatory States, and Self-Governance" [ch. 8], in *Polycentric Governance and Development: Readings from the Workshop in Political Theory and Policy Analysis.* Edited by Michael D. McGinnis.

Ostrom, Vincent. 1998. "Problems of Cognition as a Challenge to Policy Analysts and Democratic Societies" (Ch.17) in *Polycentric Governance and Development: Readings from the Workshop in Political Theory and Policy Analysis.* Edited by Michael D. McGinnis.

Polanyi, K. 2001, c1944, *The Great Transformation* (2001 edition), Boston, MA, Beacon Press.

Ribot, Jesse. 1998. *Decentralization, participation and accountability in Sahelian Forestry: Legal instruments of political-administrative control.* In Berkeley Workshop on Environmental Politics, University of California, Berkeley.

Sabatier, Paul (ed.) 1999. *Theories of the policy process.* Theoretical Lenses on Public Policy, Boulder, CO: Oxford: Westview Press.

Sabatier, Paul, & Jenkins-Smith, H. (1999). *The advocacy coalition framework: An assessment*. In P. Sabatier (Ed.), Theories of the policy process (pp. 117-166). Boulder, CO: Westview.

Schmid, A. Allan. 1997. Incompatible use and exclusion costs (Chapter 3 in *Property, Power and Public Choice*, 2nd ed. was published by Praeger, 1987.

Sen, Amartya (1999) *Development as Freedom,* Anchor books, New York.

Suliman, M. 1997, *Ethnicity from Perception to Cause of Violent Conflicts: The Case of the Fur and the Nuba Conflicts in Western Sudan*. Institute for African Alternatives, UK.

Strange, S. 1996. *The Retreat of the State: The Diffusion of Power in the World Economy*, Cambridge Studies in International Relations; Cambridge University Press

Tilly, C. 1995. **"**To Explain Political Processes", *American Journal of Sociology*, Vol.100, No.6 (May 1995) pp. 1594-1610.

Tyler, R. 1999. "Policy implications of natural resource conflict management (Ch.14) In *Cultivating Peace: Conflicts and Collaboration in Natural Resource Management*. Buckles, D. ed. London, IDRC.

Warner, M. *Conflict Management in Community-based Natural Resource Projects: Experiences from Fiji and Papua New Guinea*. London: Overseas Development Institute. April 2000.

Wunsch, James S. 1991. "Institutional Analysis and Decentralization: Developing an Analytical Framework for Effective Third World Administrative Reform." *Public Administration and Development* 11:431-51.

Zartman, W. 1997. *Governance as Conflict Management: Politics and Violence in Africa,* Washington, DC: Brookings Institution Press, p.9

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