

# **Linking National Forest Programmes and Poverty Reduction Strategies**

## **Sudan**

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## Acronyms

CNS	Comprehensive National Strategy
CPA	Comprehensive Peace Agreement
CSO	civil society organization
FAO	Food and Agriculture Organization
FNC	Forests National Corporation
FSR	Forest Sector Review
GDP	gross domestic product
GNU	Government of National Unity
GOSS	Government of Southern Sudan
IPES	Interim Poverty Eradication Strategy
IPRSP	Interim Poverty Reduction Strategy Paper
M&E	monitoring and evaluation
MAF	Ministry of Agriculture and Forestry
MFNE	Ministry of Finance and National Economy

## Summary of key recommendations

### Overview

Sudan's poverty reduction strategy process began in 1999 with the establishment of a poverty unit within the Ministry of Finance and National Economy (MFNE). However, lack of data and weak capacity to carry out a poverty analysis, prevented completing an interim paper until January 2004.

The Interim Poverty Reduction Strategy Paper (IPRSP) covers only the North. It briefly assesses issues in the agriculture, health, education, industry, and water sectors, and identifies key areas of growth. Although the main text does not mention forestry *per se*, many objectives contained in the annexes relate to natural resources, including community forestry and incentives for forests and wood production. The document does not outline goals or targets to reduce poverty and is silent on a system to support implementation and monitoring. With regard to the South, the government's Policy Statement notes the importance of sustainable agricultural development and recognizes that trees, woodlands and forests are essential to the well-being of its citizens and to national economic growth.

The IPRSP – not yet implemented – only covers the 16 states of Northern Sudan and is based on data from 3 different surveys, none of which are specific to poverty. When the Comprehensive Peace Agreement (CPA) was signed in May 2005, it was decided that Southern Sudan would develop its own strategy which it plans to complete by mid-2007. The two would then be merged to cover the entire country.

Significant changes have taken place since the Forest Sector Review – Sudan's national forest programme for the North – was developed 20 years ago. On the one hand, the Forests National Corporation (FNC) in the North is proposing to draft a new Forestry Policy (FNC, 2005a), amend the *Forest Act* (FNC, 2006), update the Forest Sector Review (FNC, 2004, draft) and review the functions of the FNC with a view to adjusting to the changing institutional landscape (FNC, 2005b). On the other hand, the Government of Southern Sudan has produced a draft Forest Policy and Strategy Framework as a background paper for the 2006 budget speech. Both governments are developing their respective forestry policy frameworks in a more participatory manner than in the past.

As the policy dialogue on the Interim Poverty Eradication Strategies evolves in both Northern and Southern Sudan, the potential for prioritizing forestry interventions is significant, given that the sector is well reflected in the Comprehensive Peace Agreement and because of the commitment to make both strategies consistent with the Millennium Development Goals. If the Forests National Corporation in the North and the forestry department in the South established clear focal points to participate in the formulation of the strategies, they could engage more effectively to influence outcomes.

### Strengthening the linkages between forestry and poverty alleviation

#### Collaborating across sectors

Collaboration between FNC and the Ministry of Energy and Mines extends more than two decades so that the linkages between forestry and oil are well understood. The draft Forestry Policy of the Government of National Unity notes how developments in the oil sector are reducing dependency on woodfuels, particularly for cooking, brick making and traditional bakeries.

Under the Comprehensive Peace Agreement, the Government of Southern Sudan will have access to substantial revenue generated domestically, largely from oil. However, additional

resources will be needed to manage its vast forest resources. In line with the FNC paper on oil that has informed the draft Forestry Policy of the Government of National Unity, more research is needed on the use of waste water for forestry operations. The draft Forestry Policy for the South should also consider aspects of the oil industry which are likely to affect the region such as the potential to market modern fuels in areas that have yet to make the transition to available energy options. Examples of private-public partnerships within this growing sector are available to serve as models.

The integration of forestry with agriculture is well advanced in Sudan, as is the use of trees and shelter belts to increase crop yield. The Forest Policy Statement (1986) calls for planting forests for protective and productive purposes and thus opens the door to expand forestry to agricultural schemes. As a matter of priority, the FNC should provide more farmers in rain-fed and irrigated schemes with high value tree species which can generate sufficient income to attract interest in increasing the area of planted forests. Government assistance is essential since private forestry, as in many countries, often needs financial incentives to succeed. FNC requires improved capacity to advocate the benefits of forestry, publicize successes, and convince workers in agricultural schemes of the merits of planting trees.

### **Coordinating federal-state interventions**

A recent analysis revealed that the Higher Council for Natural Resources, the Higher Professional Council for Natural Resources and the Higher Council for Gum Arabic are all assigned responsibilities for integrating and coordinating activities related to renewable natural resources at the national level. If all three councils carry out these functions, considerable confusion over federal-state coordination is likely to continue and will be compounded as federal and state councils are constituted under the Council for Planning and Division of Lands and Forests.

If the government undertook a review of the overlapping mandates of the three councils with a view to streamlining roles and responsibilities, duplication would be minimized and collaboration enhanced. Moreover, if separate institutional arrangements for the North and for the South were to be established, each would have a distinct but consistent mandate to implement their respective national forest programmes and define, implement, monitor and evaluate their forest policies and management. Both structures should take into account the need for compatible configurations at federal and state levels.

### **Enhancing institutional capacity**

One of the most important developments arising from the Forest Sector Review was the launching of the Forests National Corporation in 1989. As the first country in Africa to establish autonomous self-financing organizations 17 years ago, Sudan has much experience in this regard. Despite almost no recent external assistance and no structured national forest programme process *per se*, FNC has advanced the contributions of forestry to poverty alleviation. However, lack of donor support, insufficient government funding, rising wage costs, and lower revenues due to falling charcoal prices are threatening the institution's sustainability. Although the organization increased forest reserves from 2.8 million ha in 1989 to 11 million ha in 2006, not a single new post has been created since 1990.

In line with the Interim Poverty Eradication Strategy and budget reforms, the FNC needs resources to improve its financial management systems to meet international standards to which Sudan has agreed. The forestry department of Southern Sudan will also need to adhere to these same standards when developing its systems. A working group on sector financing should be established to address (i) the sharing of benefits, responsibilities and

revenue and (ii) the need to budget along programme lines so that forestry authorities can show the value their organizations add to government funding.

The Forest Sector Review (1986) proposed several options for increasing forest cover in Sudan and FNC staff are helping to achieve this objective by providing technical advice and planting material free of charge, offering financial incentives, and publicizing the importance of forests to livelihoods and the environment. Consequently, community forestry in Northern Sudan is well established and locally-driven.

In collaboration with other departments, local administrations and non-governmental organizations, the FNC should help to build the capacity of the forestry department in Southern Sudan. Expertise is required, for example, to establish forest user groups, create village forest committees, and assist communities to develop and implement benefit-sharing mechanisms for the equitable distribution of revenues generated from forests and trees.

### **Calculating forestry's contributions to Gross Domestic Product**

Findings from a forest valuation study which fed into the revised draft Forest Sector Review (2004) reveal that areas covered by forests (other than central and provincial forest reserves) supply more than 89% of domestic fuelwood and other products. The Forest Consumption Survey (1995) is a valuable source of information which covers household and industrial establishments, quantifying use by state, sector and type of wood fuel. The study also provides statistics on rural and urban consumption. In the South, non-governmental organizations have generated qualitative information on food security, nutrition, livelihoods and vulnerability. However, findings tend to be localized, context specific and difficult to aggregate so that they are not easily integrated into decision-making processes.

As a matter of priority the Forests National Corporation, in collaboration with the forestry department in Southern Sudan, should update the Forest Consumption Survey using current valuation methods; expand its scope to include more non-wood forest products; and gauge the impact that the discovery of oil might have on charcoal consumption. Moreover, teaming up with the Livelihood and Food Security Integrated Analysis Policy Unit in Southern Sudan and the Food Security and Vulnerability Analysis Policy Unit in Northern Sudan would improve access to and use of existing data sets.

The Central Bureau of Statistics, the New Sudan Centre for Statistics and Evaluation, the FNC and the forestry department in the South should conduct further research on economic valuation of the sector; develop methodologies to assess the impacts of policy options; and measure the contributions of forestry to poverty alleviation in both qualitative and quantitative terms, including of a greater array of non-wood forest products. Training in the use of environmental economic tools for accounting purposes should also be offered.

In addition to a lack of reliable information, weak capacity to analyze statistics prevents FNC from building a solid case that demonstrates forestry's importance to the national economy. The Ministry of Finance and National Economy maintains that contributions of the sector to the Gross Domestic Product have averaged around 3% for the last 5 years. FNC argues that, if consumption and sales in communities were taken into account, the figure would be four times higher.

### **Marketing forestry**

The Forest Sector Review has been guiding institutional reform in Sudan since the eighties, officially introducing extension services which became the driving force of modern forestry in the country. Accordingly, the FNC has assisted villages to implement a range of

community initiatives, in addition to delivering lectures to students on the importance of the sector and using the media to raise awareness of the negative impacts of desertification, displacement, environmental degradation and unemployment, for example.

The link between the priorities identified in the 1986 Statement of Forest Policy and activities to reduce poverty needs to be articulated across sectors at central, state and local levels. Efforts to influence politicians are particularly important in this regard. Similarly, the strategy to communicate the IPES needs more consultation and review. To promulgate the revised forest policy in the North and the one in the South once it is formulated, Sudan may wish to consider distributing simplified versions of these policies and of the IPES to improve understanding of the linkages between forestry and poverty alleviation.

## **Other opportunities for forestry-based poverty alleviation**

### **Gum Arabic production**

In recent years, gum Arabic has accounted for about 13% of Sudan's annual export earnings and is an off-farm activity for more than 5 million people. Findings from a recent survey show that, on average, 19% of household earnings come from this product. Given the importance of the industry to alleviating poverty, its restructuring is accorded high priority in the IPRSP. Reforms are needed to address price fluctuations, low farmer returns, weak services in production areas and lack of funding. Increasing market efficiency and sharing benefits more equitably call for further changes in the sector, ones that are consistent with the World Trade Organization to which Sudan aspires to become a member.

### **Improved governance in the teak sector**

Large-scale planted forests in Southern Sudan offer significant potential for development. If managed sustainably, the teak trade alone from the current 10,000 hectares could generate an estimated US\$ 5 million per year. However, these resources are unlikely to yield immediate financial benefits since the Government of Southern Sudan, the private sector and communities need to invest significant time and money to reverse resource degradation and destructive practices of the past.

Weak governance in the teak trade over the last 10 years has eroded public confidence in the forest department and the Ministry. There is now an urgent need for government to engage communities and other stakeholders in the reform process and to support local efforts to control illegal operations, starting with those that are commercially driven – whether they are timber, firewood, charcoal or other products.

### **Employment for internally displaced people**

A significant number of displaced people from Sudan and neighbouring countries are expected to relocate to cities in the South. Construction of new homes, schools and offices will require large amounts of round wood, small poles, bamboo and sawn wood. Sawmills are therefore needed as well as equipment for harvesting. Restoration activities also may offer job opportunities but, unless those involved are to be permanently resettled, they are not likely to engage in community work which extends beyond the demands of their employment.

In line with the need to better market the importance of forestry to increase government and donor support, the FNC and forestry department should collect data on the proportion of household income that is derived from employment in the forest sector and consider how to measure the extent to which such employment improves rural and urban livelihoods.

## **1. Introduction**

As part of a wider study in African countries, FAO led a mission to Sudan to examine the extent to which its Forest Sector Review (FSR) is linked to the Interim Poverty Reduction Strategy (IPRSP). The main objectives were to identify factors that fostered or hindered the establishment of effective linkages and to enhance the presence and influence of forestry in wider planning instruments with a view to strengthening financial, institutional and policy support for forest-based poverty alleviation.

The team consisted of a staff member of FAO, an international consultant, and a national consultant who worked closely with the Forests National Corporation (FNC) of the Ministry of Agriculture and Forestry (MAF). During the 2-week mission, discussions were held in Northern Sudan with more than 40 representatives from government, the private sector and civil society, including in Sennar and Gazira States. Since time did not allow for on-site visits to Southern Sudan, information was obtained from a review of policy papers and other documents which reflected recent consultations the Government of Southern Sudan had with the forestry department in that part of the country. See annex 1 for the list of persons met.

The timing of the mission was such that contributions were made to four important policy initiatives: updates to the National Forestry Policy for Northern Sudan (2006, draft) and Forest Sector Review (2004, draft), both led by the FNC; the preparation of the first National Forestry Policy for Southern Sudan (2006, draft) led by the State Ministry of Agriculture and Forestry in the new Government of Southern Sudan; and efforts to develop an Interim Poverty Eradication Strategy (IPES) in the North and South, led by the Ministry of Finance and National Economy, in collaboration with Government of Southern Sudan's State Ministry of Finance.

## **2. Policy Processes in Sudan**

### **2.1 Overview**

Sudan is categorized as a least developed country, comprising 2.5 million square kilometres (the size of Western Europe). It is the largest country in Africa and has an estimated population of 34 million. According to the National Accounts, growth in Gross Domestic Product (GDP) in the Northern part of Sudan and the garrison towns in the South averaged 3.8 % in the period 1990-1995, accelerating to 6.2% during 1996-2000 and 7.4% from 2001-2006.

While it is not possible to accurately determine the level of poverty in Sudan due to lack of recent data (the last nationally representative household survey on income and expenditure was in 1978), some estimates put it between 50 and 60%, similar to most of its neighbours. The high levels of poverty are also evident in a variety of human development indicators, for example the United Nations Human Development Index, which lists the country at 139. Indices measuring factors which enable a minimum standard of decent living reveal significant rural/urban disparities. On average, 87% of rural people have no access to electricity, 53% have poor sanitation and no access to safe drinking water, and 92% depend on biomass for energy (MFNE, 2004).

In the Northern part of Sudan, GDP per capita was estimated at USD 395 in 2001, an average that masks wide regional disparities in economic and social development and a skewed distribution. Throughout the North, rural poverty rates of more than 60% are recorded in the Red Sea region, Eastern Darfur and Northern Kordofan.



In the Southern part of Sudan, lack of statistics conceals the full extent of poverty. Estimates show the GDP per capita to be less than USD 90 per year, with 90% of the population living on less than USD 1 per day. Southern Sudan, as a resource endowed forest area, ranks among the poorest regions of the world.

## **2.2 Comprehensive Peace Agreement**

Any discourse on forest policy in Sudan must not only consider the economic growth and poverty indexes but also its fragile and evolving institutions, most recently exemplified by the Comprehensive Peace Agreement (CPA) which was signed in January 2005. The constitutional and administrative processes leading to the federal system and more than 20 years of civil strife are the most salient features affecting the course of Sudan's forest policy and the role of government institutions.

The CPA envisages interim institutional arrangements which will take it to 2010 when a referendum will be held to determine whether the South will remain part of Sudan or secede. Plans are to institute a federal/national level of administration under a Government of National Unity (GNU) which will encompass 16 states in the North and 10 in the South, each with their own government. In the South, the Government of Southern Sudan (GOSS) will be an intermediate tier between the federal and state levels and will have considerable autonomy at the national level and over the management of its forest resources.

It is expected that major differences will emerge between the North and the South in terms of how service delivery is organized, including in forestry. In the North, civil servants are employed across different tiers of government: 30 federal ministries, 6 state ministries, and numerous local administrations. In addition, there are some 70 public enterprises and 25 public universities. In practice, these arrangements are designed to have government deliver public services over the long term. In the South, the public service must be established, including personnel and systems. Unlike the North, however, the private sector and local institutions would deliver many of the services. The GOSS and state governments are expected to be largely responsible for policy and regulatory matters, leaving most positions for service delivery at the local level. The size of the public service is to be 35-40 000, with each level of government managing its public service. An unresolved issue is the extent to which employees of the southern Sudanese government working in the garrison towns will be integrated into the GOSS administration.

When designing the institutional aspects of Sudan's national forest programme, the one country-two systems approach outlined in the CPA will have to be taken into account, as will the need for arrangements in the North to be compatible with those in the South.

## **2.3 Forest Policy and Legislation in the North**

The first phase in the development of Northern Sudan's forest policy culminated in the Forest Sector Review (FSR) in 1986 – the equivalent of a national forest programme. Often noted as a 6-year project, the FSR focused on strengthening central and regional public institutions, introducing incentives to engage the private sector in the conservation of wood energy and woodfuels. Resource constraints during the eighties resulted in the prioritization of activities which involved less capital and yielded maximum benefits in the short-term. Later interventions would concentrate on longer term development.

Using the FSR as a basis for national policy development, the Minister of Agriculture and Natural Resources approved the Statement of Forest Policy (1986). In accordance with this statement and because of the need to restructure the forestry administration to carry out new responsibilities, the government passed the *Forests Act* in 1989, the same year it established

the *Forests National Corporation* (FNC) – a service-oriented parastatal body which reports to the Minister of Agriculture and Forestry. The Act provides for private forest ownership, community ownership, and forest reserves to be managed by institutions, in addition to national and regional reserves. All forest reserves are under the technical supervision of the FNC.

In 2002, the *Forests and Renewable Natural Resources Act* replaced the forestry laws of 1989, providing a framework for the management and protection of forests and renewable natural resources, including pastures, rangelands and aspects of agricultural land use. It also serves as the basis for governing the forest sector as a whole. The Act calls for the creation of the National Forests and Renewable Natural Resources Corporation to manage natural resources, other than wildlife and water. However, it has not yet been established. In the interim, the FNC is performing the functions stipulated in the legislation, including the management of federal forest reserves. States manage state reserves, in accordance with FNC policies and technical plans.

Weak capacity and lack of resources, among other difficulties, have hindered enforcement of both the 1989 and 2002 Acts. Forestry offences registered with the police versus those still pending investigation are indicative of the problem, as is the low number of cases brought to trial (FNC, 2006).

Significant changes have taken place since the Forest Sector Review was developed 20 years ago and current events are shaping future direction. The Forests National Corporation (FNC) is proposing to draft a new Forestry Policy (FNC, 2005a), amend the *Forest Act* (FNC, 2006), update the Forest Sector Review (FNC, 2004, draft) and review the functions of the FNC with a view to adjusting to the changing institutional landscape (FNC, 2005b).

#### **Suggested action:**

By updating the current forestry policy framework and engaging in reforms which arise from this process, the forestry sector will be in a good position to bring together policy issues emerging in other areas. Improving relations and harmonizing national forestry priorities with those identified by states will require time, effort and new approaches to strategic planning. Involving key stakeholders in these processes is a prerequisite to their success.

## **2.4 Forest Policy in the South**

Some 68% of the forestry resources of Sudan are located in the South and, in pre-war conditions, produced 85% of Sudan's sawn timber. The productive areas are characterized by fragile ecosystems so that forest conservation and sustainable exploitation are vital for the environmental stability of the entire country. Forests and range are the main land uses and animal husbandry is the traditional source of livelihoods rather than agriculture.

Following the signing of the Comprehensive Peace Agreement in 2005, former displaced residents are returning to Southern Sudan in large numbers despite an infrastructure which cannot support the influx and threats posed by unexploded ordinances over vast areas. Forestry is expected to improve livelihoods and well-being by generating revenues as well as providing environmental services (GOSS, 2006a). The policy paper on peace and forests in Southern Sudan concludes that (FNC, 2005c):

- the war caused extensive damage, including the destruction of the forest sector and forestry infrastructures
- the tasks that await the newly established authority are colossal and urgent

- the forest sector is expected to contribute significantly to resettlement and rehabilitation efforts but needs extensive national and international assistance to build a competent forest service and to undertake pressing tasks
- the forest resources in the South protect an extremely fragile environment and water catchment of the White Nile.

The forest policy process of the Government of Southern Sudan is now underway, having produced a draft Forest Policy and Strategy Framework as a background paper for the 2006 budget speech. It is now elaborating modalities to implement policies and identify critical interventions. The European Commission recently confirmed its support to help the forestry department further elaborate the draft framework into policies, strategies and laws for the sector which would then be used as a basis for discussing priorities with donors as well as guiding the department's activities. There may be scope to continue such support if forestry is included in the European Commission's Country Strategy Plan (2008-2013). So far, the draft plan does not.

At the same time, many donors have expressed an interest in supporting forestry and agroforestry activities. If forest resources are to contribute to poverty alleviation, such funds need to be used to address the priorities of the sector and of the people in Southern Sudan. The Ministry of Agriculture and Forestry of the GOSS submitted an initial project proposal to strengthen the capacity of individual states in the South so that they can assume more responsibility for forest administration. Little mention is made in the document of the Forests National Corporation which is headquartered in the North. The Oversight Committee of the Multi Donor Trust Fund has approved this initial proposal but a final project still must be submitted to it.

#### **Suggested action:**

If the Government of Southern Sudan and each state in the country are to formulate their own laws on forest management, consistent with the powers assigned in the Comprehensive Peace Agreement and national constitution, support from the Forests National Corporation and long-term assistance from the international community will be required to ensure that legislation encompasses the principles of sustainable forest management and recognizes the importance of forestry to poverty reduction.

## **2.5 Interim Poverty Reduction Strategy Paper**

The IPRSP process started in 1999 with the establishment of the Poverty Unit within the Ministry of Finance and National Economy (MFNE). In 2000, a Presidential Decree established a High Council, chaired by the President, to supervise the preparation and implementation of a comprehensive programme to reduce poverty. The following year, it was replaced by the National Council for the Preparation and Supervision of Poverty Reduction Strategy. A social development department was created in the Ministry of Finance and National Economy to coordinate implementation of related policies and the financing of programmes. The department was also tasked with formulating an IPRSP (2004-2006) for the 16 states in the North, taking into account issues identified in Sudan's Comprehensive National Strategy (1992-2002) and National Strategy for the Agriculture Sector (2003-2027).

As an interim document, the IPRSP has yet to outline poverty reduction goals, objectives and targets or a structure to support implementation and monitoring. It briefly assesses issues in the agriculture, health, education, industry and water sectors. The medium term economic programme revolves around a three-year rolling budget and focuses on

maintaining macroeconomic stability and achieving 7% real growth in GDP. The main sources of growth include the construction sector (mostly in basic infrastructure), power generation, services and, to a lesser extent, manufacturing. The agricultural sector, of which forestry is a part, is also expected to contribute to economic growth with reconstruction efforts and increased investment. New discoveries in the oil sector, if they materialize, would accelerate growth rates.

The IPRSP makes it clear that Sudan's (GNU, 2004):

*...development strategy must reflect and be based upon the characteristics of the country and its economy i.e. its large size, a high land to population ratio with much of the land fertile but subject to arid or semi arid conditions and unpredictable rain, the overwhelmingly rural nature of the population scattered across vast areas who is basically poor, with low levels of education and health; a country that is also rich in other resources such as oil, various other minerals, forests, fish wildlife etc but whose basic infrastructure is either non-existent, run down or underdeveloped and faced with inadequate institutional and human capacities to tackle these problems.*

Overwhelmed with the urgent need to help victims of the war, including displaced persons, refugees and orphans, the GNU has been less preoccupied with making the IPRSP process one that guides and monitors the implementation of government priorities. Only recently has the political climate changed in favor of a poverty-centered approach that is participatory in nature. As part of the joint assessment planning process which led to the Comprehensive Peace Agreement, the Government of Sudan and the Sudan Peoples Liberation Movement signed a Concept Note in 2004 which resulted in a multi-party commitment to develop a National Poverty Eradication Strategy.

In February 2006, the GNU launched preparations for an Interim Poverty Eradication Strategy (IPES) to replace the Interim Poverty Reduction Strategy Paper. The Government of Southern Sudan is embarking on its own IPES, aiming to complete it by mid-2007. The Poverty Eradication Unit in the Ministry of Finance and National Economy is acting as a technical secretariat to ensure that the two documents are elaborated in close collaboration with the State Ministry for Finance in Juba and with the participation of stakeholders. Plans are to eventually merge both strategies into one that covers the entire country.

#### **Suggested action:**

Despite extensive efforts which began in 1999 to develop the Interim Poverty Reduction Strategy Paper, the process was completed with limited consultation. If the Forests National Corporation in the North and the forestry department in the South established clear focal points to participate in the formulation of the Interim Poverty Eradication Strategies, they could engage more effectively to influence outcomes.

### **3. Linkages, benefits, constraints & opportunities**

#### **3.1 Mainstreaming**

##### **3.1.1 IPRSP orientation towards forestry in the North**

Forestry forms part of the agriculture sector in the IPRSP for Northern Sudan. Agriculture has traditionally dominated Sudan's economy and is expected to continue to be the engine for growth in the foreseeable future. However, emphasis is expected to shift to policies that encourage greater integration of trees on agricultural lands. More specifically, the

IPRSP framework promotes the environmental services that afforestation schemes provide, including halting desertification. Sudan's Comprehensive National Strategy (CNS) calls for the planting of trees with agricultural crops in 5 percent of total land in irrigated areas and 10 percent of land in traditional rain-fed areas.

At the highest level of socio-economic planning in the Sudan (North and South), forestry is given particular attention in the CNS, most notably with regard to setting aside 25% of the country's total area as forests, range and pasture, and wildlife reserves – about 61 million hectares. Specific objectives related to forestry in terms of poverty alleviation in the IPRSP include:

- land reform as a major pillar in government agricultural policies, including the preparation of land use maps in marginal areas where forestry and production of food crops are in competition
- government commitment to protect areas subject to desertification, complemented with the transfer of land from usufruct holders to authorities for reforestation programmes, including to enhance community resource management
- the provision of extension and credit to producers of gum Arabic, the planting of improved varieties in designated areas, and the rehabilitation of nurseries for the production and dissemination of these varieties
- the abolition of the marketing monopoly granted to the Gum Arabic Corporation which would give producers a higher price, provide an incentive to increase production, and reduce the smuggling of gum Arabic to markets in neighbouring countries.

The progress report on IPRSP implementation proposed a combination of policies to address several issues, including living conditions, finances, taxation, legislation, services, capacity-building, and sharing of power. Although the main text does not mention forestry *per se*, many objectives in the annexes are related to natural resources and the environment: the enhancement of community forestry and incentives for forest management as well as wood production, taking into account conservation of biological diversity and the need to achieve environmental balance.

Similar to ambitions in the North, the Government of Southern Sudan is preoccupied with sustainable agricultural development and improved well-being of Southern Sudanese of its citizens. The Policy Statement recognizes that trees, woodlands and forests are essential to meeting these goals through the provision of wood, fuel, medicine, fruits and other food as well as their role in regulating the quantity and quality of water in rivers and streams. In addition, the sector provides employment and contributes to national economic growth.

Although the South has yet to elaborate a strategy on poverty reduction, His Excellency the President of the Government of Southern Sudan, Lt. General Salva Kiir, noted the importance of trees and forests in his opening speech to the assembly (GOSS, 2006b):

*Improved agriculture and forestry services shall become a driving force for our national socio-economic development. We shall work to improve the livelihood of rural Southern Sudan without compromising the sustainability of its natural resources for future generations.*

The sustainable management of natural resources and the equitable sharing of benefits are key concerns for most initiatives undertaken in the framework of the CPA. Natural

resources mapping, land tenure, land use, sustainable utilisation and conflicts resolution are priorities identified as a result of various joint assessment missions.

**Suggested action:**

As the policy dialogue on the Interim Poverty Eradication Strategy evolves in Sudan, the potential for prioritizing forestry interventions is significant, given that the sector is well reflected in the CPA and because of the commitment to make both strategies consistent with the Millennium Development Goals. All national organizations and associations, including the Forests National Corporation, the forestry department of Southern Sudan and gum Arabic producers, are urged to examine how they can include IPES action plans in their respective agendas and formally collaborate on implementation and monitoring.

**3.1.2 Forest Sector Review orientation towards poverty**

The diversity of forest and tree resources and the varying extent of forest cover and population density across the country mean that, while trees and forests feature in many livelihoods, their importance is not uniform. Critical shortages are juxtaposed with abundant supply, for example, in the South where 68% of forests are located. The failure to cover Southern Sudan in the Forest Sector Review severely limits the scope to capture the sector's contributions to poverty. However, the FSR does highlight that marketable forest products alone cover 70.8% of the national energy needs. Forestry provides significant opportunities for employment and income generation in almost all rural areas of Northern Sudan and more than 1 700 000 of the population are estimated to be engaged in forest activities (IDA, 1986).

When preparing the Forest Sector Review in 1986, macro-economic planners were unable to measure poverty because of the difficulties in understanding its complex dimensions, the absence of an agreed definition, and lack of data. The information contained in the draft of 2004 is more detailed because of the studies carried out over the past ten years: Forest Consumption Survey, National Forests Inventory, Global Forest Resources Assessment, Africover, National Energy Assessment, Forestry Outlook Study for Africa, and Forest Valuation and Investment in Sustainable Forest Management.

The updated version makes strong links between forestry and livestock, noting that Sudan's forests provide 33 percent of the feed requirements of the national herd, estimated at 128.5 million head. Moreover, the Forest Consumption Survey which the Forests National Corporation carried out in 1995 covers household and industrial establishments, quantifying use by state, sector and type of wood fuel. The study also provides statistics on rural and urban consumption.

Findings from a forest valuation study that have fed into the revised Forest Sector Review reveal that areas covered by forests (other than central and provincial forest reserves), generally termed natural, supply more than 89% of domestic fuel wood and other products. As such, they constitute more than 50% of FNC income (FNC, 2003).

**Suggested action:**

As a matter of priority the FNC, in collaboration with the forestry department in Southern Sudan, should update the Forest Consumption Survey using current valuation methods and expand its scope to include more non-wood forest products. Closer collaboration with the Ministry of Energy and Mining would help the FNC gauge the impact that oil production has on energy supplies, providing solid evidence of changes it has on the affordability and accessibility of charcoal in rural and urban areas. Further quantification should be carried out with the Range and Pasture Administration on the role trees and shrubs play in livestock

feeding and the linkages to food security and health amongst rural populations.

### **3.1.3 Allocations to forestry**

Over the years, forestry has increasingly become the subject of media attention and its contributions have been taken into account in official economic reviews. However, it is still not possible to determine the extent to which the government allocates funds, if any, to the Forests National Corporation based on the sector's links to the Interim Poverty Reduction Strategy Paper where it is classified as a sub-sector of agriculture.

A review of FSR implementation reveals that its preparation culminated in a US\$ 59 million multi-donor Forestry Resources Conservation Project. This initiative triggered new legislation and the establishment of the FNC as a parastatal organization. However, only limited funding was committed for its operations (FAO, 2003). Pre-FSR investment (1981-1985) was approximately US\$ 7.5 million whereas post-FSR investment (1985-1990) was US\$ 25 million through 26 donor funded projects. Today only 4 such projects exist.

Since 1989, the international community has isolated the Sudan politically, diplomatically and economically. For 20 years prior to this period, foreign support ranged from US\$ 800 million to US\$ 1 billion per annum. During the nineties, aid dropped to US\$ 50 million per year, mainly for humanitarian assistance. With regard to forestry, the drastic decline in funding for capital and development projects is preventing federal and state governments from meeting their objectives and commitments. More specifically, several factors are threatening the sustainability of FNC, in addition to lack of donor support – insufficient government funding, rising wage costs (now 60% of the operational budget), and declining income sources due to the drop in charcoal prices.

Legislation dictates that the FNC limit its annual budget increase to 5% even though it was established as a self-financing authority with reasonable resources at its disposal. Despite the organization having increased forest reserves from 2.8 million hectares in 1989 to 11 million hectares in 2006, it has not created a single new post since 1990.

#### **Suggested action:**

In line with the Interim Poverty Eradication Strategy and budget reforms, the FNC needs to improve its financial management systems to meet international standards to which the Government of Sudan has agreed. The forestry department of Southern Sudan will also need to adhere to these standards when developing its systems. In formulating Sudan's new forestry policy and first national forest programme, a working group on sector financing should be established to address (i) the sharing of benefits, responsibilities and revenue between the FNC and states, and (ii) the need to budget along programme lines so that the FNC can show the value it adds to government funding.

## **3.2 Creating linkages**

From Sudan's 20 years experience using the Forest Sector Review as a reform vehicle, albeit disconnected from the framework of its IPRSP and awaiting fuller implementation, many examples of the forest sector's contributions to poverty alleviation are evident.

### **3.2.1 Forests National Corporation**

One of the most important developments arising from the Forest Sector Review process was the launching of the Forests National Corporation in 1989. FNC has the mandate to consolidate and expand the forest estate in Sudan and manage it according to the principles of sustainable yield. Although programmes such as planted forest development and

extension facilitate community participation in forest management, implementation often spans many years. Because some of these programmes are budgeted on line, the FNC is able to fund them over the longer term.

As the first country in Africa to establish autonomous self-financing organizations 17 years ago, Sudan has much experience in this regard. The FNC has earned a reputation for competence, is able to retain top professionals, and supports initiatives of benefit to large segments of the rural population. However, several factors have prompted a move to reorganize, including the following (FNC, 2005b):

- nearly a fourfold increase in the area of forest reserves, from 1.2 million ha in 1989 when FNC was first established to 4.6 million ha in 2006
- an estimated annual loss of close to 1 million ha of forests – the highest deforestation rate in Africa – according to the Forest Resources Assessment (FAO, 2000)
- the promulgation of the Constitution of the Republic of Sudan (1998) and the Comprehensive Peace Agreement which provide for decentralized forestry operations and clarify federal and state arrangements
- the country's emergence as an oil producer which is causing a decline in fuelwood and charcoal consumption – the main source of income for FNC
- the need to reassess and realign institutional roles and responsibilities with the shift towards greater private sector involvement in forestry.

#### **Suggested action:**

Despite almost no external assistance from donors for the past 17 years and no structured national forest programme process *per se*, FNC has advanced the contributions of forestry to poverty alleviation. As it participates in the Interim Poverty Eradication Strategy processes, its relationship with the forestry department in Southern Sudan should be clarified, as should its involvement in the integrated management of natural resources, beyond forestry.

### **3.2.2 Gum Arabic production**

Gum Arabic, a product of *Acacia Senegal* and *Acacia Seyal*, is a commodity used in food and pharmaceutical products and is a major source of foreign exchange for Sudan. In recent years, it has accounted for about 13% of annual export earnings. For decades, Sudan has dominated the production and trade of gum Arabic although its share in international markets is declining.

Gum Arabic is an important off-farm activity for more than 5 million people or 13% of Sudan's population. In addition to producers hiring entire families living in the Gum Belt for four months in the dry season, other labourers migrate to the area for temporary employment. Findings from a recent survey show that, on average, 19% of household earnings come from activities related to gum Arabic (FAO, 2005). It is a critical source of income in rural areas where opportunities are limited and where the workforce is often not mobile or able to engage in more labour-intensive work.

Given the importance of the industry to alleviating poverty, its restructuring is accorded high priority in the IPRSP. Until recently, the Gum Arabic Company held a monopoly on trade and was responsible for setting the export price. This structure adversely affected farmer incomes, their incentives to increase production, and their chances for better living standards.

The General Gum Arabic Producers Union, located in Sennar State, comprises 88 registered



societies which consist of 6 241 producers who are responsible for 10% of production. Members are concerned about marketing policies, price fluctuations, low farmer returns, weak services in production areas and lack of funding. With trade liberalisation of gum Arabic, private companies are only now able to work directly with unions. In turn, unions are better able to secure loans from the bank than in the past.

### 3.2.3 Discovery of oil

Collaboration between FNC and Ministry of Energy and Mines extends more than 20 years so that policy makers understand the linkages between forestry and oil – the cornerstone of modern day Sudan. Although the country is producing oil since 2000, the potential for new discoveries is attracting several international companies.

The draft Forestry Policy of the Government of National Unity (FNC, 2005a) demonstrates how developments in the oil sector are reducing dependency on woodfuels, particularly for cooking and industries such as brick making (52%) and traditional bakeries (36%). With refining capacity increasing by eight-fold over the last 5 years – from 25,000 barrels to about 200,000 barrels of crude per day – the oil sector contributes an estimated US\$ 500 million to government revenue per annum.

The use of modern fuels is on the rise in urban areas, especially in middle and high income households. If refining capacity does not keep pace with the current rate of increase, additional demand must be met through imports. The FAO Forestry Outlook Study for Africa (FOSA, 2001) speculates that if liquid petroleum gas replaced charcoal and wood as an urban fuel, it would reduce demand for these products from degraded forests. However, if Sudan undergoes the significant urbanization it anticipates over the next two decades, the switch in energy source would remove an important means of rural livelihoods.

Inevitably, oil exploration and development affect the forest resource base when land covered in natural vegetation is cleared for other uses. The drilling of wells causes some water to be contaminated with hydrocarbons which may be harmful to animals. An example of responsible public-private partnership is found in the bioremediation of polluted water which is then used in afforestation schemes for the benefit of communities (Box 1).

#### Suggested action

Under the Comprehensive Peace Agreement, the Government of Southern Sudan will have access to substantial revenue generated domestically, largely from oil. However, additional resources will be needed to manage its vast forest resources. In line with the FNC paper on oil that has informed the draft Forestry Policy of the Government of National Unity, more investigations are needed on the use of waste water for forestry operations. The draft Forestry Policy for the South should also consider aspects of the oil industry which are likely to affect the region, such as the potential to market modern fuels in areas that have yet to make the transition to available energy options.

#### **Box 1. An oil company forms partnership with foresters, universities, communities**

The Greater Nile Petroleum Operating Company is funding a 5-year project to treat water produced from the Heglig Central Processing Facility for use in planted tree development. *Use of the Heglig Oilfields Treated Produced Water in Forests Plantation* is estimated to cost US\$ 1.4 million and is being implemented in two phases – first it will plant forests in irrigated areas and then in rain-fed areas.

The project uses large quantities of this treated water to grow 5,625 feddans (close to 2340 hectares) of fast growing tree species of high economic value (eucalyptus, bamboo species,

Sunt, Talih) in the Heglig oil fields. Considering the vast areas of forested land that were cleared for petroleum exploitation, an additional 1,000 feddans (about 430 hectares) are being reforested each year in rain fed areas. A nursery will be established on site to eventually produce 1 million seedlings per year.

FNC supplies technical advice, planting material, and a full-time coordinator who works closely with field staff and reports to the project's steering committee. A research organization offers training and, in collaboration with academic centers of excellence, supervises studies in areas such as bio-diesel, bio-refineries, efficient use of forest products, matching tree species to site conditions.

The project is very much in line with FNC objectives to help local communities to improve living standards through the participation of residents in planting and protecting the trees as well as tapping and marketing the gum which these resources produce. As an example of how to creatively use a by-product of the petroleum industry, the initiative is expected to be replicated in other sites to use discharged water more effectively.

Source: FNC, 2005d. Project Proposal: Use of the Heglig Oilfields Treated Produced Water in Forests Plantations

### 3.2.4 Community forestry

The frequent occurrence of drought throughout the 1970s, 1980s and 1990s, coupled with increased pressure on forests due to an expanding population, prompted government to engage communities in the sustainable management and use of forest resources.

The Forest Sector Review (1986) noted the country's lack of experience with community forestry. Up until that time, gum Arabic was produced on private land for the benefit of individual farmers. Although some communities managed forests, trees for communal use were not being planted and resources were deteriorating. The Review concluded that several options were feasible for increasing forest cover in Sudan – establishment of village woodlots, private and community tree planting, improved resource management and the setting aside of forests for amenity or recreational purposes.

As a result of vigorous extension and research programmes which were made possible through externally funded projects, the Forests National Corporation overcame constraints to successfully carry forward the Review's recommendations. FNC staff provides technical advice and planting material free of charge, offers financial incentives and widely publicizes the importance of forests to livelihoods and the environment. Consequently, community forestry in Northern Sudan is well established and locally-driven.

According to the draft policy of the Government of Southern Sudan, the forest department will adopt the FNC approach to help increase, manage and protect tree resources. It will also assist to analyze market opportunities as well as to gather and disseminate market information. However, the small cadre of personnel has technical expertise to offer but is not as familiar with the concepts of community forestry or micro-finance, for example.

#### **Suggested action:**

In collaboration with other departments, local administrations and non-governmental organizations, the FNC should help to build the capacity of the forestry department of Southern Sudan in community forestry. Expertise is required, for example, to establish forest user groups, create village forest committees, and assist communities to develop and implement benefit-sharing mechanisms for the equitable distribution of revenues generated from forests and trees.

### 3.2.5 Publicity and extension

The Forest Sector Review has been guiding institutional reform in Sudan since the eighties, officially introducing forestry extension which became the driving force of modern forestry in Sudan. The FNC has been effective in assisting villages to establish community forests as well as to organize committees and associations. It also supports women's involvement in woodlots, helps set up village nurseries and promotes energy saving programmes. In addition to informing the public of the multiple roles and importance of the sector (Box 2), including for food security, officials deliver lectures to students, make presentations to a variety of audiences, and use the mass media to raise awareness of the negative impacts of drought and desertification, displacement, environmental degradation and unemployment, for example. By their own assessment, these outreach activities have reinforced a positive image of foresters.

Religious leaders and community elders also champion the cause of forestry when they remind followers to plant and care for trees, cutting them only in accordance with laws, and highlight that all benefits flowing from these resources, including shade, are gifts to the planter or owner (FAO, 2003).

#### Suggested action

At the national level, the link between the 1986 Statement of Forest Policy priorities and IPRSP is not widely recognized and therefore needs to be articulated across sectors in central and local governments. Efforts to influence politicians are particularly important in this regard. Similarly, the communication strategy for the Interim Poverty Eradication Strategy processes needs more intensive consultation and review. Simplified versions of forestry policies and the IPES have proven to be efficient tools to better communicate the linkages between forestry and poverty alleviation. Sudan may wish to consider this approach to promulgate the revised forest policy in the North and the one in the South once it is formulated.

#### Box 2. Making the most of the media

Forests and trees outside forests contribute significantly to food security and poverty alleviation in Sudan by providing many edible goods, creating jobs and generating income from the sale of products. However, interest and investment in the sector has been low because its importance to livelihoods is not well recognized and its contribution to the economy is difficult to assess. As a result, an estimated 1 million hectares of forests are lost every year.

The National Forest Programme Facility therefore engaged a firm which specializes in public relations to launch a campaign to encourage foresters, decision-makers, civil society and the general public to give higher priority to forestry programmes in Sudan.

Field trips were organized for twenty-two journalists from major newspapers in Khartoum to show forestry in action and to encourage discussion of sector issues with the local people and forestry officials. As well, media officers in forestry agencies were trained on ways to use the media to help achieve their objectives. Interaction among the parties sparked an active debate in the press which featured more than fifty articles, interviews, reports and advertisements on various subjects. In addition, 1 000 brochures, 500 posters and 1 000 stickers were printed, disseminated and posted in prominent areas in Khartoum and at entry points to important forests.

The activities are expected to change attitudes towards forestry at all levels of decision-making and help to develop national consensus on how to address issues relevant to forests

and trees.

Source: Press Release on Teeba Press Corporation

### 3.3 Constraints to establishing linkages

#### 3.3.1 Federal-state coordination

As a comprehensive framework, the Forest Sector Review only partially fulfilled its mandate to coordinate and monitor implementation through a multi-stakeholder approach that involved federal and state institutions before the practice of targeting forestry interventions was discontinued in the late eighties. Even the National Strategy of the Agricultural Sector (2003-2027) noted that one of the shortcomings of the Comprehensive National Strategy was that it neither guided nor made provisions for the coordination of activities among those responsible for managing the range of natural resources at federal and state levels.

The FNC remains the focal point for forestry matters but, in principle, it is supported by a number of councils – each authorized to coordinate and integrate national policies, plans and programmes. The Council for Planning and Division of Lands and Forests is the most relevant and is about to be established. As called for in the Constitution, it will assume responsibility for the planning and division of lands and forests between federal and state authorities.

A recent analysis revealed that the Higher Council for Natural Resources, the Higher Professional Council for Natural Resources and the Higher Council for Gum Arabic are all assigned responsibilities for integrating and coordinating activities related to renewable natural resources at the national level (FNC, 2005). Their main task is to ensure that the government offices involved in formulating state plans related to natural resources and the environment integrate and coordinate such plans with federal land use policies. If the three councils succeed in carrying out their functions, considerable confusion over federal-state coordination is likely to continue and will be compounded as federal and state councils are constituted under the Council for Planning and Division of Lands and Forests.

#### **Suggested action:**

If the government undertook a review of the overlapping mandates of the three councils with a view to streamlining roles and responsibilities, duplication would be minimized and collaboration enhanced. Moreover, if separate institutional arrangements for the North and for the South were to be established, each would have a distinct but consistent mandate to implement their respective national forest programmes and define, implement, monitor and evaluate their forest policies and management. Both structures should take into account the need for compatible configurations at federal and state levels.

#### 3.3.2 Monitoring and evaluation

The Ministry of Agriculture and Forestry and the Forests National Corporation are the main producers and users of forestry information in both the North and South Sudan. Despite considerable effort to conduct the Forest Products Consumption Survey, the National Forest Resource Inventory, and the National Energy Assessment, up-to-date information on forest resources in terms of degradation, volume assortment, increment and allowable cut is not readily available. Improving the situation requires establishing baseline data which can then be used in wider policy discussions and monitoring of operations.

Sudan's poverty reduction policy thus far has not elaborated an integrated approach to

poverty monitoring although the Ministry of Finance and National Economy has indicated its intention to do so. Poverty indicators still need to be refined and baseline data must be collected to measure performance and progress.

In terms of poverty data collection to prepare the IPRSP in 2004, macro-economic planners faced the same constraints as 20 years earlier. Statistics on poverty were patchy and information on the South was often omitted. Therefore, the IPRSP borrowed from three national surveys which were carried out for different purposes at different times: Household Budget Survey (1992) which is in fact a poverty survey, the Safe Motherhood Survey (1999) carried out by the Central Bureau of Statistics, and the Multiple Indicators Cluster Survey (2000). While forestry is absent from these data sources, statistics by sector are collected from key institutions, including FNC, and published by the House of Ministers in the Annual Statistical Yearbook.

Gaps and shortcomings with respect to the quantity, quality and availability of information to monitor forestry in North and South Sudan include lack of adequate:

- baseline data
- mapping of vulnerabilities
- information on and mapping of natural resources
- data on rainfall, especially in the South where there are no meteorological and rainfall stations
- vital agricultural information (e.g. food prices and food production)
- information on rural livelihoods
- access to remote areas.

In the South, non-governmental organizations have generated qualitative information on food security, nutrition, livelihoods and vulnerability. For example, the data collection and analysis which the Livelihoods Analysis Forum has undertaken could facilitate information sharing and joint analyses between the states and institutions in the North and the South. However, findings tend to be localized, context specific and difficult to aggregate so that they are not easily integrated into government decision-making processes. The recent constitution of the New Sudan Centre for Statistics and Evaluation is bringing about considerable improvements with respect to coordination amongst suppliers and users of information in Southern Sudan.

The European Commission's proposed "Institutional Capacity Support Programme for an Integrated Food Security, Vulnerability and Market Information System" is designed to provide relevant federal and state institutions with training and equipment to conduct location specific assessments and monitoring of natural resources. The project will focus on improving the information and statistics bases to monitor progress in implementing IPES. In preparation for the 2007 census, the food security programme is making headway to improve techniques in collecting cross-sectoral data for policy making (Box 3).

### **Suggested action**

Because arrangements are not in place to monitor and evaluate the Forest Sector Review, it might be useful to identify and tailor proven practices and instruments found elsewhere rather than design new systems to fit the national forest programme proposed for Sudan. One model that could be explored to establish baseline data is Uganda's National Biomass Survey carried out in 1990 which is being revised and updated. Based on satellite images,

the survey added data from ground measurements and observations at sample points.

The Forests National Corporation is unable to collect all the data needed to show forestry's full contributions at a household or national level. Teaming up with the Livelihood and Food Security Integrated Analysis Policy Unit in Southern Sudan and the Food Security and Vulnerability Analysis Policy Unit in Northern Sudan would improve access to and use of existing data sets. The European Union's support to these units focuses on relevant forestry issues: (i) protecting the most vulnerable, (ii) supporting smallholder agriculture and rural livelihoods to reduce poverty; (iii) sustainable and equitable management of natural resources.

### **Box 3. Poverty oriented survey approaches – lessons from food security**

The European Commission reviewed a number of survey options to improve information on food security in the North and in the South of Sudan, all of which met two overriding objectives: (i) to collect and organise baseline data required to inform decisions on food security matters; (ii) to help to establish the basis for a population census. As a result of the review which took into account technical aspects, the mission recommended that the following two surveys be undertaken:

(i). In a **household food consumption and welfare survey**, interviews would be conducted at community and household levels in 16 states of Northern Sudan on aspects related to food security: community access to basic services; household food expenditure; and household welfare indicators such as dwelling and access to water, for example. Following the design of a questionnaire, enumerators would be recruited and trained. The survey would then be conducted simultaneously in three states at a time. Thus, findings in some states would be available before the full exercise was completed. The support of the European Commission is required to finance the costs of enumerators and their training, the logistics of data collection, technical assistance, and equipment such as computers and GPS. The proposed survey is part of pre-census activities which the Government of Sudan is planning to help assess food security and welfare aspects of the MDGs and the IPES. Other surveys to which the one noted above could contribute include a questionnaire for households on core welfare indicators in a limited number of states and a poverty baseline survey.

(ii). In a **community and food security survey**, interviews would be conducted with community leaders in all ten states of Southern Sudan on aspects such as access to basic services, to the community's natural and productive resources and the main sources of food as well as the estimated number of vulnerable and food insecure people. The design of the instrument takes into account the special circumstances which prevail in Southern Sudan: (i) lack of appropriate sampling frames; (ii) low level of literacy; (iii) accessibility problems; and (iv) the urgent need for reliable information to inform policy decisions. The proposed survey is part of the pre-census activities which the New Sudan Centre for Statistics and Evaluation is planning in preparation for the population census. Other surveys foreseen include a questionnaire for households on core welfare indicators in a limited number of states and the Multiple Indicator Cluster Survey.

Findings mostly will be used to establish baselines against which to measure the success of policies and programmes to improve access to basic services and access to food.

Source: Institutional Capacity Support Programme for an Integrated Food Security, Vulnerability and Market Information System. European Union Programme Document 2005.

### 3.3.3 Calculating the contributions of forestry to the GDP

In addition to lack of reliable information, weak capacity in the Forests National Corporation to analyze statistics prevents it from building a solid case to capture the attention of government decision-makers. The Ministry of Finance and National Economy maintains that the contributions of forestry to the Gross Domestic Product have averaged around 3% for the last 5 years. FNC argues that, if local consumption and sales in communities were taken into account, the figure would be four times higher (FNC, 1995).

Like in many countries, calculating GDP in national accounts for Sudan is based on conceptual elements and country guidelines issued by the United Nations:

- The methodology which the Central Bureau of Statistics (CBS) uses to estimate forestry's contribution to GDP covers the production of charcoal, fuelwood, wood poles, bamboo and sawn wood as well as non-wood forest products, mainly gum Arabic, Henna, Senna pods and Tamarind fruits.
- Data on wood production, including both in terms of quantities and prices, are derived from the FNC.
- Data on gum Arabic production are derived from purchases recorded in the financial records of the Gum Arabic Company Ltd. However, because the company is no longer the only service provider in the industry, statistics are skewed on the full movement of the product.
- Data on other non-wood forest products are derived from export data which, in most cases, do not represent their real value because production or processing costs are not taken into account.

One of the problems with estimating the contributions of forestry to GDP is the understated statistics related to the production of gum Arabic because of illegal trade. Lack of regular household surveys to verify estimates of the cost and production of forestry products also hinders attempts to be accurate (FNC, 2003). Moreover, the figures used are only those reported by forestry offices. They do not take into account the high number of transactions which occur in informal markets nor do they consider the range of services that forests provide.

#### **Suggested action:**

The Central Bureau of Statistics, the FNC in the North and the forestry department in the South, in collaboration with the New Sudan Centre for Statistics and Evaluation should conduct further research on economic valuation of the sector; develop methodologies to assess the impacts of policy options; and measure the contributions of forestry to poverty alleviation in both qualitative and quantitative terms, including of a greater array of non-wood forest products (Box 4). Training in the use of environmental economic tools for accounting purposes should also be offered.

#### **Box 4. The importance of Shea nuts not captured in official statistics**

Despite the importance of non-wood forest products in many national economies and to poor people, decision makers largely ignore their value. In Sudan, little quantitative data is available on the production of Shea oil, for example, thus limiting the extent to which the Forest Sector Review can provide a framework to identify and address related issues.

The oil extracted from the Shea nut protects the skin from dryness and is widely used by women and on babies and small children. It is also edible and can be used in lamps and to make soap. The technology to extract the oil is simple and relatively affordable. As a

natural product, Shea oil is used increasingly in pharmaceuticals, make-up and food industries. Thus, it opens up opportunities in the international market place. Women are traditionally involved in the collection and processing of Shea nuts as a means to increase food security and generate income – important outcomes in the fight against poverty.

The yield of nuts in Southern Sudan is usually far more than the demand but local shortages exist because of poor roads and communications. Furthermore, trees do not always produce nuts every year which means that supplies are not reliable. Uncontrolled fire also damages trees and reduces nut production over time. While Shea nut trees are usually retained when land is cleared for agriculture, people making charcoal or collecting firewood may cut them down, especially if they have no long term stake in the local area.

To reach the full potential of Shea nut to alleviate poverty, the forestry department, in collaboration with communities and the informal charcoal industry, must take action to control the loss and degradation of Shea nut trees, including those growing in and around settled areas which are particularly at risk. With support of government and civil society, the empowerment of women's groups to retain control over the production and marketing of Shea oil is also a priority, as is the need to minimize intermediaries, establish cooperatives, and develop benefit-sharing mechanisms. Access to microfinance and training to increase the quantity and quality of oil extracted are essential elements as well, if those involved with this non-wood forest product are to access international markets.

### **3.4 Strengthening forestry links to poverty alleviation**

#### **3.4.1 Rainfed and irrigated agriculture schemes**

Expansion of agriculture to increase crop production and improve food security has always been a priority in Sudan. However, progress in achieving this latter objective has often been disappointing.

As previously noted, the integration of forestry with agriculture is well advanced in Sudan, as is the use of trees and shelter belts to increase crop yield. The Forest Policy Statement (1986) calls for forests to be planted for protective and productive purposes over 10% of the 8 million hectares of rain-fed schemes and 5% of the 2 million hectares of irrigated schemes. This policy opens the door to expand forestry outside the FNC domain to managers and employees of schemes which span a total area of 10 million hectares. Thus, nearly 1 million ha (0.8 million ha of rain-fed and 100,000 ha of irrigated) could be planted with trees if targets were met.

However, the little amount of tree planting which has occurred in rain-fed agriculture areas is partly due to FNC efforts and resources rather than to farmers. As for irrigated agriculture areas, for example, the Gezira Scheme which covers more than 1.2 million hectares has a planted area of 0.7% - the same as the New Halfa Scheme. Both fall short of their targets of 9.3% and 4.3% respectively.

Small farmers are increasingly becoming aware of the better proceeds they can reap from forests planted in irrigated schemes compared to the rotation of standard agricultural crops such as sorghum. On the other hand, managers of larger schemes appear reluctant to change their negative attitude toward planted trees.

#### **Suggested action:**

As a matter of priority, the FNC should provide more farmers in both rain-fed and irrigated schemes with high value tree species, ones which can generate a level of income sufficient



to attract interest in increasing the area of planted forests. Government assistance is essential since private forestry, as in many countries, often needs financial incentives to succeed. To achieve this goal, FNC requires the necessary internal structure to be able to advocate the benefits of forestry, publicize successes, and convince managers and workers in agricultural schemes of the merits of planting trees.

### **3.4.2 Improved governance in the teak sector**

Large-scale planted forests in Southern Sudan offer significant potential for commercial development. If managed sustainably, the teak trade alone from the current 10,000 hectares could generate an estimated US\$ 5 million per year. However, these resources are unlikely to yield immediate financial benefits as the Government of Southern Sudan, the private sector and communities need to invest significant time and money in some of the forest areas.

Over the last 10 years, concessions exploited about half of the 10,000 hectares of teak forest and much of the revenue was used to sustain war efforts. Removing the merchantable logs and leaving those of low quality has degraded resources and produced uneven-aged plantations. Furthermore, destructive harvesting practices and lack of transparency in the concession system have resulted in only a fraction of their true value being realized.

Attempts to control illegal logging often focus on the movement of timber – a course of action which is labour-intensive and inefficient. At present, the forestry department intends to concentrate efforts at the point of harvest in view of the difficulty of controlling vast areas of private plots from which timber may originate. The proposed USAID project entitled “Combating Corruption in the Teak Trade and Improving Forest Governance in Southern Sudan” will assist forestry officials to establish and implement procedures to better regulate the sale and harvesting of teak and other timber species.

In March 2006, the Ministry of Agriculture and Forestry in Southern Sudan cancelled all forestry contracts, agreements and grants which were authorized during the struggle for liberation. It declared that all felled logs now belonged to the State and were to be used for development purposes. The ban on harvesting is a temporary measure to halt the destruction of forests while the Government considers reforms it must introduce. Given that timber is needed for post-war reconstruction and for economic development, the ban will be lifted as soon as procedures are in place which foster sustainability, equity, transparency and sound planning.

With regard to trade, the public perceives that valuable timber is being exported with little or no benefits accruing to communities living around forests, their local governments or the economy of South Sudan. The draft Forestry Policy notes that the forestry department will investigate the market potential and, if appropriate, initiate large-scale planted forests on a trial basis, drawing on experience from neighboring countries such as Uganda and Kenya. If successful, such schemes will be further developed to meet the domestic need for utility timber, poles and posts as well as for export (GOSS, 2006b).

#### **Suggested action:**

Weak governance in the teak trade over the last 10 years has eroded public confidence in the forest department and the Ministry. There is now an urgent need for government to engage communities and other stakeholders in the reform process and to support local efforts to improve the control of illegal operations, starting with those that are commercially driven – whether they are timber, firewood, charcoal or other products.

### **3.4.3 Employment for internally displaced people**

Proposed initiatives in the CPA and IPRSP focus on the reintegration of more than 2 million internally displaced people. Objectives and activities have been defined, including access to essential services, food security, and environmental vulnerability mapping. Tools have also been developed to select the areas of intervention and specific measures have been identified to support and protect the livelihoods of vulnerable groups. The latter includes the social and physical protection of people returning voluntarily, food aid and community based livelihood recovery strategies – provision of basic services; support to subsistence agriculture, small holder farmers, fisheries; and skills creation to earn off farm income. Government also operates schemes in which food is exchanged for work. Projects include the construction of latrines, rehabilitation of schools and health facilities, and flood mitigation. In addition, the new forestry department might hire many internally displaced persons and ex-combatants.

A significant number of displaced people from Sudan and neighbouring countries are expected to relocate to cities in the South. Construction of new homes, schools and offices will require large amounts of round wood, small poles, bamboo and sawn wood. Sawmills are therefore needed as well as equipment for harvesting. Restoration activities also may offer job opportunities but, unless those involved are to be permanently resettled, they are not likely to engage in community work which extends beyond the demands of their employment.

#### **Suggested action:**

In line with the need to better market the importance of forestry to increase government and donor support, the FNC and forestry department should collect data on the proportion of household income that is derived from employment in the forest sector and consider how to measure the extent to which such employment improves rural and urban livelihoods.

## **4. Next Steps**

The Forests National Corporation and the forestry department of the Government of Southern Sudan may wish to jointly discuss the findings and suggestions contained in this report with a view to enhancing their collaboration to further reduce poverty through forestry-based interventions. More specifically, it would be opportune to consider poverty reduction as a priority in the respective forestry policy frameworks which the governments in the North and in the South are updating. The involvement of stakeholders, including civil society, donors and other relevant ministries, would broaden ownership in and commitment to follow-up action. As a partner country of the National Forest Programme Facility, Sudan is eligible to seek Facility assistance to make the process as participatory as possible.

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