

The Sudan

Finding a Path from Least Developed to Fast Developing

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The Sudan – Finding a path from Least Developed to Fast Developing

Introduction

With 2.5 million square kilometers, Sudan is the ninth largest country in the world and the largest country in Africa¹. It is endowed with vast areas of agricultural land, extensive water resources and the River Nile, and a wealth of livestock, mineral and other underground resources including oil and gold. Yet, Sudan is one of the poorest territories in the world today.

Bordering nine countries², the diversity of its geography is evident in its people who are multiethnic, multicultural and multilingual. Sudan's history, culture and political economy have largely spawned out of relations to the north with Egypt and the Arab world and with East and Central Africa and the Horn in the other direction. Despite the emerging oil sector, the core of Sudan's economy and its main driving force is agriculture which accounts for 29% of GDP.

Estimates of Sudan's population varied between 31.7 million in 2001 (extrapolated from the last population survey in 1993) to 38 million in 2005 (European Commission), to reach about 41mn (Jul-06 estimates), with a growth rate of about 2%. The vast majority is poor with average *per capita* income estimated at less than US\$395 in 2001. Recent studies (2005) indicate that more than 95% of the population live below the poverty line. It has remained in the list of 147 Least Developed Countries over the last decade. The Human Development Index of the United Nations Development Programme (UNDP) ranked Sudan 138th out of 162 countries in 2001, and again the same 138th position out of 175 countries in 2003.

Sudan has endured a civil conflict which started in the 1950s that has profoundly divided the country. It is believed that since 1983 more than two million people have died and more than four million have been displaced, and their livelihood and cultural identities destroyed beyond recovery. Many regions of the country have been marginalized, with the environment sustaining great damage, and human rights violations massively out of control.

¹ The geographical size of Sudan is more than twice the size of Germany, France and Italy combined.

² Sudan is surrounded by the Central African Republic, Chad, Democratic Republic of Congo, Egypt, Eritrea, Ethiopia, Kenya, Libya and Uganda.

I. Civil conflict since Independence

Khartoum today is a large and growing metropolis, with new construction and expansion breathing signs of new hope and a brighter future. However, this capital city continues, as it has been for hundreds of years, surrounded by impoverished areas, notably the Darfur region and the southern Sudan.

Like many other countries in sub-Saharan Africa, Sudan has had its share of long periods of political tension and civil war since its independence from the United Kingdom and Egypt in 1956. The fundamental roots of conflict in Sudan were planted throughout the colonial period when artificial boundaries with other countries in Africa were prescribed. The struggle between the peripheral provinces against the political and economic center of Khartoum formed the backdrop of much of Sudanese history. Towards the final years of the colonial period, the coming of Islam facilitated the division of Sudan into northern and southern halves. Even after independence, Sudan was preoccupied by the Southerners' fear of domination by the North and of their imposition of an Islamic and Arabic-speaking administration.

Having been totally neglected during the colonial period, discontent flared in 1955, and war broke out the following year, on the first year of independence. This war raged on for 16 years until 1972. Peace negotiations repeatedly foundered over the issues of self-determination for the South and the application of Sharia Law. The war ended in 1972 (under the Addis Ababa Peace Agreement). This was followed by a decade of peace, from 1972 to 1983. History shows that this was to be the last peaceful period for the next 23 years thereafter in the Sudan.

Africa's longest civil war

The failure of socio-economic development during that only decade of peace guaranteed the outbreak of another war – Africa's longest – in 1983. In that year, Colonel John Garang assumed leadership of the main opposition force, the Sudan People's Liberation Movement/Army (SPLM/A). The Northerners were headed (after 1989) by Lieutenant General Umar Hassan Ahmad al Bashir, and his ally, Hassan Abd Allah al Turabi (leader of the National Islamic Front), ousted from the government in 2002.

In June 2002, both sides agreed that a referendum on self-determination for the South would be held within six years of a peace agreement. In the interim, the Sharia would not be imposed on non-Muslim Southerners. Subsequent negotiations produced a cease-fire in much of the South, as well as agreements on public institutions, security arrangements, a formula for sharing oil revenues and a federal structure of governance.

Peace process

The mainstream peace process between the government and the SPLM/A is the IGAD process (Inter-Governmental Authority on Development), which started in 1993. A break-through was achieved when a comprehensive framework for a peace agreement was finally signed on 20 July 2002, by the Government of Sudan (GOS) and the Sudanese People's Liberation Movement/Army (SPLM/A) in Machakos, Kenya, under the IGAD-led process that was reinforced by international observers. Open-ended negotiations started in August 2002 to achieve a comprehensive peace agreement.

Darfur rebellion

These negotiations were overshadowed, however, by a separate rebellion in Darfur that began in 2003. Over allegations of economic and political marginalization, characterized by bitter conflict over land areas and water resources made scarce by drought, compounded by overall governmental neglect and long-unsettled political tensions between nomadic and pastoral tribes, the al Bashir regime sent Arab militias into Darfur and resorted to a military solution. Crimes against humanity, genocide and other large-scale humanitarian atrocities reported in the global press drew international condemnation amidst calls to the United Nations for sanctions against Sudan. This led eventually to deployment of cease-fire monitoring troops from the African Union in late 2004, and its reinforcement under UN-led peace keeping forces in January 2006 and January 2008.

The United Nations mission in Sudan has declared much of the war-torn western region of Darfur unsafe, with almost two-thirds of the area of operation of the humanitarian community considered hazardous for the safety of humanitarian personnel. Tensions in and around Geneina, the capital of West Darfur, had led to a deterioration in security conditions in the region, prompting the United Nations to declare all roads leading out of the town to be restricted in view of armed clashes north, west and south of the town, in addition to increased banditry along all roads. Only North Darfur state appeared to be relatively safe. Due to the violence, thousands of civilians have fled to camps set up throughout the region for Internally Displaced Persons (IDPs).

Notwithstanding the Darfur rebellion, the Comprehensive Peace Agreement (CPA) was finally signed on 9 January 2005. This represents, for the first time in more than 20 years, a major opportunity for peace and development, made possible through the increased international attention of the global community on the Sudan.

The CPA as peace framework

The peaceful reconciliation between the North and the South continued to make progress in the framework of the CPA, despite the death of Dr. John Garang in July 2005. The unification of the Sudan People's Liberation Movement (SPLM), the National Congress Party, and other parties has been achieved under a "Government of National Unity", and the Assessment and Evaluation Commission (AEC)³ has been established as the oversight body

³ The Assessment and Evaluation Commission (AEC) will be chaired by the former Development Minister of Norway.

of the CPA. Moreover, the formation of the National Petroleum Commission (NPC) has been announced.

The signing of the CPA was to be followed by the establishment of the Government of Southern Sudan (GOSS). The CPA prescribes six years as an Interim Period (ending 2011). After this period, southern Sudan will vote either for unity of the Sudan, or separate nationhood for the South.

Slowly but surely, the Government of Southern Sudan continues to be established. The enormous challenge before SPLM is its transition from a rebel movement into a national political party that can cooperate with other southern political groups to form a government. While under the CPA the South has the opportunity to opt out of Sudan in 2011, the SPLM is under pressure to make national unity work under a policy of inclusiveness, and to demonstrate that a strong southern Sudan can lead the way to an even stronger Sudan.

The new southern government faces the gargantuan task of resettling millions of displaced and disillusioned Sudanese into war-torn areas after two decades of war. New institutions would need to be built, including those that would help ensure the supremacy of the rule of law, transparency and financial accountability. Many international aid organizations and bilateral assistance programmes have pledged their readiness to support the rehabilitation and reconstruction of the South, to put in place schools, roads, medical care, electricity, water supply, banking institutions, telecommunications and other basic civil infrastructures.

II. Economic Structure and Performance

Overview

Although very well endowed with natural resources in relation to its population, Sudan's economic performance has never quite reached anywhere near its real potential.

Primarily an agricultural country, throughout the late 1980s and early part of the 1990s agricultural production in the Sudan accounted for more than a third of GDP and around 15% of exports. More than 70% of the population depended on this sector for their livelihood. Prior to the structural reforms undertaken since the beginning of the 1990s, the economy was characterized by extensive government controls, a weak private sector and structural imbalances. Stiff price regulation, controlled markets and limited access to credit had created major disincentives to investment, production, growth and export trade, and the economy was heavily dependent on foreign aid.

The economy suffered for almost two decades from negative growth rates and internal and external imbalances before important economic gains were achieved through macro-economic stabilization that started in the second half of the 1990s. Subsequent economic recovery began to look promising in the mid-1990s when the peace process got underway under the stewardship of the IGAD. In contrast to the challenges faced by many post-conflict countries, the macro-economic foundations of Sudan are essentially stable, except for Sudan's huge external debt and mounting arrears.

With the increase in total development budget from 1% to 3.5% of GDP during the period from 1998 to 2001, some headway was made in stabilizing the economy, although at very high costs in terms of access to basic social services. The performance of the economy was also limited, overshadowed by population growth and the unsustainably high public debt. Moreover, most of the developmental efforts tended to be geographically concentrated in the central states around Khartoum, which exacerbated regional disparities and triggered uncontrolled rural to urban migration flows at the expense of rural development. Thus, while gradual liberalization of the economy had an overall positive impact, it had negative consequences for the agricultural sector, particularly in the case of irrigation schemes that were privatized without the proper engagement of the private sector. Moreover, the war and the deteriorating security situation in parts of the country proved to be enormously costly, siphoning off resources earmarked for much needed social services and agro-industrial infrastructure support. While the agricultural sector suffered the most, it continued to provide the main source of income for the majority of the rural population.

Sudan's economic managers successfully maneuvered a course change for the better under the National Comprehensive Strategy (NCS) implemented from 1992 to 2002. Under this strategy, the economy was effectively deregulated, price controls were removed and government subsidies for selected consumer goods were virtually eliminated. Controls on the foreign exchange rate were lifted, enabling it to be unified and determined by market forces. International trade policies shifted in favor of less regulation, and an ambitious privatization programme was launched while liberalizing investment policies to encourage a greater inflow of foreign direct investment into manufacturing and other sectors.

The economy responded favorably to these reforms. GDP grew in real terms by around 6 % during 1997-2001. The Sudanese real GDP growth was sharp enough in 2005 to beat that of MENA economies. Sudan achieved a real GDP growth of 8.0%, while MENA economies achieved 5.4% during the year. Inflation, which had reached 133% in 1996,

declined to 5% in 2001. The inflation rate in Sudan measured by the percentage change in the Consumer Price Index notched up slightly to 8.5% in 2005 compared to 8.4% in 2004. It was 7.7% in 2003 compared to 8.3% in 2002 (4.9% in 2001). The rise in the inflation rate over last three to four years came because of rapid growth in economy since 2001. However, inflation is expected to ease a little bit with tight control of money supply as envisaged by the central bank..

Best of all, the private sector gained confidence in the economy.

By 2001, agriculture could account for about 36% of the country's GDP, and more than 90% of the non-oil export income. Agriculture continued to contribute about two-thirds of employment opportunities, and supplied approximately 60% of the raw materials needed by the industrial sector. While increased oil production, revived light industry and expanded export-processing zones have boosted GDP growth, agricultural production, which is susceptible to drought and weak world prices, still employs 65% of the workforce and provides over 38% of GDP. Agriculture remains an important sector and means that a large proportion of economic success is dependent on favourable weather conditions. The most important agricultural exports are oil seeds, especially sesame, cotton, and livestock

During the last five years, however, agriculture's share of GDP steadily declined, while the oil sector gradually developed and grew from almost nil to more than 10% of GDP over the same period. Sudanese light crude and other petroleum products now account for more

than 80% of exports and around 40% of public revenue. Although subject to price fluctuations in the global oil market, Sudan's oil production is responsible for the country's trade surplus. Consequently, Sudan's importation of petroleum products has rapidly declined from more than 21% down to about 7% of total imports in the last five years. In comparison, during the same period, importation of food products remained at the same level of around 20% of total imports.

General economic outlook for 2009 and beyond

Sudan's economic outlook for 2009 and beyond will most likely continue along the path of high dependence on agricultural and oil production for the medium term. Its other exploitable natural resources like minerals, forests and water resources could be targeted for development over the longer term, preferably after the necessary economic and financial infrastructure have been put in place. As both the agricultural and oil sectors are still far from being fully exploited, these sectors will continue to be the drivers of Sudan's economic take-off in the medium term.

In the petroleum industry, major investments are already being mobilized, from the expansion of exploration and extraction activities to large-scale oil refining and establishment of related products and services. If indeed peace endures, and if an environment conducive to the entry of private commercial capital – both domestic and foreign – is effectively created through supportive government policies and incentives programmes, and access to the vast Sudanese local market potential remains open, then downstream industries based on oil could quickly develop (plastics products and derivative manufactures, agricultural fertilizers, other petrochemicals, etc.). This would lead to significant diversification of the petroleum economy, which by itself would already make Sudan one of the major economic players in Africa.

In the agricultural and mineral sectors, large untapped potentials are well-known and awaiting exploitation and modernization, offering another major pathway to economic development. Apart from the immediate problem of access to arable cropland because of security and safety issues (large areas of farmland have been mined during the war that restrict the availability of safe farming and mining), a major challenge is finding an agreed formula for the fair distribution of the benefits of agro-industrial resources between the populations in various parts of the country, one of the fundamental causes of the war.

Another major challenge is the management of the agricultural export sector, given an environment characterized by periodic severe drought and other climatic conditions, frequent international price fluctuations and other external shocks. The expansion of the industrial sector based on agro-processing and oil refining (which contributes about 9% of GDP) has recently received active government support. The sugar industry is expanding⁴, and textile production has a substantial potential if the requisite investments in rehabilitation and new plant can be mobilized.

⁴ Sudan, as a sugar-producing Least Developed Country with a capacity of about 680,000 tons, is expected to benefit from the liberalization of the EC sugar market which began in 2006.

Undoubtedly, as shown by many studies on the Sudanese situation today, the biggest stumbling block to the full development of Sudan's leading growth sectors originates directly or indirectly from the civil unrest more than from exogenous and external market conditions. Major constraints to growth include, for example, the unstable and insecure environment for utilization of natural resources, run-down economic infrastructure, limited financial investment, a poorly-skilled work force and constraints on technology transfer from foreign direct investment. These constraints are particularly pronounced in the South.

Basic rehabilitation and reconstruction needs

Recognizing that failure in socio-economic development efforts is a potential threat that could derail the peace process, the national government has embarked on a wide-ranging programme of rehabilitation and reconstruction to set the stage for full-scale socio-economic development, particularly in the South.

Electric power

Priority has been given to rebuilding and expanding the power sector and introducing private sector investment (both local and foreign). Two thermal power plants were constructed in the vicinity of Khartoum (financed by China and Malaysia). The government has also launched the Meroe Dam project in the North to further expand the electricity grid of the country, with funding being mainly secured from Arab countries and funds.

Road network

As in the power sector, the government is also introducing private-sector investment in road construction, through a "Build-Operate-Transfer (BOT)" system. Much of the existing federal road network is in very poor condition, driving up the cost of transportation and thus prices, of essential goods and services. Most of the hard-surfaced roads are found in and around Khartoum and north-east of the country, although many of them, used as trunk and feeder roads for which tolls are charged, suffer from gross under-maintenance. The proceeds from toll operations are inadequate to cover costs of upgrading and repair. The network of roads falling under the responsibility of the state and local government outside of urban areas is very limited. These consist mostly of graveled and unsurfaced roads with no reliable maintenance services.

Labor force and employment

As pointed out earlier, *more than two generations of Sudanese have grown up without adequate education or medical services*. Thus, development of the Sudanese labor force is suffering from high illiteracy rates as well as stagnant capacity and deteriorating standards of technical education and vocational training. Even at higher educational levels, the available skills in the labor force are mis-matched, as they fall outside the skill sets in high demand in the labor market, reflecting the lingering effects of a massive brain drain to Middle East countries, as a result of the civil war.

Sudan's population is growing at around 2.6% per year, but the labor force is growing much faster, at around 4% per year. By 2018, the population will have expanded to

48 million and, assuming steady growth of the economy over the same period, Sudan will need to create 6 million more jobs, or around 400,000 new jobs per year. With unemployment already hovering around 15% (28% for young people), the situation deteriorates steadily with increasing levels of education. The biggest losers will be the graduates. Each year some 200,000 students are admitted to universities and 170,000 finish with academic degrees – all of them competing for scarce jobs. In this scenario, an estimated 49% will end up unemployed.

It will be vital, therefore, to empower the younger labor force to find jobs, probably in informal manufacturing activities in the peripheries of urban centers (micro and small enterprises). The government is thus embarking on the dissemination of vocational education and training in all states, targeting especially deprived groups and victims of the war. While this may only be a “band-aid” solution, a much broader and effective employment-generation strategy will need to be implemented in the meantime.

Domestic and foreign capital investment

The disruption of the local economy caused by the civil war fundamentally crippled not only domestic savings as an investment source, but foreign assistance sources as well. Given the dwindling financial sector, and the low level of external financing for basic infrastructure investment due to the restriction or suspension of assistance from many international aid organizations during the war, the situation has been exacerbated by limited access to commercial loan financing due to non-servicing of the huge external debt. Outside of the oil sector, foreign direct investment has also been hampered by international sanctions imposed by the UN and the United States. While the UN lifted its sanctions in September 2001, the US Government did not and still maintains sanctions, affecting corporate and individual investors who have business interests in United States territories. Especially in the south, private-sector ventures and general commercial operations are significantly constrained by a weak financial system, a shortage of banks and other financial intermediaries, and the use of up to six currencies in simultaneous use in the local economy.

External debt and reserves

The exportation of Sudanese crude from 1999 was a life-saving blessing to the Sudanese economy in the face of its huge external debt.

At the end of 2001, Sudan’s external debt peaked, reaching about 180% of its GDP (US\$ 20.9 billion)⁵. Interest payment arrears alone for the preceding year accounted for nearly the entire federal budget, equivalent to around 11% of GDP. External reserves were almost exhausted in late 2001 and were gradually recovering during 2002. Export earnings from oil since 1999 served to somewhat dampen the pressure from debt service obligations, but not enough to maintain a healthy level in the external reserves.

⁵ According to the *European Community and Sudan’s Country Strategy Paper and National Indicative Programme, 2005-2007*, a debt of this magnitude is grossly unsustainable, and Sudan would, from an economic point of view, clearly qualify for the HIPC initiative. The political disagreements between GOS on the one hand and USA and the Paris Club Members on the other has so far blocked any real progress towards HIPC.

The external reserves now need priority attention and need urgently to be rebuilt to safe levels, if only to accommodate the economic aftershocks that are inevitable in the framework of the present Sudanese economy characterized by: (i) dependence, more or less, only on agricultural and oil exports; (ii) a fragile and unstable political and economic environment threatened by the continuing Darfur unrest; (iii) the long gestation period needed for rehabilitation and reconstruction of large segments of the economy; and (iv) the need to re-train an outdated and dwindling labor force, or to train new entrants to the labor force, before normal production can be re-started.

Public finances

Revenues from the oil exports since 1999 enabled the level of the federal budget to gradually increase, from around 8% to about 12% of GDP within a two to three-year period. The subsequent increase in resources at federal level allowed for the expansion of government expenditure both for development and to finance the operations of the State governments.

Security spending by the police and the military accounts for a major portion of federal resources. State and local governments are responsible for social services expenditure. However, states and localities are well-known for cash shortages, and ever since agricultural taxation was abandoned in 2001 as a national revenue measure, arrears have been increasing, along with delays in payment of salary to staff. It is thus unsurprising that there have been serious shortfalls in delivery of even the most basic social services.

As highlighted earlier, one fundamental cause of the civil conflict was the failure to find a successful formula for equitable sharing of resources and power. This is echoed in the perceived mal-distribution of resources for basic recurrent expenditures among the states. To a limited extent, this issue had been addressed through the distribution mechanisms under the Federal Government's National Fund for State Support, which was intended to even out the differences in resources among states. However, this system has been only partially successful, with southern and western Darfur being the consistent losers. Most of the expenditures for development still favored Khartoum and its adjacent states.

Urban and rural development

At the third Conference for Least Developed Countries held in Brussels in May 2001, the government presented an action programme over a 10-year time frame. It focused on an investment package totaling some US\$87 billion, of which around US\$55 billion would be set aside for use as soon as the war ends and the security situation improves. Of the US\$32 billion proposed to be spent right away, more than three-fourths were to come from the private sector (around US\$25 billion) while the remainder would be public sector investment. The government proposal was heavily oriented towards large infrastructure construction projects such as power generation (dams) and transmission, road networks, railroads, water supply and education facilities which, for the most part, tended to focus on urban areas of the greatest population concentration. To balance the programme's focus to better include rural areas, a government programme on poverty alleviation for 2001 and 2002 – estimated to cost some US\$45 million – was also proposed. This programme would concentrate on education, health services and safe water development.

Public sector management

As expenditures continue to increase in anticipation of peace, the management of public expenditure has emerged as a critical area of concern, not only to the government but also to international aid organizations that are gearing up to provide large assistance inputs after the war ends. Under the present set-up, control of expenditure is significantly hampered by the fact that commitments and funding responsibilities are separated between, for example, the state and local governments. Moreover, it is difficult to obtain a full picture of public expenditure at the national level due to the absence of an operational national accounting system, and the sporadic and late reporting of public spending by states and localities to the federal government.

The provision of effective basic services like health and education at the national level will require a major reform of public-sector management in the Sudan. Such reforms must encompass proper and transparent planning of development priorities and expenditure programmes that follow conventional technical standards and norms. Moreover, great attention needs to be given to ensuring a more equitable distribution of resources, improvement of institutional capacities at all three levels of government, transparency and accountability, including timely and accurate financial reporting.

Regional cooperation

The rapid growth and expansion of the oil sector has significantly altered Sudan's economic structure and performance, and could increasingly influence its political position and relations with neighboring countries. Sudan has made considerable progress in strengthening its political and economic relations within the region, having re-established close economic links with Ethiopia, based on the sale of Sudanese oil to Ethiopia and the shared use of Port Sudan.

This cooperation is the engine driving the IGAD process, and is likely to play a crucial role in regional cooperation and integration in the Horn of Africa, as well as in jump-starting Sudan's own socio-economic development.

Positive relations have also been restored by Sudan with Egypt, Libya and Chad. (while relations with Chad is negatively affected by the Darfur crisis) Moreover, Sudan played an active role in helping with diplomatic efforts to resolve the conflict in the Democratic Republic of Congo (DRC). Sudan also sent troops to the joint Libyan-Sudanese peacekeeping force in the Central African Republic. Significant constructive improvements have also been made in its relationship with Uganda, which in the past shared a long-standing policy of mutual destabilization. An agreement was signed in 1999 to stop armed opposition movements, and full diplomatic relations were re-established in 2002. Sudanese relations with Kenya have reached 'positive neutrality', indicating a delicate balance of Kenya's economic interests and its defense in principle of self-determination for southern Sudan⁶.

⁶ *European Community and Sudan's Country Strategy Paper and National Indicative Programme, 2005-2007.*

III. Social and Environmental Situation

Social development in the Sudan had virtually grounded to a halt due to the civil war. The fragile economic base and the nearly shattered infrastructure bring little promise or hope. National and international attention had shifted to short-term humanitarian relief and environmental (climatic) emergencies. Untold suffering, desperation and loss of life continue in the countryside, along with sporadic armed fighting, severe food shortages in parts of the country, and massive displacement of people who have permanently lost their homes and livelihoods.

Poverty situation

Against this background, Sudan remains one of the poorest countries in the world. Widespread poverty and deprivation dots the countryside, and it is believed that a very large proportion of the population lives on less than US\$1 a day.

The historically rooted and deeply entrenched inequity in the sharing of resources and political power in the countryside has been fuelling civil unrest for most of Sudan's political history. Conflicts have spread nationwide, many of them related to inter-tribal disputes or access to agricultural land and water for irrigation, forcing the marginalization of certain communities. Discontent has widely proliferated, often fueled by the inequitable distribution of development resources and the prevailing high levels of poverty in the country. These conditions have forced an estimated four million people to be displaced, the highest number of Internally Displaced Persons (IDPs) in the world.

Several factors contribute to the high incidence of poverty even during periods of positive economic growth. Apart from the civil conflict mentioned earlier, these include ill-conceived development plans and development policies that neglect rural development, and the absence of mechanisms to mitigate the effects of natural disasters – mainly drought – which has sparked conflict over resources. Since the mid-1980s, reductions in the average mean annual rainfall have resulted in increased occurrence of drought, compounding the suffering of large numbers of farmers and agro-pastoral herders.

The main constraints to poverty reduction efforts have been the armed conflicts in the South and in Darfur. These have seriously affected the basic fabric of Sudanese life, caused massive displacement and migration of people from the conflict-stricken areas to major urban centers in the northern and central parts of the country and even to neighboring countries. The latter has significantly eroded the capacity of host communities both local and foreign and further aggravated levels of deprivation.

In response to the escalating crisis, federal sectoral ministries have provided relief and welfare to some of the poorest segments of society through a number of programmes⁷, jointly funded by the Federal Ministry of Finance and the Ministry of Welfare and Social Development in the amount of some SD4.7 million (equivalent to US\$1.7) as of 2003. The Ministry of Welfare and Social Development, for example, has introduced anti-poverty interventions through such mechanisms as the Zakat (Islamic tax), which benefited an estimated 105,000 poor patients under its health programmes, and sponsored some 21,000 students and 26,500 orphans. It has also provided 300 units of low-cost housing in the

⁷See *Sudan – Millennium Development Goals – Interim Unified Report*, Government of Sudan and the United Nations Country Team, December 2004

Khartoum area to poor families as a first phase, with the intention of replicating the project in other states in subsequent phases. The Savings and Social Development Bank, a specialized funding corporation that mainly targets vulnerable groups such as women, students/graduates, retirees, small farmers, etc., has launched the productive families programme and the national programme for graduates' self-employment. In addition, the National Insurance Social Security Fund and the Health Insurance Fund began to offer pensioners and vulnerable groups a complementary social security system to meet basic needs.

Non-income-based poverty

Equally important from a policy perspective are the non-income-based dimensions of poverty in the Sudan. These pertain to: access to services; adequacy of basic infrastructure; access to assets or social capital; unemployment rates; and changes in demand for food assistance. National food aid requirements remained high and were directly related to high fluctuations in the availability of the essential food crops sorghum and millet. The primary reason for this is that climatic conditions have not been conducive to successful and regular harvests, leading also to price fluctuations. The lack of an infrastructure is another influencing factor, particularly in rural areas where the absence of reliable road networks prevent the free movement of food commodities from surplus to deficit areas. The share of crops and livestock in GDP, however, has remained fairly constant due to persistent low productivity in both sectors.

Poverty eradication: In dire need of miracles?

It is often taken for granted in most poverty reduction strategies that there is sustained and decent economic growth within a politically stable, orderly and peaceful environment, upon which poverty programmes could piggy-back. Presumably, this is also the *sine-qua-non* for moving towards the eight Millennium Development Goals of the UN Millennium Summit. Unfortunately, this does not apply to the situation in the Sudan.

In the Sudan, abject poverty has been so deeply entrenched over such a long period of time in an environment where there is no sustainable economic growth. Herein lies the crux of the matter – poverty alleviation under Sudan's present conditions will demand no less than a strong political will to lift the population out of poverty, and a deliberate, nationwide concerted effort launched from the top of the political leadership and simultaneously supported at the regional, county and grassroots levels, and shored up by enormous flows of international aid over a short-term period. For this effort to become sustainable in the long run, at some point in time there has to be a certain degree of stability in the agricultural, manufacturing, energy and other leading drivers of the national economy. Indeed, it seems, that miracles and nothing less would be needed.

Environmental conditions

The environment in the Sudan is suffering from a continuing process of degradation and – what is most alarming – it is approaching irreversibility. Most of the once-abundant and varied wildlife has disappeared, and agro-pastoral development is constrained by increasing desertification, erratic seasonal rainfall and successive dry spells. For the past two decades at

least, total forest cover has declined by an estimated average of 1% per year, well above the world average.

The main causes of environmental degradation in Sudan (as rated by the UN) are low rainfall (38%), over-cutting (32%), over-cultivation (15%) and over-grazing (13%). All but the first are directly or indirectly exacerbated by the current civil conflict. Massive displacements of population and movement restrictions due to fighting and insecurity increase the pressure on diminishing natural resources, and fuel tribal conflicts. Oil development poses additional threats to the environment. The fishing resources of the Sudan swamps are considerable, but also at risk if not properly managed. While in general public and government awareness on environmental issues has increased in recent years (e.g., Emergency Act for Environmental Protection passed in March 2000), this has not diminished the ongoing process of degradation, and natural resource depletion is continuing at an alarming pace.

Human development situation

The UNDP's annual Human Development Index (HDI)⁸ ranked Sudan 138th out of 162 countries in 2001 and again in the same 138th position out of 175 countries in 2003, and in the last HDI of 2007/2008 Sudan ranked 147th out of 177 countries, indicating either stagnation or even retrogression of human development in the country. Moreover, what is not readily apparent in this single-index measurement is the fact that there are very significant disparities in welfare conditions among population groups with respect to access to basic social services and living conditions. Most alarming are the disparities in the education and health sectors. Table A, below, summarizes a few selected indicators in these sectors.

Table A	
Selected Social Indicators, Sudan	
UNDP Human Development Report 2007/2008	
Ratio of medical doctors to population:	1 per 5,000 in Central Gezira State 1 per 700,000 in West Darfur State
Ratio of hospital beds to population:	1 per 400 in Northern State 1 per 7,000 in West Darfur
Adult literary level:	60% to 70% in Khartoum, Northern and Gezira States About 30% in North and West Kordofan and Blue Nile States
Primary school enrolment level:	More than 75% in Khartoum and Nile River States Less than 30% in Blue Nile, South and West Darfur States
Recipient of full basic education:	hardly any child in Upper Nile and Jongli States

⁸ This report did not include SPLM-controlled areas in the South.

Overall, international comparisons indicate that, despite declining trends, the health situation in large parts of the north is still at par with the levels in sub-Saharan Africa and the least developed countries (LDCs). But the situation in education is far below such international averages in the north, and is even worse in the south.

Other human development concerns

With respect to nutrition indicators, the zones of active fighting and displacement are seriously prone to malnutrition due to the continuing food shortage. But even outside the war zones – especially in West Kordofan, the Darfur States and the Red Sea – frequent droughts and consequent food shortages or emergencies cause sudden spikes in malnutrition levels.

Although malaria is the most prevalent disease, the spread of HIV/AIDS is believed to be rapidly increasing. Monitoring of the HIV/AIDS situation is seriously hampered by the difficulty in obtaining reliable statistics on HIV/AIDS cases. This is alarming to the health sector as it is believed that the Sudan is at risk of a rapid increase in the number of HIV/AIDS cases at the national level, unless effective preventive measures are taken immediately. Moreover, it is likely that the highest incidence of HIV/AIDS will be in the war zones and other conflict areas.

While issues such as safe maternal care and female genital mutilation (FGM) remain national problems, abduction and violence against women continue to be of particular concern in conflict areas⁹.

IV. Sudan and the Millennium Development Goals¹⁰

Overview

Eight years have passed since the single, largest-ever gathering of heads of state of some 189 nations ushered in the new millennium by adopting the United Nations Millennium Declaration, a framework of interrelated commitments and goals, articulated in terms of three pillars of collective action: peace and security, human rights and governance, and economic and social progress. Sudan was one of them.

Values and principles of the Millennium Declaration

Freedom. Men and women have the right to live their lives and raise their children in dignity, free from hunger and from the fear of violence, oppression or injustice. Democratic and participatory governance based on the will of the people best assures these rights.

⁹ *European Community and Sudan's Country Strategy Paper and National Indicative Programme, 2005-2007.*

¹⁰ This section draws heavily from the data reported as well as most of the analyses contained in *Sudan – Millennium Development Goals – Interim Unified Report* (December 2004), by the Government of the Sudan and the United Nations Country Team for the Sudan.

Equality. No individual and no nation must be denied the opportunity to benefit from development. The equal rights and opportunities of women and men must be assured.

Solidarity. Global challenges must be managed in a way that distributes the costs and burdens fairly in accordance with basic principles of equity and social justice. Those who suffer or who benefit least deserve help from those who benefit most.

Tolerance. Human beings must respect one other, in all their diversity of belief, culture and language. Differences within and between societies should be neither feared nor repressed, but cherished as a precious asset of humanity. A culture of peace and dialogue among all civilizations should be actively promoted.

Respect for nature. Prudence must be shown in the management of all living species and natural resources, in accordance with the precepts of sustainable development. Only in this way can the immeasurable riches provided to us by nature be preserved and passed on to our descendants. The current unsustainable patterns of production and consumption must be changed in the interest of our future welfare and that of our descendants.

Shared responsibility. Responsibility for managing worldwide economic and social development, as well as threats to international peace and security, must be shared among the nations of the world and should be exercised multilaterally. As the most universal and most representative organization in the world, the United Nations must play the central role.

In many respects, the Millennium Declaration represented the international community's recognition that even though global wealth is increasing, many people remain mired in poverty and deprivation. While some countries in Africa, Asia and Latin America have made significant progress in lifting their people out of poverty, for many others, particularly the Sudan and other countries in sub-Saharan Africa, poverty, hunger, illiteracy, infectious diseases, unemployment and environmental degradation continue to pose daunting problems.

The Millennium Declaration includes eight Millennium Development Goals (MDGs) which, taken together, constitute a framework for accountability for the actions taken by countries in the fight against poverty up to the year 2015. They were founded on the international agreements and United Nations conferences in the 1990s, and consist of the following:

- MDG1 – Eradicate extreme poverty and hunger
- MDG2 – Achieve universal primary education
- MDG3 – Promote gender equality and empower women
- MDG4 – Reduce child mortality
- MDG5 – Improve maternal health
- MDG6 – Combat HIV/AIDS, malaria, and other diseases
- MDG7 – Ensure environmental sustainability
- MDG8 – Develop a global partnership for development.

For each of the MDGs, one or more specific and measurable targets and indicators of achievement have been agreed upon, most to be achieved by the target date of 2015 using 1990 as the benchmark comparator.

According to the latest report on progress towards the MDGs of the Government of Sudan and the United Nations Country Team¹¹, Sudan represents a special case both in terms of the huge challenges it faces in the framework of the MDGs and the opportunities that are now emerging since the signing of the Peace Agreement.

Because of the civil conflict, it is not surprising that social development and economic growth in the Sudan over the last decade have had little positive impact on the social development indicators of the eight MDGs. The devastation of the civil war and the ongoing Darfur crisis have diverted the focus of economic management from investment and development to humanitarian assistance. This has been of particularly serious concern especially with regard to basic services (i.e., health, nutrition, clean water and sanitation, and education) where little or no progress has been made for large parts of the population, even for those not directly affected by the civil war.

The decades-long conflict in the South had an extremely negative impact on the country as a whole – south and north alike – though in varying degrees. One aggravating factor is the tendency to continue to locate development in urban centers, which has triggered pronounced rural-urban migration flows and placed additional pressures on already weak social service infrastructures. Worse still, this has led to a neglect of the traditional agricultural sector on which the majority of the population depends. Another factor that has hampered the achievement of the MDGs is the transfer of the responsibility from the federal government to states and localities without ensuring that they possessed the required technical and managerial capacity to deliver basic social services, and that sufficient funding could be made available. States and localities are notoriously cash-strapped and, more often than not, under-staffed and under-managed.

The role of agriculture is also an important factor in the implementation of the MDGs. In a recent report jointly produced by the Agriculture and Rural Development (ARD) Department of The World Bank and the International Food Policy Research Institute (IFPRI)¹², the continuing importance of agriculture, both directly and indirectly, towards achieving the MDGs especially in low income countries, was examined using alternative development scenarios in country-wide models. The report demonstrated how investments in different areas of agriculture could impact poverty in countries like Ethiopia and Zambia. The analyses show that if Ethiopia stays on a business-as-usual growth path, poverty will increase by another 10 million people, and food security will be compromised even further. In Zambia, the poverty rate under business-as-usual growth would still be 68% by 2015, only seven percentage points lower than the current poverty rate of 75%. The report concludes, *inter alia*, that policy action and increased investment in the critical arenas of sustainable agriculture productivity and food and nutrition security will be essential for responding effectively and responsibly to the MDGs.

Health-related MDGs for the Sudan– A special concern

¹¹ *Sudan – Millennium Development Goals – Interim Unified Report*, Government of Sudan and the United Nations Country Team, December 2004

¹² *Agriculture and Achieving the Millennium Development Goals* (Report No. 32729-GLB), Agriculture and Rural Development Department, World Bank, Washington, D.C.

Three out of eight MDGs, eight of the 16 targets, and 18 of the 48 indicators relate directly to health. Health is also an important contributor to several other goals, and the significance of the MDGs lies in the linkages between them. In this context, the MDGs provide a vision of development in which health and education are squarely at the center.

Health care is one of the primary responsibilities of the government sector, comprising the federal Ministry of Health (FMOH), 26 state ministries of health, and 134 locality health administrations. The FMOH is responsible for the development of national health policies, strategic planning, and for monitoring and evaluating the performance of the health system. The state ministries of health are responsible for policy implementation, detailed health programming and project formulation. The delivery of health services is undertaken through the local health system that replaced the former ‘Health Area System’, and is based on the concept of primary health care.

Government health expenditure in Sudan has been very low in comparison to its neighboring sub-Saharan countries. Over the period from 1998 to 2000, the total expenditure on the health and population sector was in the range of 0.7% to 0.9% of GDP and 1.5% in 2005 – and between 5.4% and 8.5% of total government expenditure. In 2000, this translated into just US\$2.50 per person. Overall health expenditure in Sudan, both public and private, has been mostly on staff salaries; with relatively little being spent on other items, including drugs. Health expenditure is supplemented to some extent by international development assistance. In 2002, donors contributed some US\$20 million to the health and population sector – US\$0.6 per person – most of which was for nutrition, primary health care and the control of communicable diseases.

The MDGs in South Sudan

A detailed assessment of the situation of South Sudan *vis-à-vis* each of the MDGs is described in the next section. Overall, the picture painted is rather grim. Decades of economic and political marginalization, widespread armed conflict, and non-delivery of basic social services have destroyed livelihoods and infrastructure, undermined international assistance efforts and increased the levels of poverty. Children and women in rural communities were the most affected. Although school enrolment has increased in recent years, three-quarters of children still have no access to education, and those lucky enough to be in school find themselves in a poor learning environment. As emphasized in the Interim Unified Report, ‘‘South Sudan is now producing a generation of illiterate youth.’’

On another front, South Sudan is fighting an uphill battle in empowering their women. The participation of young girls and women in economic and social development is being marginalized, including in government – despite official proclamations targeting 25% representation.

The health of the population is far below acceptable standards. One child in four dies before the age of five. The risk of a woman dying in pregnancy or childbirth is one in nine. There is one doctor for every 100,000 persons. Clinics and other primary health facilities lack essential drugs and basic equipment. The situation is compounded by the fact that less than one-third of the population has access to safe water, and there are widespread poor hygiene and sanitation practices. These are manifestations not only of general poverty and civil insecurity, but also of the serious breakdown in the basic social services delivery system.

On governance, South Sudan suffers from institutional weaknesses, lack of vision and planning, lack of skills for management, especially for programming and monitoring. There has been little capacity-building to enable the delivery of basic services, which for the most part have been delivered by UN and humanitarian agencies. Today, the Government of South Sudan still does not have the human or financial resources for programme implementation, or the capacity for following up the implementation of the MDGs.

The signing of the Comprehensive Peace Agreement provides an opportunity to address the causes of poverty and the disparities in access to social services. A pro-poor development strategy has been embraced by both the SPLM and the Government of Sudan, providing a strong framework for working together to implement basic human development objectives and accelerate progress towards the MDGs. These commitments, however, will mean nothing unless there is durable peace, and the support of the international community, civil society and the private sector will be necessary to translate them into reality.

V. Status of achievement of the MDGs

Due to the lack of adequate statistics and updates covering the whole of the Sudan, facts and figures and analyses of the MDG situation under this section are presented separately for the Sudan, excluding SPLM-controlled areas, and for South Sudan (where data are available), in relation to each of the MDGs.

MDG1– Eradicate extreme poverty¹³ and hunger

This goal aims to reduce by one-half the size of the population living in poverty and those suffering from hunger (and malnutrition) by 2015.

Poverty eradication

Sudan, more than any other country in sub-Saharan Africa, faces the greatest challenge in attaining this MDG. In South Sudan it is estimated that more than 90% of the population live on less than one US dollar a day, a significant proportion of them in female-headed households. A study in western Equatoria in 2000 found that 93% of the population lived on this income and, in 2003, another study for the whole of South Sudan found that the

¹³ As reported by the UN Country Team and Government of Sudan in their Interim Unified Report on Sudan's performance on the MDGs, there is very little information and very few data on the extent of income poverty in the Sudan. These are generally district-based and the national-level statistical estimations derived from such data are at best tentative and speculative. Although several attempts have been made to improve both the availability and quality of such data, the analysis of the poverty situation borrows from different sources which are non-poverty specific, and are based on outdated surveys for assessing progress in achieving the MDGs for which there are no systematic data and information for the whole of Sudan since 1978. So far, poverty research at the national level in Sudan has tended to make use of data supplied as a by-product of surveys that were carried out at different times and whose principal objectives were not poverty-specific in either focus or design. These were: the 1992 Household Survey (mainly for northern Sudan); the Safe Motherhood Survey, 1999, carried out by the CBS in collaboration with UNFPA, and the 2000 Multiple Indicator Cluster Survey (MICS) carried out in collaboration with UNICEF. All these surveys were confined to northern Sudan and, at best, some areas under government control in the south. Moreover, it is important to note that the information and data available for the analysis represent non-oil dates, and thus they do not represent the oil periods of today where data and information are not yet available.

proportion of households that became poor during the civil war increased to as much as 97%, with the highest concentration in the Upper Nile, Equatoria and Bahr el Ghazal states or regions.

Hunger and food security

As concerns hunger, proxy national-level data on nutrition from the Federal Ministry of Health suggest that endemic hunger prevails over the whole country. The Global Acute Malnutrition rate (GAM)¹⁴ from 1997 to 2001 ranged from 26% to 19.5% for the North and 32.4% for the South (a GAM prevalence rate of 15% indicates a serious situation). Malnutrition levels in various parts of South Sudan have been particularly high in recent years, especially in the Bahr el Ghazal and Upper Nile regions, and to a lesser extent in Equatoria. The average GAM in Bahr el Ghazal and the Upper Nile increased from 20% in 2001 to 25% in 2003. In 2003, South Sudan had a GAM rate of 21.5%.

These levels of malnutrition are largely due to general shortages of food. However, even when food is available this does not necessarily translate into nutritional well-being. In Old Fangak, Upper Nile, for example, malnutrition actually worsened between March 2002 (GAM 30%) during the hunger gap, and September 2002 (GAM 34%) after the harvest and despite food aid interventions. Other indicators of malnutrition in South Sudan as reported by UNDP are underweighting, stunting and wasting. The levels for these indicators over the period from 1995 to 2001 are shown in Table B, below.

Table B – Malnutrition levels in South Sudan between 1995 and 2001

Percentage of under-five children underweight (weight-for-age):	48%
Percentage of under-five children severely underweight age (weight-for-age):	21%
Prevalence of under-five children stunted (height-for-age):	45%
Percentage of under-five children suffering from wasting – moderate and severe (weight-for-height):	22%

The UNICEF Multiple Indicator Cluster Survey (MICS) in 2000 reported that about 22% of households in the Bahr el Ghazal and Upper Nile regions often either consumed no food or ate wild foods once a day before the survey period, that 54% still depended on relief or food loans after the last harvest, and that 69% consumed wild or no food during the worst period after the last harvest. In 2004, it was estimated that in South Sudan as a whole, 1.8 million people were in need of food assistance. In South Sudan food security is not only a production issue but also one of economic access and opportunity, and this affects the female population more than the male in the same household.

¹⁴ Malnutrition in emergency situations is often based on measurements of mid-upper arm circumference (MUAC) of children under five. If the MUAC is below 12.5 cm the child is said to be suffering from global acute malnutrition (GAM); if it is below 11.0 cm, or the child has oedema (swelling due to large amounts of fluid in the body's intercellular spaces), the child is said to be suffering from severe acute malnutrition (SAM). According to the World Health Organization (WHO), a GAM prevalence of 15% indicates a serious situation.

Lost Livelihoods

In the past, conflict eroded traditional coping mechanisms, leaving many communities dependent on food aid and agricultural input support. This has been the case especially in the Bahr el Ghazal and Upper Nile regions where many households lost farming labor, particularly male labor, to the war. The war also severely restricted movement, closed trade routes and reduced access to markets, thereby disrupting traditional livelihood practices. In the worst cases, protracted counter-insurgency warfare exposed many communities to recurrent famines. In 1998 alone, in the Bahr el Ghazal region, it is estimated that 70,000 persons died as a result of famine. In addition, the consequences of warfare have been exacerbated by adverse climatic conditions, including floods and drought.

The stark reality as shown above is that, probably even under the best of conditions, it is not likely that Sudan would be able to make significant progress in halving poverty and hunger by the target date of 2015.

MDG2 – Achieve universal primary education¹⁵

The basic education system in the Sudan was changed in 1998 from a six-year to an eight-year programme. It consists of three stages: two years of pre-school for children who are 4 years-old; eight years of basic education for those who are six years-old; and finally three years of secondary education. Between the academic years 2000-01 and 2003-04 the gross enrolment ratio (GER) rose, for both sexes, from 53% to 59.6%. However, this meant nothing in terms of the quality of education.

Low and uneven enrolment

The Federal Ministry of Education reports that not only are the overall achievements in basic education still too low, but there are also huge regional disparities. Higher levels of enrolment are found in the more prosperous northern regions not directly affected by the war, whilst the lowest ratios correspond to the conflict-affected regions of the South, the West and eastern Sudan. In northern Sudan, the highest GER for 2001-02 was in the Northern Region at 92% – compared to 73% in the Central Region, 46% in Kordofan Region, and 41% in the Eastern Region. The lowest GER, only 39%, was in the Darfur region, and this was before the Darfur conflict, which has since thrown the educational system into chaos.

Dropout rates

Dropout and repetition rates are alarmingly high at most primary grade levels. Data on enrolment by grade show that enrolment declines progressively: 89% of pupils may be found in the lower grades but only 11% in grades 5 to 8. Many children drop out as a

¹⁵ As qualified in the Sudan MDG Interim Report, the assessment of progress towards MDG2 is based on a number of sources including *Education for All: National Sudan Plan 2003*. It should be noted that the quality and availability of data on enrolment, rates of dropout, retention and repetition are often so low that they impact negatively on educational planning institutions' capacity for effective monitoring of the overall quality of the educational system. For the purposes of this assessment, the Gross Enrolment Ratio (GER) is used to assess progress. The GER is the total number of children in school (regardless of age) expressed as a proportion of children in the population of the official school age (7-14 years for South Sudan). The GER is also used as a proxy indicator for the NER.

result of increased domestic duties and cultural factors, such as early marriages for girls. In addition, many schools have been forced to close as a result of famine and insecurity.

Lack of access to education

For South Sudan, despite efforts to rebuild the education system over the past decade, over 75% of an estimated 1.4 million children of school-going age (7-14 years) do not have access to education. Among those who do, many are substantially over age (possibly due to the limited number of adult education centers). A survey of 101 schools in Equatoria, for example, indicates that the average age of children in grade one is 12 years, five years older than the official entry age of seven years. Lack of access to schools is the single most important factor responsible for low enrolment ratios.

Basic literacy and numeracy

Large numbers of 15 to 24-year-olds in South Sudan missed out on education when they joined the army, or were displaced or abducted by militia. Others did not attend school for fear of forced conscription. Research shows that it takes five to six years of basic schooling to achieve functional literacy and numeracy. With the current high dropout rates for primary schools, it is estimated that, on average, children are spending only one or two years in school, so that only a small proportion are likely to achieve basic literacy and numeracy. This is compounded by the limited opportunities for those over 15 years' old in alternative education – whether in technical and vocational training institutions or in accelerated learning programmes.

Unless the educational infrastructure is substantially rebuilt and there is durable peace, the MDG on achieving universal primary education for both girls and boys is not likely to be attained in the medium term. This will of course have serious ramifications on the economic recovery of Sudan over the longer term.

MDG3 – Promote gender equality and empower women

Half of the Sudanese population is female. In the northern regions women head about 27% of households, but the proportions vary between urban and rural areas as well as between regions. Illiteracy rates in rural areas are 62% for females and 44% for males, and in urban areas they are 34% and 21%, respectively. Like other statistics for the Sudan, gender-disaggregated data are difficult to obtain for the assessment of gender equality and women's empowerment. However, some information seems to indicate progress in women's education and, although the civil war resulted in widespread violence against women, it has also changed some traditional roles and has actually led to greater autonomy for women.

Gender inequality

Girls account for up to about 47% of primary school enrolment, and at this level there are 88 girls for every 100 boys. From 1997 to 2003, primary enrolment grew annually by 4.4% for boys and 3.8% for girls. The reported rate of girl's enrolment in basic education in 2002-03 is 62.7% compared to 71.3% for boys, with large regional variations for both rates. School dropout rates seem relatively low and are similar for both genders, except in rural areas for the 14-16 age group.

The ratio of girls to boys in secondary school appears to be higher than in primary schools. It is in fact almost equal for the same years (48%). The rate of growth for both, however, is lower.

With over two million girls currently out of school (the majority in conflict-affected areas), it does not seem likely that Sudan would be able to attain gender equity by 2015.

Literacy and participation of women in economic activities

With respect to literacy rates, women lag behind the men. In 2003, the literacy rate for females aged 15 and above was 50% with wide regional variations – from 75% in Khartoum to 26% in West Darfur. The situation appears to be better with respect to women's participation in economic activities. The women of Sudan contribute significantly to household income through both paid and unpaid work. According to the *2001 Sudan Programme of Action for Development*, women's participation in economic activities rose from 18% to 30% between the early 1990s and the early 2000s. However, there are still wide gender gaps in employment. In 1996, the unemployment rate for women was 24%, compared with 13% for men. The gap was evident in both urban and rural areas: 33% in urban areas compared with 15% for men, and 21% in rural areas compared to 12% for men. □ Women comprise 38% of the work force. The proportion of working women in the private sector is 10%. More women are employed in Khartoum than in other states.

Women are also represented in professional and technical jobs, though not generally in the more senior positions. Thus while women occupy 44% of public sector jobs they take up only 24% of technical positions, compared with 70% of clerical ones. They also take up only 5% of top management positions. In urban areas, 2.4% of working women are employed in the public sector and 74.9% in the private and informal sectors. In rural areas, most of the female population work in traditional agriculture, and for those in the informal sector, most are engaged in small retail trading (tea and food), working under harsh conditions and are often subjected to harassment.

Girls and women in South Sudan

In South Sudan, the elimination of gender disparity in primary and secondary education by 2005 and to all levels of education by 2015 presents a formidable challenge. About 84% of girls in southern Sudan have no access to education. Girls account for only 27% of all primary school enrolment, and less than one-third of pupils in each grade. Each year, only around 500 girls finish primary education. The disparity is more pronounced at secondary educational level and there are also significant regional disparities.

The low enrolment of girls in primary school is attributed to heavy domestic duties and early, and often forced, marriages. According to the Interim Unified Report, upon reaching the age of puberty, "her perceived economic value in the form of bride wealth or economic security, far outweighs any future benefits that might accrue to her as an individual if she were to become literate".

There are also institutional barriers working against women in South Sudan. These have excluded girls from education since colonial days, fostering attitudes that literacy was

only for boys. It is estimated that 90% of women in South Sudan are illiterate. Several agencies support girls' education by providing incentives designed to increase their enrolment. These include supporting the establishment of girls' schools, recruiting women teachers, and providing sponsorships, school uniforms and basic hygiene supplies.

MDG4 - Reduce child mortality

This goal targets the reduction, by two-thirds, between 1990 and 2015, of the under-five mortality rate of Sudanese children.

Since the 1990s, there has been little improvement in MDG-related health indicators in Sudan. However, there has been significant progress in certain programmes that have been made possible through international assistance, in particular *Roll Back Malaria*, immunization against measles, mass distribution of vitamin-A to children less than 5 years of age, and promotion of the use of iodized salt. These programmes have succeeded in increasing efforts to improve child health. Since 2000, around five million children have received vitamin-A twice a year and, in 2004, more than eight million children below 15 years of age were vaccinated against measles. These public health interventions are known to have a positive impact on reducing child morbidity and hence mortality.

Status and trends

Because of the paucity of data in general, the assessment of child mortality in Sudan is limited to the data available from surveys which were done before 2000. Between 1990 and 1999, the infant mortality per 1,000 live births, for example, fell only from 7,738 to 6,839 deaths (11.6%), and the under-5 mortality rate per 1,000 live births only declined from 12,440 to 10,541 deaths (15.3%).

Under-five mortality appears to be highest in the Red Sea, Kasala, Blue Nile and southern Kordofan states, where the rates are higher than 140 per 1,000 live births. Neonatal mortality is also highest in these four states – ranging from 38 to 50 deaths per 1,000 live births. In most of these states literacy rates among females aged 15 and above correlated highly with neonatal mortality rates, and were lower than the national average of 49%.

Leading causes of mortality in under-five children

In 1998, Analysis in Sudan documented that more than 70% of outpatient caseload among under-five children is related to five leading causes, i.e., malaria, pneumonia and other acute respiratory infections (ARIs), diarrhea, malnutrition and measles (Source: *Annual health statistics report FMOH 1998*). Admissions to inpatient facilities revealed a similar pattern where the same causes accounted for more than 80% of admitted cases and 75% of under-five hospital deaths. Up to 25% of all deaths were due to diarrhea. Malaria, which is endemic in Sudan, also takes a heavy toll.

South Sudan

Child mortality rates are high as a result of the high disease burden, poor health service coverage and high rates of malnutrition. However, since there have been no baseline studies in South Sudan it is not possible to measure trends.

Infant mortality rates

A high infant mortality rates of 150 deaths per 1,000 live births reflects the fact that most births (around 95%), take place at home, without a skilled birth attendant. Thus, there is little postnatal care and children do not get immunized against common childhood diseases. In 1999, for example, three out of four children under 12 months' old did not receive the first dose of the diphtheria, pertussis and tetanus (DPT) vaccination, and two-thirds were not immunized against measles.

Under-five mortality rates

The main causes and contributing factors to under-five mortality in South Sudan are vaccine-preventable. Unfortunately, vaccination coverage is very low under the existing programmes on immunization in South Sudan. In 2003 for instance, coverage was recorded at 12% for measles, 24% for Bacillus Calmette Guérin (BCG), 15.6% for DPT-1 and 7.5% for DPT-3. The polio eradication programme, on the other hand, has been very successful. Under the National Immunization Days programme, between 1998 and 2003 the number of children immunized against polio increased steadily from 800,000 to more than 1.8 million. South Sudan has not had a single reported case of wild polio, i.e., from a strain not related to the vaccine, since 2001.

Malnutrition in under-five children

Malnutrition results from severe food insecurity, diseases due to unsafe water supplies and poor sanitation, and poor childcare practices. In 2001, 48% of children under five were malnourished, measured by low weight for age. The other indicators of malnutrition, based on under-five children's upper-arm circumference, are global acute malnutrition (GAM) and severe acute malnutrition (SAM). In 1998, at the height of the famine, GAM and SAM were recorded at 80% and 40% respectively, way above national emergency levels.

Micronutrient deficiencies

Children in South Sudan also suffer from micronutrient deficiencies. For example, many suffer from iodine deficiency, which can lead to goiter and reduced mental capacity. Iodized salt is used for treatment and prevention, but only in 5% to 10% of households. Vitamin-A deficiency is also common and, among other things, can reduce resistance to a range of diseases. This has been addressed since 1998 under the National Immunization Days programme. In 2000, more than 900,000 children under five years of age received a dose of vitamin-A and, by 2003, the number had risen to 1,485,539 – 88% of children under five.

For Sudan, including the South, under-five mortality trends show that achieving the MDG4 target of 40 deaths per 1,000 live births by 2015 does not seem likely. At best, the rate would be around 80 deaths per 1,000 live births outside of SPLM-controlled areas.

MDG5 – Improve maternal health

This goal calls for reducing by three-quarters the incidence of maternal mortality at childbirth, with progress towards the MDG measured by improvements in the provision of

various reproductive health services. The achievement indicators include maternal mortality ratio (MMR); contraceptive prevalence rate; total fertility rate; antenatal and postnatal care; and the proportion of births assisted by a skilled birth attendant.

Maternal mortality ratio

Between 1990 and 1999, MMR showed a positive trend – falling from 537 to 509 maternal deaths per 100,000 live births, but there were wide disparities between and within regions. In the six regions of North Sudan, for example, the ratio per 100,000 live births varied from 582 in Kordofan, to 559 in Khartoum, to 556 in the eastern region, to 524 in Darfur, to 452 in the central region, and 319 in the northern region. These ratios are better than those in many countries in sub-Saharan Africa, but they are the worst in the eastern Mediterranean region. The ratio in Egypt, for example, is 170 per 100,000 live births.

Contraceptive prevalence rate

Only around 7% of currently married women are using any form of contraception – a decline of two percentage points since 1989-90. The 1999 Safe Motherhood Survey (SMS) found that for the five-year period prior to the survey, 11% of women indicated that their births were unplanned and another 4% said they were unwanted.

Total fertility rate

As a result of low contraceptive use, the total fertility rate (TFR) is high – 5.9 births per woman – one of the highest rates in the eastern Mediterranean region and comparable with that in many countries of sub-Saharan Africa. In rural areas where two-thirds of the population live, TFR has hardly fallen and is currently around 6.5 births per woman. In the urban areas, however, since 1990 TFR has fallen by one birth, to 5.1 – a reduction that correlates strongly with improvements in women's literacy, which by 1999 for women aged 15 to 19, had reached 70%. Another positive sign over the same period is the average age at marriage, which increased from 17.5 to 19.9 years. There are variations across the country, from 17 years in southern Darfur to 21 years in Khartoum. As a result of the high fertility rate, Sudan's population is relatively young: 43% of the population are below the age of 15 – a proportion that has not changed since 1983.

Antenatal care

Between the late 1980s and the 1990s, the proportion of mothers receiving antenatal care fell from 76% to 71%. The coverage also varied considerably across the country – with more women covered in urban areas (90%) than in rural areas (62%). There were also wide disparities in access and utilization of antenatal care between states, ranging from 92% in Khartoum to 33% in western Darfur.

South Sudan

Although there are no hard data for South Sudan, there are estimates that 80% of maternal deaths are directly related to obstetric hemorrhage, obstructed labor, and unsafe abortions, while the remaining 20% are related to pre-existing conditions such as malaria, HIV/AIDS, hepatitis, anemia and micronutrient deficiencies. Mothers in South Sudan face a number of risks in pregnancy – including early marriage and close spacing of children due to the pressure to replace family members lost to conflict. Another is a heavy workload during pregnancy. In Narus and New Cush in eastern Equatoria, for example, the high incidence of miscarriages has been attributed to strenuous daily chores. All these risks are compounded by an inadequate health delivery system. Even before the conflict, the health infrastructure was inadequate, and has subsequently deteriorated. Currently, there are 783 health care facilities; of these, 88% are minimal health posts and only 6% are referral hospitals. These serve an estimated 7.5 million people, leaving around 40% of the population with no access to health services at all.

Maternal mortality ratio

Some studies have estimated that the maternal mortality ratio (MMR) ranges from 400 to 800 per 100,000 live births. However, given a high fertility rate of 6.7, the fact that women

start bearing children at a very young age and the virtual absence of emergency obstetric care, the figure could be much higher. Another estimate suggests 1,700 per 100,000 live births.

Proportion of births attended

Most women give birth either alone or with the help of traditional birth attendants, and only 5% benefited from supervision by skilled attendants such as midwives. The number of midwives is very limited, partly because South Sudan has no midwife training schools, but also because there are few candidates for training as a result of the breakdown of the education system during the war.

Family planning services

Less than 1% of couples are using contraceptives. Hospitals and primary health care centers do not regularly provide family planning services.

Antenatal and postnatal care

Although antenatal services are the most common preventative health service available in South Sudan, in 2000 only an estimated 16% of women received antenatal care from trained health personnel. Women attending clinics do receive vitamins and iron supplements, but the distribution is not monitored, making it difficult to ascertain their impact. Information on postnatal care is also limited as the practice is not standardized. In 1999, most women and their newborns were not protected against tetanus toxoid (TT). The situation improved somewhat following the launching of a measles and maternal neonatal tetanus pulse campaign which reached 23% of women of childbearing age in six counties of South Sudan in 2002.

Sudan's MDG target for maternal mortality is to reduce the ratio by three-quarters – from 509 to 140 per 100,000 live births. In view of the present situation, however, probably a more realistic aim would be to reduce it by half to 250 per 100,000 live births. This should be helped by improvements in women's and girl's education, reductions in family size, an increased prevalence and utilization of contraception and child spacing.

MDG6 – Combat HIV/AIDS, malaria and other diseases

This goal calls for halting the spread of HIV/AIDS and to reverse its spread by 2015, as well as halting the incidence of malaria and tuberculosis and reversing their incidence by 2015.

Epidemiological studies conducted as part of the national Situation and Response Analysis (September 2002) confirmed that the country now faces a formidable challenge nationwide concerning the HIV/AIDS epidemic. The prevalence of HIV infection varies by region and tends to be higher in the southern states, eastern states, Khartoum and White Nile State. Almost all transmission (94%) is the result of heterosexual transmission, with vertical transmission from mother to child accounting for 2.4%. Sudan's situation is made even more difficult since the epidemic has taken hold in neighboring countries – and there is free movement across the porous borders.

Public awareness

Despite the overall increase in HIV prevalence, the 1999 Safe Motherhood Survey found that in several states only 20% of the population had heard of AIDS. The 2000 Multiple Indicator Cluster Survey similarly found that only 14% of people knew about HIV/AIDS. Even among those who had heard of the disease there were serious misconceptions. Behavioral studies conducted in 2002 by the Sudan National AIDS Control Programme (SNACP) found that some 27% of the sample population thought that the disease could be transmitted through mosquito bites, and 24% believed it could be transmitted through eating. About 15% believed that there is no harm in re-using syringes and 34% thought that infection couldn't be transmitted through breastfeeding.

Preventive measures

Not many people are taking preventive measures. In the past, the main focus of the HIV/AIDS control programme has been on screening blood and blood products through blood banks and also on providing consultation services for sexually transmitted infection (STI) patients at public sector health facilities. Donors have provided some resources for blood screening, advocacy and awareness raising, condom promotion and for supporting people living with HIV/AIDS (PLWHA), but this too falls far short of what is needed. A number of non-governmental organizations (NGOs) are also helping, including Care International, the Sudanese Red Crescent, and the Sudanese Council of Churches, Plan Sudan, ACCORD, the Sudan AIDS Network and Médecins Sans Frontières.

Over the past two years, the government has been focusing more on HIV/AIDS. The FMOH held an inter-country meeting for Ministers of Health of nine neighboring countries to discuss cross-border issues, including HIV/AIDS. It has also developed a number of short and long-term HIV/AIDS strategic plans. In late 2002, the government undertook a comprehensive situation and response analysis, which formed the basis of an evidenced-based national strategic plan for 2003-07. For 2003-2008, the objective will be to confine the prevalence to less than 2% of the general adult population, while avoiding the stigmatization of vulnerable populations. They will target populations with higher-risk behavior in two of the main high-burden states, namely Khartoum and the Red Sea. In this regard, funding under the Global Fund to Fight TB, AIDS and Malaria (GFATM) has been secured, including grant funds of around US\$7.8 million to expand programme interventions.

Malaria

Malaria is endemic in Sudan to varying degrees, and is a major public health problem. Annually, it is estimated to produce around 7.5 million attacks, killing around 11 persons out of every 10,000, or about 35,000 deaths per year. Incidence of the disease was highest in the Darfur region, followed by Kordofan. Government political and financial commitment and support, both at the federal and state levels, have steadily increased and, as a result, caseload has been reduced somewhat in recent years. Between 1993 and 2001, incidence per 1,000 people fell from around 400 to 125 per year and appears to have been stabilized. By 2007, the FMOH aimed to reduce malaria morbidity and mortality by 40% through improved surveillance and disease management, evidence-based multiple prevention interventions and capacity-building. In 2003, the government provided US\$1.4 million for the malaria control programme and will probably provide a similar amount for the next few years. Donors,

including UN agencies, will provide an estimated US\$0.5 million annually for the next three years. In addition, the Global Fund for AIDS, TB and malaria (GFATM), through its second round applications, has allocated US\$14 million for two years, starting from mid-2003.

Tuberculosis

After Pakistan and Afghanistan, Sudan has the third highest incidence of tuberculosis in the world, at about 180 cases per 100,000 persons. The annual rate of infection is estimated at 1.8% of the population of about 28.1 million for northern Sudan, with an annual new caseload of about 50,600 cases, of which about 70% are detected (2004). The majority of patients are of reproductive age (15-45 years). There is also a strong link with HIV/AIDS: over the period from 1988 to 96, 6% of TB patients were found to be HIV-positive.

South Sudan

There is relatively little information on the status of HIV/AIDS in South Sudan as a whole. Surveys have, however, been carried out in some of the higher-risk areas to provide baseline information on HIV prevalence rates and on sexual behavior, and to identify high-risk groups. Studies on knowledge, attitudes, behavior and practice (KABP) that can provide the basis for monitoring trends in behavior and for targeting interventions have been carried out in specific locations, including Yei, Yambio, Rumbek, and Mundri. UNICEF carried out a feasibility study on the establishment of prevention of mother-to-child transmission services in health facilities, and a KABP survey among community-based organizations and health workers in Yambio in 2003. All the KABP surveys and the adjusted results from the 2000 Multiple Indicator Cluster Survey in South Sudan indicated that 60% of adults had never heard about AIDS and 10% of those who had knew nothing about its relationship to unprotected sex.

Prevalence rates

UNAIDS model data from 2001 estimated prevalence among adults (15-49 years) at 2.6%, among males aged 15-24 at 1.1%, and for females in the same age group 3.1%. The HIV/AIDS epidemic in South Sudan is believed to have moved into the generalized phase where, with an overall adult prevalence greater than 1%, infection has gone beyond high-risk groups into the general population. Other risk factors will further spread the disease.

Transmission factors

Most people in South Sudan know little about HIV/AIDS – how it can be transmitted and prevented. They also have a number of misconceptions. Lack of knowledge at the individual level is compounded at household and community levels by poverty and cultural practices such as polygamy, wife inheritance and scarification. They are also more exposed because, as a result of cultural inhibitions, less than 1% use condoms. In addition, they are vulnerable because of the prevalence of sexually transmitted infections (STI) since these are commonly associated with HIV/AIDS. People with STIs have difficulty in obtaining effective treatment since health facilities lack appropriate drugs and trained health providers. South Sudan does not have a standardized system for surveillance. Nor are people living with HIV/AIDS likely to receive treatment for HIV/AIDS itself, apart from treatment for opportunistic infections.

Communities close to the border are also exposed to the free movement of people from neighboring countries that have a high HIV/AIDS prevalence, such as Kenya, Uganda and the Democratic Republic of Congo. The danger is that, as a result of the anticipated peace agreement, many refugees will also return from these countries.

Preventing HIV/AIDS involves targeting all people at risk or who are vulnerable to the infection. So far, interventions have focused on behavioral change, communication and voluntary counseling and testing. A number of agencies have been involved in behavior change communication activities, raising awareness among all members of the community, using limited standardized training materials that have been translated into five local languages. The Secretariat of Education, for example, in conjunction with UNICEF and Sudanese professionals, has developed HIV/AIDS 'life-skills' modules for youth, which they are using in Rumbek and Yambio and are developing for inclusion in the school syllabus.

Malaria

Malaria is responsible for over one million deaths annually in sub-Saharan Africa, 30% of which occur in South Sudan. In most areas of South Sudan, malaria is considered hyper-endemic – endemic at a high level, in all age groups. Some areas are also considered 'holo-endemic' – endemic at a high level early in life, leading to a state of equilibrium such that the adult population shows evidence of the disease less often than do the children. In the absence of hard data, it is estimated that malaria accounts for 40% of all health facility visits. In 2003, all regions reported a significant increase in the number of malaria cases – attributable to heavy rainfall following two years of drought, which created conditions favorable for mosquito breeding. Groups at high risk include the internally displaced, returnees, migratory families, pregnant women, and all children under five years of age. They are even more vulnerable when suffering from other illnesses as well as malnutrition, and have limited access to health facilities or drugs.

Tuberculosis

It is estimated that the prevalence of tuberculosis in South Sudan is in the range of 325 cases per 100,000 population. The available treatment programmes currently cover only 25% of the estimated southern Sudan total population of 7.5 million people. Vulnerability to the disease is heightened by poverty, malnutrition, displacement and limited health services. Currently, eight organizations provide TB control services in South Sudan, in collaboration with local authorities and international partners.

Other diseases

Sudan's unique geography and ecology make the population vulnerable to several major infectious and parasitic diseases. These include leishmaniasis (kala azar), guinea worm, yellow fever, schistosomiasis, sleeping sickness, leprosy and onchocerciasis.

Given the increasing prevalence rates of HIV/AIDS in the whole of the Sudan and the many factors that encourage its uncontrolled spread, the objective of MDG6 of halting the spread of HIV/AIDS by 2015 remains a difficult and truly formidable challenge. Better progress may be expected, however, in dealing with the incidence of malaria and tuberculosis.

MDG7 – Ensure environmental sustainability

This goal calls for integrating the principle of sustainable development into Sudan's policies and programmes and for reversing the loss of environmental resources. It is focused on: (i) halving, by 2015, the proportion of people without sustainable access to safe drinking water; and (ii) achieving, by 2020, a significant improvement in the lives of 50% of poor and slum dwellers.

Sudan has many important natural resources that it needs to manage, protect and develop in a sustainable manner (land, natural forests, fresh water, biodiversity, marine ecosystems, mineral resources and reserves of fossil fuel). But recent experience has been discouraging. Civil war and conflict, combined with irrational utilization of natural resources, have created a range of environmental problems, including land degradation and desertification, deforestation, soil erosion, water pollution, energy scarcity, human health hazards, biological species extinction, decline in soil productivity and loss of sustainability. What is worse, these have exacerbated the poverty situation, which in turn has caused greater environmental and health problems.

Deforestation and soil erosion

In 1950, forests accounted for about 36% of the total area of the country. A large part of these forests has been depleted to meet the growing demands for fuel wood and timber. By 1995, forests constituted only 20% of the total area of the country. The rate of deforestation and desertification is estimated to be almost 29 times the rate of forestation. In 1990, deforestation was taking place at 1.06% per annum. Many parts of the landscape are being affected by erosion. Arid or semi-arid areas in particular are coming under pressure as people look for more land for cultivation or grazing. Erosion then reduces productivity, provoking demand for yet more land – and a vicious circle of degradation. Vulnerability to erosion has also increased following persistent droughts in the 1980s and the felling of trees for various purposes.

Desertification

The country is very diverse in terms of rainfall, soil types, land areas and water sources, with four main ecological zones: □ desert – 35%; □ semi-desert – 20%; □ low rainfall savannah – 25%; high rainfall savannah – 12%; □ fuel wood plains and mountain vegetation – 8%. Rainfall varies from near zero in the northern desert to about 1,500 mm in the south. According to the National Drought and Desertification Control Programme's Monitoring Unit, more than half the land area is affected by desertification – as a result of inappropriate land use methods, overcultivation, over-grazing and deforestation.

Change in land use

In subsistence agriculture productivity has been falling as a result of changes in land use patterns such as abandoning crop rotation and shortening fallow periods combined with the use of manure or fertilizers. But productivity has also fallen in areas of mechanized farming due to inadequate rainfall, harmful management practices, greater incidence of pests and diseases and a lack of extension services.

Pastoral farming

There is also great pressure on pastoral systems. The encroachment of cultivation has limited the rangelands, since the first target of mechanized rain-fed agriculture tends to be the best grazing lands – forcing pastoralists into new and more marginal areas or to turn to settled agriculture, resulting in additional pressure on resources. Pastures have also been affected by fires, whether natural or as a result of preparing lands for agriculture. All this pressure on the land has resulted in the diminution or disappearance of several kinds of grass and other palatable browsing species.

Industrial and oil pollution

In the urban areas there are serious problems of industrial pollution, especially in Khartoum, Port Sudan, Wad Madani and El Obeid, where industrial enterprises are discharging raw, untreated effluents and toxic wastes. This takes place in the absence of guidelines, standards and enforceable legislation on industrial pollution or environmental control. Many towns are also suffering from environmental pollution and health problems as a result of the massive expansion of squatter settlements where poor standards of water and sanitation heighten the risks from endemic and epidemic diseases. Water quality is also affected by the use of insecticides and pesticides by farmers in mechanized irrigation schemes and the discharge of untreated industrial waste.

Further potential sources of environmental pollution have appeared following the discovery of oil and the establishment of pipelines, refineries and export ports, since the country does not have the capacity to control and combat oil pollution. In the Red Sea this poses a particular risk to marine resources. The Sudanese Exclusive Economic Zone is rich in these fragile resources but they have yet to be mapped. The prospect of a mushrooming oil industry has set off alarm bells and, in an encouraging move, the Ministry of Energy recently requested UNIDO to undertake an environmental impact assessment in the sector.

Environmental management

Because of the increasing importance of the environmental factor for sustainable development planning, the GOS established a full-fledged Ministry of the Environment, endorsed all international conventions on the environment and is in the process of rectifying an Environment Protection Act. With the Presidential Decree on forest conservation in 1992, around 3.5% of the total area is now protected as natural reserves.

The Quarter Century Development Strategy (2002-2007) linked desertification with poverty, food insecurity and environmental protection and the National Comprehensive Strategy (NCS 1992-2002) spelt out the main objectives and priorities for sustainable development, and states clearly that environmental issues must be embodied in all development projects. The directives of the NCS cover a wide range of concerns including poverty alleviation, popular participation in the development process, balanced development, biodiversity, establishing more protected areas, public awareness of environmental issues, and wildlife conservation. In 1990, the government endorsed the creation of a network of eight national parks and 17 natural reserves and sanctuaries, whose designation was declared a priority in the NCS.

Access to safe drinking water

Sudan is endowed with a variety of water resources – perennial rivers, seasonal water courses, rainfall and underground water. Yet, there are considerable regional variations in access to water. Thus, as numerous rivers traverse the southern one-third of Sudan and there is moderate to high annual rainfall, the rest of the country is classified as dry and semi-dry. The two Niles only provide water along a north-south central axis, while water is very scarce in the western states.

As regards safe drinking water, the abundance of water resources does not ensure adequate access. Moreover, statistical data on water services are sketchy. According to FAO, in rural areas the overall daily *per capita* amount of drinking water was only 35% to 60% of the minimum required amount and in urban areas 38% to 44%. The proportion of the population in northern Sudan who have access to an improved water resource is estimated at 70%, but with regional variations – from 24% in Blue Nile state to 93% in Khartoum state. In many parts of the country accessibility hinges not on the physical availability of water but, rather, on how water is managed. Moreover, people in much of the country are so preoccupied with getting any water at all that its quality is a secondary consideration.

South Sudan

In South Sudan, there are no accurate estimates for the areas covered by forests. This has raised alarm signals since, among other things, the entire population of South Sudan uses wood for fuel. Moreover, forest reserves have not been defined, gazetted or classified in terms of ownership. With the advent of peace, it is expected that there will be massive settlement construction around urban areas. In order to curb excessive tree cutting for construction, plans are underway to encourage construction of semi-permanent, and eventually permanent, dwellings in the peri-urban areas.

Paradoxically, the civil war helped to improve biological diversity since many people could not engage in their usual activities and became more reliant on organic farming. However, there seems to have been a loss of wildlife as a result of insecurity and a massive increase in hunting. Since the period prior to the war, the numbers of white-eared kob have fallen by 55% and elephants by 80%. Indiscriminate hunting practices have been curtailed in Boma National Park to protect animal species through the regulation of hunting seasons.

In view of the environmental situation reported above, significant progress towards MDG7 is not likely to be made within the time given to achieve this goal. There has been too much large-scale damming to the environment, and its degradation continues today. The targets of halving by 2015 the proportion of people without sustainable access to safe drinking water; and achieving by 2020 a significant improvement in the lives of 50% of poor and slum dwellers are, under present conditions, near-impossible tasks.

MDG8 – Global partnership for development

This goal addresses a set of inter-related issues and complements the first seven goals by calling for an open, rule-based trading and financial system, more generous aid to countries committed to poverty reduction, and relief for the debt problems of developing countries. It is especially significant for Sudan as it draws attention to the problems of the

least developed countries. It also calls for global partnerships, cooperation with the private sector to address youth unemployment, access to affordable essential drugs, and promotion of the benefits of new technologies.

Global partnerships can support Sudan's efforts to achieve the MDGs by providing effective aid and offering better market access. Sudan has the potential to achieve the MDGs if both the debt burden is relieved and Official Development Assistance (ODA) is increased, and provided the ongoing peace process produces true and lasting peace.

ODA for the Sudan

Declining ODA is a global issue, and impacts strongly the commitment on the part of the industrialized countries towards achievement by Sudan, and the rest of the developing world, of the MDGs. With few exceptions, ODA for Sudan has been shrinking steadily across the board (over the past decade, the real value of global aid to developing countries decreased by about 8%). Between 1989 and 1995, ODA to Sudan averaged US\$22.2 *per capita*. However, due to its deteriorating relationship with the international community, while humanitarian aid increased, *per capita* ODA declined sharply over this period – from US\$31 in 1982, to US\$29 in 1990, to US\$6.53 in 1995, and further down to US\$5.54 in 2001. During this period of falling ODA, the population of Sudan grew at an average rate of 2.6%.

Developing trade capacity

MDG8 also aims to enhance micro-economic efficiency and debt sustainability. It is thus crucial to relegate a portion of ODA to enhancing micro-economic efficiency through strengthening national institutional capabilities that facilitate productive sectors to overcome technical barriers to trade. In this context, the GOS has established a Commission for Accession to the World Trade Organization (WTO), reporting directly to the Presidency.

Science and technology promotion

In addition, the GOS acknowledged the importance of bridging the technology gap through the creation, in early 2001, of a full-fledged Ministry of Science and Technology to accelerate the promotion of technology science in Sudan. Subsequently, a long, medium and short-term national strategy was formulated covering all aspects of capacity-building and infrastructure development with programmes under three main categories: Science and Technology, Information Technology and Technology Transfer. More than 70 researchers are currently undergoing training in the different fields of technology with emphasis on ICT (Sudan electronic city, Satellite information network, and Computer system (hardware/software) manufacturing).

South Sudan

Conflict has had a catastrophic impact on South Sudan, leading to the almost total absence of a social service infrastructure, the attendant deterioration in human development conditions, weak institutional capacity and the depletion of human resources. It is clear that progress towards the MDGs will demand broad-based economic growth, especially in rural areas, combined with improved access to social services. Thus far, most aid flows to South Sudan have been in the form of humanitarian assistance with a focus on saving lives and meeting urgent needs rather than on financing development and reconstruction. Now,

however, there is an opportunity to promote sustainable growth and development since the promise of peace and stability should lead to an increase in donor flows. These funds can also be complemented by oil revenue. Successful reconstruction and development will, however, pivot on achieving a sustainable peace and avoiding further conflict – while ensuring the resettlement and reintegration of IDPs, refugees and former combatants. Here too, international support will be critical.

The emerging Government of South Sudan has to manage a series of transitions, both in terms of governance and institutions as well as in reorienting from humanitarian assistance to reconstruction and development. It will also have to foster a policy environment and a system of financial management that will enable it to manage its own resources efficiently as well as attract external assistance and investment. This will require building stronger technical and institutional capacity – another area that will benefit from assistance from donors and international development partners.

In the context of South Sudan, MDG8 also aims to implement strategies for productive work for the youth, and with the cooperation of the private sector, to make available the benefits of new technologies, especially information and communication. In 2002, less than 0.1% of southern Sudanese subscribed to fixed line or mobile phone systems. This situation is unlikely to improve in the near future.

It will be many years before South Sudan develops a significant formal economy. Most young people looking for work will therefore have to depend on finding jobs in the informal economy – though they will find this difficult, particularly if they had lost the opportunity for education during the war and lack the skills necessary to compete in the job market. Their problems will be compounded by the paucity of technical and vocational training centers. Most current initiatives in this area are within the education sector or are related to productive activities that are being encouraged by interventions in agriculture or credit.

Regardless of the final outcome of the Comprehensive Peace Agreement (CPA), the forging of global partnerships for the rehabilitation and development of Sudan as envisaged under MDG8 should still be attainable within the time given for this goal, assuming all parties to the peace process can rise to the challenge. If lasting peace and a unified Sudan emerge as the final outcome of the CPA, the attainment of this goal will be even more significant and its benefits will multiply a hundred-fold as it will serve as the framework and model for various kinds of partnerships, local and foreign, to rebuild the nation.

VI. Alternative Development Strategies for North and South Sudan

With the outpouring of international attention on the Sudan, the major players in the CPA as well as many international aid organizations have begun to put forward various approaches and strategies on how best to proceed with the reconstruction of the Sudanese economy and society. A comparative survey of some of these approaches and strategies is included here to highlight the extent of planning that has been invested, as well as the nature and extent of commitments that may be forthcoming as soon as the war ends.

SPLM Manifesto – “*Peace through Development*”

The SPLM manifesto emphasizes the thrust of re-building South Sudan along three logical phases or components: (i) establishment of an authority based on a division into legislative, executive and judiciary branches; (ii) empowerment of civil society; and (iii) development of the economy and provision of services (emphasis on health services, formal education, civic education and information, and cultural development).

Development efforts in southern Sudan by the SPLM began after the SPLM Convention of 1994 was concluded, moving from an emphasis on military mobilization and securing of territory to establishing civil authority and undertaking socio-economic development. By 1986, some civil-military administration was in place to maintain law and order and to mobilize resources for the war effort. An economic commission was established to initiate public investment, especially in natural resource exploitation (gold, livestock and fisheries). Some health facilities were also set up. In 1990, the SPLA created the Friends of African Children Education (FACE) Foundation to support the education of minors under SPLA care.

Many of the developmental efforts suffered setbacks with the political split of the SPLA in August 1991 and, consequently, the SPLA lost much of its territory to the Khartoum Government. In 1994, the SPLA re-organized itself as the National Convention of New Sudan, and began another effort to establish government structures and launch socio-economic development. Three branches of government were established under the National Convention of New Sudan, consisting of the legislative, executive and judiciary, and five lower levels of administration were created – central, regional, county, payam and boma.

By 1999, with the encouragement of the SPLA, a number of NGOs, civil-society organizations and professional groups had emerged – youth, women’s associations, legal practitioners, economists, medical professionals and others at regional and county levels. Farmers and traders also organized themselves and, under USAID support, several regions began to recover (Yambio, Panyagor, Yei, Rumbek, Meridi, Tombura, Tonj) and started producing local and export goods. Business was growing in retail trade, restaurants, hotels, drugstores, and other ventures, while schools and health posts were being re-established. Civil society initiated calls for the removal of military roadblocks to facilitate trade flow, the simplification of the taxation system, a unified national currency, and plans and programmes of government for peace and development in South Sudan.

US Agency for International Development

In the 1990s, USAID launched a five-year US\$22.5 million *Southern Sudan Agricultural Revitalization Project*. It addressed the rebuilding of production capacity for agricultural products and marketing via the strengthening of agricultural skills, infusion of modern technology, access to capital for agricultural enterprises, and expanded commodity networking for trade and marketing of produce. It targeted agricultural producers all over New Sudan regardless of political affiliation, and emphasis was placed on assisting communities and the equitable participation of women in all project activities. The project supported business skills training in food crops, agricultural technology, forestry, livestock, wildlife and fisheries. It established central information collection, data analysis and dissemination, and provided capital for enterprises through a financing institution.

As a result, surplus production was soon achieved in western, southern and central Equatoria. Increased income led to increased importation of salt, sugar, washing soap, textile, wheat flour, beverages, cereals, footwear, fuel and oil, building materials. It also led to increased exportation of hides, coffee, oil seeds, honey, palm oil and timber, and increased livestock trade from Tonj to Rumbek, western and central, and Uganda. Progress that had taken place in western Equatoria and other relatively peaceful parts of southern Sudan have largely been financed by USAID and run either directly by USAID or indirectly by NGOs contracted by USAID. UNICEF eventually took over from USAID in that role.

The USAID¹⁶ *Interim Strategic Plan 2004-2006* integrates all USAID assistance programmes in Sudan into a single strategy, covering humanitarian, development, refugee and political assistance. It calls for continued support by the United States to Sudan through its humanitarian crises and onto peace and recovery. The strategic objectives to be achieved by the end of 2006 include: expanded support to the peace process; promoting more responsive and participatory governance; improving equitable access to quality education; increased use of health, water and sanitation services and practices; and establishing a foundation for economic recovery.

The Plan calls for broad-based private sector-led development, under which it is envisaged that international assistance supporting individual entrepreneurship and a vigorous private sector will contribute to recovery from war and towards development with the widest benefits possible. Assuming good governance, private sector-led growth would be participatory, committed to development and available equitably to all Sudanese citizens.

Particularly under the peace process, jump-starting development programmes requires an initial humanitarian response that anticipates long-term development. It will be necessary to work closely with other organizations, such as UNDP, UNICEF, UNHCR, etc., in the early planning stages to prepare for the return of the 420,000 refugees (check) currently in camps in the region.

European Community

The European Community has long been concentrating its assistance strategy in Sudan on humanitarian aid. However, in 2000, the need for a policy-shift was indicated by a study¹⁷ on the unintended impact of humanitarian aid implemented over long periods in the Sudan. The study concluded the following:

- (i) the political situation and civil conflict cannot be resolved by humanitarian aid, nor will humanitarian aid be effective in the long term without a solution to civil conflict;
- (ii) humanitarian assistance does not allow donors much leverage with the conflicting parties;
- (iii) longer-term and better informed strategies will provide a higher return on humanitarian investment than short-term funding and responses;
- (iv) rapid staff turnover and poor institutional memory greatly affect an accurate understanding of the overall situation in the Sudan, and thus appropriate responses;
- (v) unrestricted access for humanitarian purposes should remain a high permanent priority;

¹⁶ The USAID Representative's Office for the Sudan is presently co-located with USAID/Kenya in Nairobi.

¹⁷ Prepared by the University of Dublin, Trinity College, and financed by ECHO.

- (vi) a major investment in both primary and secondary education is needed;
- (vii) the limited resources available for health programmes are inadequate to cope with the reality in the Sudan.

In the wake of these conclusions, Europe (and, for that matter, the rest of the international community) began to see the need to move away from emergency assistance towards sustainability and rehabilitation. This policy shift was reinforced in the conclusions of the North/South Joint Donors meeting in Khartoum, in June 2001, and in Nairobi, in June 2002, and the IAC meeting in Geneva in December 2001. Further reflection on the Sudan situation has also shown that it would be inappropriate to use an instrument created to respond to emergency assistance for the purpose of addressing sustainability.

The focus of the European Commission's latest response strategy, under the *EU-Sudan Country Strategy Paper and National Indicative Programme 2005-2007*, will be to contribute to bringing the Sudanese civil conflict to an end, while mitigating its effects and addressing root causes for directly affected populations in north and south Sudan.

Food security

In anticipation of a successful peace process, the EC will focus on food security in a broader poverty reduction and development framework. The long-term objective is to achieve a sustainable improvement in the food security of the poor, and a reduction in their vulnerability to food security shocks. The EC's involvement is to assist in replacing the current emergency response to the humanitarian crisis with a development approach to foster sustainable livelihoods, market access and capacity-building.

Education

The government has repeatedly confirmed its commitment to the objective of *Education for All* and has recently begun a process of addressing some of the key issues of a much needed reform process. The EC will complement this effort and support the development of a potentially multicultural and multilingual education system and offer sufficient resources to be able to make an impact. The EC strategy will highlight increased, gender-balanced and equitable access to quality basic and secondary technical education, as well as non-formal literacy and vocational training for adults and school dropouts, teacher training, adult literacy campaigns and provision of teaching materials, and improvement of the physical environment of primary schools.

The major donors in the education sector are UNICEF, operating in the north, and USAID, in the south. The EC will cooperate very closely with these agencies in order to ensure proper coordination at policy and operational levels.

Support to the peace process and to peace-building initiatives

In the framework of the current Country Strategy, the EC will increase its direct support for the peace process and specific peace-building activities, such as demobilization, disarmament and reintegration (DDR) operations that could include demining, training of security forces and any other action for which provision is made under Article 11 of the Cotonou Agreement.

Human rights, democratization, rule of law and good governance

The EC's support to Sudan, in the framework of the European Initiative for Democracy and Human Rights (EIDHR), would cover five components: (1) strengthening the capacity-building of civil society; (2) improving the judiciary system; (3) enhancing democratic rules within political parties; (4) promoting freedom of expression and freedom of the press; and (5) actions related to good governance, including issues related to transparent and accountable management of the country's own resources.

Health

The EC's interventions in the health sector, to be coordinated with ongoing ECHO activities, may include, among others, the following: (i) strengthening the primary health care system; (ii) surveillance, preparedness and response to major endemic diseases (e.g., Kala-Azar, trypanosomiasis, tuberculosis, etc.); (iii) increased coverage of immunization/vaccination programmes and mass vaccination campaigns (with special attention given to polio eradication campaigns); (iv) distribution of drugs; and (v) enhancing secondary health facilities.

Support to private sector development and large public investment

The EC may provide complementary global facilities for private-sector development, including support to small and micro-enterprises, such as EBAS (support to improve business environment) and Pro-Invest (institutional empowerment and sector promotion). Direct support for feasibility studies, market surveys, financial diagnosis, start-up assistance, etc., will be provided to the Centre for Development of Enterprises. Other assistance may be provided to support regional and international trade policy formulation and implementation.

Regional cooperation

The EC's regional strategy identified three focal areas: (i) regional economic integration and trade; (ii) sustainable management of natural resources; and (iii) transport and communications infrastructures. Other intervention areas include conflict prevention, resolution and management.

The Sudan has a strong interest in each of these areas, which would facilitate, in particular, the forging of stronger links with Ethiopia, Kenya and Uganda, for the purposes of promoting peace and stability across common borders and increasing cross-border trade through the removal of trade barriers and upgrading transport and communications links. The proposed regional strategy would clearly be in line with the Sudan's national strategy and would imply access to additional resources for key intervention areas, such as peace building and food security.

International Labour Organization (ILO)

The ILO's focus will be on the employment situation of returning IDPs and their role in reconstruction activities. In this regard, action needs to be taken to ensure returning workers possess the appropriate skills and have been adequately trained.

It is against this background that, in May 2004, the ILO-UNHCR working group approved a programme that will allow ILO to support UNHCR plans to reintegrate, following the eruption of conflict in Darfur, some 200,000 refugees and 1.2 million IDP's in the coming years, through job creation and skills development. The ILO is considered to be a crucial partner that can address the employment dimension of this re-integration challenge, facilitating the voluntary repatriation of Sudanese refugees in safety and dignity in their community of choice. The ILO has already identified employment needs and opportunities in rural communities, mainly the organization of vocational training facilities, leading returnees to the creation of small enterprises and assisting capacity-building for labor administration and civil society organizations.

UNICEF and UNESCO

In October 2003, the federal Ministry of Education, with support from the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the United Nations Children's Fund (UNICEF), produced the *National Plan for Education for All*. As promoted at the Dakar World Educational Forum in 2000, this plan outlines the national strategy for achieving access to education for all Sudanese by the year 2015. For northern Sudan, the aim is to increase the GER to 72.5% by 2007 and to 87.5% by 2015 – and to raise literacy rates among youth and adolescents to 67% by 2007 and to 95% by 2015. The government has already taken the necessary steps to formulate and finalize its policy frameworks and planning outlines for Education for All (EFA) and has embarked on the process of state-level planning. By 2005, it was to have finalized detailed state-level plans and started implementation.

UNICEF has been providing assistance to Sudan at countryside level continuously throughout the period of conflict and concurrently with the peace process. It shifted its policy from a purely relief orientation to direct assistance to pastoral community development when, after recognizing the importance of cattle farming to Sudanese rural communities, it incorporated a vaccination and animal health service project under the Pan African Rinderpest Control Initiative. It provided free vaccines, training and equipment for community animal health workers, and supported the improvement of livestock marketing. The success of the programme in the reduction of Rinderpest outbreaks encouraged pastoral communities to request the inclusion of other animal diseases in the programme.

The WHO's strategic agenda for Sudan

The World Health Organization's (WHO) country cooperation in Sudan is founded on a flexible framework that will enable its assistance programmes to adapt to changing conditions brought on by localized civil unrest, tribal conflicts, the HIV/AIDS threat and frequent humanitarian emergencies. The planning horizon of the *WHO Country Cooperation Strategy (CCS) in Sudan* will be influenced by the emerging requirements of national macro-economic policies and the peace process in the South. Special attention will be given to ensuring timely mobilization of technical support and other resources from headquarters and the regional office.

The specific strategic directions of the *WHO Country Cooperation Strategy (CCS) for Sudan* for the next four years will encompass the following.

Stewardship

The WHO will act as an advocate and play a proactive role in policy formulation, priority setting and strategic planning for the health sector. It will aim to secure a central position for health in the broader national macro-development agenda using a coordinated approach with civil society, including the public and private sectors, NGOs, academic institutions, communities, UN organizations and donor agencies. Among its long list of interventions, WHO will support strengthening the capacities of health ministries at all levels, development of a pro-poor national health strategy for sustainable development, implementation of a comprehensive health information system, including community-level information, and strengthening of the national health research system.

Health systems development

The WHO will contribute towards the development of equitable and financially fair health systems featuring integrated delivery of services through the primary health care approach, public-private partnerships, health system research and an in-built culture of health intelligence and monitoring. Its focus will be, among other things, on the strengthening of health training institutes; strengthening organization, management and functions in secondary and tertiary care levels; improving the quality of medicines and pharmaceutical services; and increasing accessibility to essential drugs.

Reducing burden of disease

The WHO will continue long-term support for selected programmes and will address priority and emerging issues, in line with WHO global and regional priorities and, consistent with national strategies to reduce the burdens of mortality and morbidity in Sudan, promote healthy lifestyles and improve the quality of life with a special focus on the most vulnerable and underserved segments of the population. Under this component, WHO will promote: the prevention and control of the six major causes of mortality (malaria, diarrhea, malnutrition, ARI, tuberculosis and vaccine-preventable diseases); HIV/AIDS prevention through increased awareness and promotion of safe sexual behavior, volunteer testing and counseling; and blood safety, prevention and control of endemic tropical diseases.

VII. A Strategic Vision: The Sudan as a Single Unified Nation

The foregoing comparative presentation of alternative approaches and strategies for the re-building of the Sudan revealed a wide spectrum of priorities and needs as perceived from the humanitarian, political, geographic, economic, social, environmental, organizational, financial, trade, health and educational perspectives. Most have broken down the formidable tasks of rebuilding a nation emerging from decades of war into mostly technical areas, directly addressing specific programmatic and management issues and offering best practices and proven technical solutions. Undoubtedly, taken collectively, these embody critically important strategies that will at some stage need to be adopted, adapted, endorsed and implemented in the course of the reconstruction of the Sudan.

It seems, however, that a vision is needed by which the political leadership can legitimize appropriate strategies for development of the Sudan, and especially promote approaches that are not divisive. Even the SPLM manifesto stopped short of promoting a

holistic vision that could serve as the foundation and an encouragement for leading the reconstruction of the entire country.

One Nation

A vision of the Sudan as a single, fully unified democratic nation is undoubtedly burning in the hearts and minds of the poor, the majority of the Sudanese people, who have languished in misery and endured untold sufferings for far too long. And the timing could not be better for a fresh, new initiative to rebuild the Sudan after decades of war, now that peace is becoming a reality. There is revenue from oil, and numerous international aid organizations are lining up to help in the reconstruction. The political leadership has a golden opportunity before it, and promulgating a vision of the unification of Sudan to lift its people out of poverty will give it the high moral ground for peace-building and national reconciliation.

With the advent of peace, embracing a concept of a single nation is the first and most valuable step in strengthening democracy and improving governance in the Sudan. Without this unifying element, it will be virtually impossible for the Sudan to address the formidable problem of widespread and deep-rooted poverty in the country. Moreover, this is the ticket for Sudan to transition from a least developed country to a fast developing country. Nothing short of a unified nation will make it possible for poverty to be reduced, even eliminated once and for all, and for human rights to be steadily improved. To enable the economy, founded on its vast human and natural resources, to flourish Sudan needs to show the world that it is willing and able to stand on its own as a democracy and to earn the respect of the international community.

The history of the world has shown many times over that national unification can be achieved – through sound democratic processes and an enlightened political leadership. Sudan has all the ingredients it needs to make this work. Its multicultural, multiethnic, multilingual and relatively young population, coupled with its vast untapped natural resources, gives Sudan a wide latitude for exploring alternative paths to development. This rich diversity is its own safety valve, enabling the Sudanese to engage in the difficult process of nation-building.

Difficult though it may seem, it is not entirely beyond its means for Sudan to now address face-to-face the root causes of conflict that have led to its social and economic underdevelopment and the neglect of grassroots livelihoods. The CPA, the development of oil exports, the willing support of the global international community, as well as guaranteed access to enormous international assistance create a truly rare window of opportunity for the Sudan. Against the backdrop of a vision of a unified Sudan, the political leadership can promote strategic and inclusive policies that will reward it with higher international visibility and credibility, enabling it to do away with civil conflict, and attend to much-needed economic and social development. This, in turn, also considerably enhances the possibility for achieving lasting peace.

Development management and governance

Economic growth in recent years has been encouraging and has brought some relief, but its benefits continue to be poorly distributed across all levels of the population. The delivery of even the most basic social services has ground to a halt in many parts of the country, particularly in rural areas, and will require a serious overhaul of government functions and financing particularly at state and local government levels. These are policy issues that should be addressed with a new vision of governance. Reform of government is badly needed, and the opportunity to wipe the slate clean and establish a truly modern, information technology-driven society and delivery infrastructure now presents itself.

Education as a prerequisite

The rehabilitation and modernization of the national education system at virtually all levels is fundamental, to say the least, in any nation-building, and constitutes one of the major challenges for the medium to long term. This is paramount in the order of national priorities for the sustaining of economic growth, ensuring more equitable distribution of incomes and opportunities, and for creating maximum opportunities for reconciliation and increasing tolerance in Sudan's multiethnic, multicultural and multilingual society. Peace-building, peace-making and empowering people to participate in governance and development through democratic processes can take place only when the people are fully informed and adequately educated. It is not enough for the government to call the attention of the international aid community to the importance of educational reform; it should also call on the Sudanese community itself to be concerned about education. And, here, Sudanese universities and other educational institutions have an obligation to fulfill.

External debt management

Sudan has made good progress in laying the foundations for macro-economic stability, and has demonstrated a positive and constructive attitude towards macro-economic structural reform under IMF/WB assistance programmes, although at some social costs¹⁸. Still, there is a long way to go towards strengthening the management of external debt and developing a viable financial sector that can be responsive to private enterprise development. A solution to the external debt problem should be among the highest priorities, to enable the influx of more international aid and foreign direct investment. Obviously, external debt management is extremely important in fostering economic growth, but it could be rendered totally meaningless were the country to remain divided.

Regional cooperation

As regards regional cooperation, conflicts concerning water from the Nile, and controlling the spread of HIV/AIDS across its borders represent particular challenges to Sudan's relations with its neighbors. However, these problems would be solved through regional cooperation for which Sudan could take proactive initiative. However, like external debt management, this effort could be rendered futile unless there is unity from within.

¹⁸ During the 1990s, Sudan adopted IMF/WB structural adjustment policies that further reduced the already meager resources dedicated to basic schooling and other social services.

Poverty reduction

Poverty alleviation is a major and pressing challenge. The government began addressing poverty alleviation in the framework of its National Comprehensive Strategy. This focused on macro-economic adjustment policies, investments in basic services and strengthening of social safety nets (Zakat Fund, National Pension Fund, Social Security Fund, Health Insurance Corporation, Student Support Fund, Support Fund for Retrenched Workers, and the Saving and Social Development Bank).

However, many lessons learned from the past indicate that it will be necessary to comprehensively and simultaneously address all of the main factors that contribute to poverty. For Sudan, the following factors are critical to the success of poverty alleviation: (i) durable peace and reconciliation; (ii) continuation of prudent macro-economic adjustment efforts; (iii) advancing rural agriculture and food security; (iv) improving social services; (v) effective participation; (vi) sustaining the environment; and (vii) setting appropriate implementation mechanisms and strategies that also empower people to help themselves. The latter implies the mobilization of the various actors in relation to several poverty-related issues, including gender, health, environment, international trade, food security, debt and population issues.

Pre-eminence of civil authority

In South Sudan, “establishing the basic structures to enable the control and administration by civil authority” is the challenge identified by SPLM in its manifesto “Peace through Development” issued in February 2000. Clearly, meeting this challenge presupposes the full rehabilitation and reconstruction of the economic, social and political institutions in the southern regions, as implied by the emphasis placed by SPLM on transport and communications infrastructures, creation of financial institutions, micro-enterprise development, as well as agriculture and natural resource management. However, one wonders in the end if this challenge should, after all, not apply to the entire country, North, South, East and West.

In this regard, it is important to keep in perspective the fact that, in the wake of three decades of civil conflict, a good portion of the country that had been developed was nearly completely destroyed. In the war zones, government institutions have become dysfunctional, transportation and other infrastructures have disintegrated, and hardly any schools or health posts remained. Two generations of Sudanese have grown up with no education or medical care.

Clearly, with virtually no trained manpower or basic infrastructure, reconstruction and administration of nation-building in the post-war period in the Sudan will be starting from scratch. This is why it is opportune to begin with a positive vision, a democratic concept of one unified people, building a single nation hand-in-hand with each other.

VIII. Challenges, Opportunities and Priorities

Although Sudan has tremendous natural resources, and assuming peace will be durable, it will take time before the benefits of their proper utilization can produce significant developmental impact on the lives of the population. The time this takes will depend upon the speed with which government structures are established and made operational, the amount of resources made available for relief,¹⁹ rehabilitation of areas emerging from conflict, and the implementation of early impact programmes and projects.

That said, however, with a vision of One Sudan united in peace, a number of strategies and supporting policies should nevertheless be addressed now to ensure that efforts to rebuild Sudan could proceed in earnest, even while the peace process is maturing and being sustained. The analysis of the situation in Sudan and the overview of progress towards attaining the MDGs in the earlier section, illuminates a number of high priority areas that should be attended to immediately. The most important ones are briefly discussed below under separate headings.

Progress towards the MDGs

It is no longer realistic to expect the MDGs to be achieved in Sudan within the original time frame (2015), given the late start and the almost zero-level starting point. The MDGs should nevertheless be used as a guide and as a gauge for Sudan's developmental performance. Among the eight MDGs, the first seven goals are directed at reducing poverty in all its forms, while the last goal relates to the means to achieve the first seven. Because of its special circumstances, Sudan should set its own strategies and time frames for achieving those goals.

Accelerating pro-poor spending

Addressing widespread poverty in Sudan will necessitate not only examining its underlying causes but also its influence on production, supply of and access to food, health-related issues, education, employment, environment, regional cooperation, governance and a host of other factors. But agriculture will be the key sector for addressing this challenge, considering that more than 67% of the Sudanese population derives its livelihood from this sector. This is workable and feasible, as Sudan has good agricultural potential. It has diverse climates and soils and adequate water supplies. Sudan also has huge animal wealth estimated at about 130 million heads of cattle, sheep, goats and camels with adequate and variable quantities of animal feed (UNDP 2004).

In South Sudan, stability is slowly returning with the signing of the CPA. However, food aid and agricultural input support are still urgently needed and, over the recovery period, attention should shift gradually towards self-sufficiency and nutritional security via sustainable food crops, forestry, livestock and fisheries. The removal of structural constraints to availability and access to food for vulnerable communities, returning IDPs and refugees,

¹⁹ Relief should be made available to all of the needy, regardless of whether they are internally displaced, returning refugees or those who stayed and suffered.

and the establishment of extension services to introduce appropriate farming technology will also need to be undertaken.

Priority policy interventions needed for the reduction of poverty will have to be a cocktail of sorts, the main ingredients being a stable macro-economic framework, a food policy especially for South Sudan, pro-poor, gender-responsive credit schemes for farmers and women in order to improve incomes, agricultural infrastructure of roads and irrigation facilities, and a realistic agricultural development strategy that focuses on the country's own resources and deals with traditional and subsistence agriculture.

Priorities in the health sector

HIV/AIDS

The HIV/AIDS epidemic is approaching alarming levels in Sudan. In order to implement a comprehensive HIV/AIDS control programme, an estimated US\$5 million will be needed annually. While it would be reasonable to expect contributions to come from the UN and other international aid organizations, the bulk of the resources will nonetheless have to come from the government. The highest priorities should be to raise the awareness of the entire Sudanese population, specifically targeting high-risk and vulnerable groups and countering stigma and discrimination. A culturally-sensitive approach would be needed to ensure effectiveness. Without these and other interventions from the international community, the prevalence rate is likely to increase much more rapidly. A comprehensive programme could slow the prevalence rate and reverse the trend after only a few years²⁰.

Primary health care delivery

Pressing health concerns relating to nutrition, vaccine-preventable diseases of childhood, antenatal and postnatal care, mother and child health, protection against malaria and other issues, should be addressed in a more comprehensive manner through new primary health care and hospital models. Much of the health infrastructure in Sudan that has survived the war has been overtaken by events, as well as by technology. Strategically, it is now important to introduce more modern health technology, more aggressive policies and strategies that realistically take into account the actual situation on the ground, abandoning programmes that clearly no longer work. This will require the rationalization of the way the health sector is organized in light of present and anticipated peace-time demands, ensuring effective horizontal and vertical integration, a review of what resources are available, where and when, as well as a frank assessment of the effectiveness of current programmes – immunization, vaccine distribution, hiring and training of health workers, etc. New initiatives should be encouraged and promoted, for instance, the suggestion that the Ministry of Health should look into the provision of free anti-malaria drugs to children under five years' old.

Structural weaknesses should also be removed, such as monitoring processes that tend to focus on input rather than on output, and impact and feedback mechanisms; for example, why annual targets are being missed, or mechanisms that fail to deliver timely information. The latter are critical for flagging emerging problems of control and for identifying important corrective measures to improve the effectiveness of the health delivery systems. The

²⁰ It has been reported that Uganda, for example, took nearly 10 years to reverse the epidemic's trend.

rationalization of the health delivery mechanisms would also encourage international aid organizations to gear up more appropriately and ensure that their inputs, whether financial, material, technological, advisory or in terms of HR development, could be used in an optimal manner.

Access to essential drugs

The local pharmaceutical industry should address the pressing need for essential life-saving drugs for the local market as part of economic recovery efforts. It is estimated that the pharmaceutical industry would need to produce at least 75% of all essential drugs to stabilize supply and attain self-sufficiency.

Sudan is currently well-placed for the development of its pharmaceutical industry in terms of resources like medicinal plants. These are ubiquitous in the Sudan, and should be exploited on a large-scale basis to lay the foundation for sustained research and development of needed pharmaceutical products and/or more efficient substitutes. Earlier research inquiries have already confirmed the use of such plants for pharmaceutical development, but commercialization of research findings has been significantly hampered by lack of capital funds and government and market incentives. This is an area where the intellectual property system of the Sudan can potentially make a huge contribution (see Section ix, below).

Exploitation of local pharmaceutical potential in the Sudan should focus primarily on medicinal and aromatic plants as sources for essential drugs and other promising product areas. In particular, the government should encourage and facilitate the establishment of local industry production of strategic items, such as intravenous solutions, eye drops, malaria drugs and other items in the national list of essential drugs. Lending institutions such as commercial banks should also be encouraged to provide seed financing for research and commercialization, particularly for joint ventures. National drug legislation and the intellectual property system also need to be updated and expanded, to promote priorities and socialized pricing for essential drugs, including enacting laws and regulations on generic labeling, concessionary importation and tax schemes for local manufacture of essential drugs.

Meanwhile, the federal Ministry of Health should articulate a national pharmaceutical master plan that encourages the direct participation of civil society in the formulation and implementation of pharmaceutical production policies and strategies.

Priorities in the education sector

Sudan is a signatory and has ratified the Convention on the Rights of the Child. In addition, it has launched the national Education for All (EFA) framework, as described above, and is now preparing EFA plans at state level. The EU and other donors have pledged support to educational reform and modernization and, assuming the CPA proceeds as planned, resources previously devoted to security expenditure should be able to be diverted to finance education development. Partnerships with NGOs should also be enhanced, and new ones explored with different stakeholders to support EFA. On these assumptions, the priorities to be addressed in the education sector would include the following.

Education and poverty

Many families cannot afford the indirect school fees for more than one of their children. At the same time, sending their children to school entails high opportunity costs, since they lose the children's work contribution. While abolishing school fees and subsidizing primary education could, in the short-run, ensure that all children can go to school, it is clear that unless poverty alleviation programmes get under way, poverty will continue to deprive children of their right to education.

Cultural constraints to education

The nomadic way of life in many of Sudan's communities, in the Red Sea and Greater Darfur regions, for example, leads to particularly low enrolment rates (UNDP 2004). Girls' education in particular is hampered by traditional gender stereotypes and harmful practices, such as early marriage and restriction to the household at age of puberty, and because of concerns about safety outside of the home. When the peace and security situation improves, the government will need to sensitize rural communities in particular to overcome these cultural and other practices that hinder school enrolment and retention. Communities could also put in place support structures to decrease the opportunity costs of schooling, particularly for girls. Increasing the number of primary schools and positioning them closer to villages would be essential for increasing school enrolment.

Education planning capacity

The general lack of planning and resource management in the education sector relative to the health and environment sectors is a serious concern, particularly at state and local levels. The lack of data and analysis hampers effective education planning. As a result, low efficiency, high dropout and repetition rates, and low retention characterize the educational system. Addressing these issues will demand no less than a concerted effort.

Quality of education

In many areas, not just those affected by war, school facilities are in disarray and lack basic learning materials and facilities, many being "bush schools" without proper buildings and protection from the environment. A shortage of qualified teachers and disparity between different educational levels – between rural and urban areas and between girls and boys – are also major issues. □ While respecting cultural and religious values, new skills (e.g., computer literacy) should also be taught in schools, particularly vocational skill areas and general science and technology, and the educational system should evolve as a multi-faceted programme capable of addressing the requirements of all children, including children with special needs and those who are older and have been out of school for some time due to the conflict. These issues contribute to the low quality of education confronting those who are lucky enough to go to school.

Vocational education and employment

Youth unemployment is a growing concern that has serious social ramifications if left unattended. With new entrants to the labor force increasing at a rate substantially higher than the rate at which new jobs are being created, high unemployment rates, especially for youth, will be like a ticking time bomb. It will be vital, therefore, to empower young people by

enabling them to find jobs, particularly in informal manufacturing activities in the peripheries of urban centers, by providing them with practical, vocational skills and education. International assistance should be exploited to support the government's objective of *"disseminating vocational education and training in all states, starting with deprived groups and those suffering the consequences of war"*. Advisory assistance would also be helpful to ensure that current government efforts to develop vocational training programmes are closely linked with market demand, or should include entrepreneurship development and micro or small-enterprise development strategies □ Training should target potential young entrepreneurs with business development skills, to meet the labor demands of different types of businesses, particularly in agro-based industry.

National priority should also be given to creating decent and productive work for youth through entrepreneurship development within the framework of the new regional industrial innovation system for the Common Market for Eastern and Southern Africa (COMESA). This should complement industrial skills, technology, knowledge and institutional capabilities among COMESA member States, with the assistance of other developing countries.

Priorities for sustainable development

The task of addressing sustainability of the environment in the context of the Sudan hinges largely on the work of different sectoral teams in the government and the extent of their horizontal and vertical integration. The priority areas for Sudan appear to include all links between environmental factors and poverty (desertification, drought, flooding, access to irrigation), food insecurity, and environmental protection including urban water and sanitation. Some sustainability issues transcend political and geographical boundaries and, in this respect, ensuring regional and international cooperation in the context of international covenants and agreements on the protection of the environment would play a critical role. Sustainable exploitation of Sudan's vast natural resources will demand policy coherence, improved regulatory capacity, community participation and empowerment, and an optimal mix of approaches to improve the management of forests, grasslands, soils and water resources. The major challenge, therefore, is the formulation of a well-integrated, sustainable development strategy covering economic growth, social development and protection of the environment. In this regard, priority attention should be devoted to the following.

Policy coherence under the Environmental Framework Act

Sustainable economic growth policies should be carefully formulated in keeping with the 2001 Environmental Framework Act. The latter is intended to provide a legal framework for policies, legislation and executive action by federal state organs. Emphasis should be placed on sectoral policies that can be implemented without prejudice to commitment to international conventions. This will require, among other things, encouraging the participation of local citizens (especially women), raising awareness, mapping areas affected by desertification, drought and flooding, controlling the use of chemicals and organic matter in industry and agriculture, improving access to safe drinking water and other actions protecting the natural environment while exploiting it for economic growth.

Urban settlements and sanitation issues

With the advent of peace, the resettlement of about 4 million IDPs will surely exacerbate the housing situation for the poor, and this is in addition to natural population growth. Pressure on urban infrastructures and social services will most certainly increase tremendously. The inability to accommodate the huge influx of poor people into urban areas will lead to expanded squatter settlements. The disposal of human excreta in open spaces and of solid waste in streets between the houses is often observed in squatter areas due to the unavailability of proper sanitation, and because of traditional rural cultures. Consequently, the incidence of disease quickly rises in these areas, affecting mostly children and women. At the national level, it is estimated that 64% of the population has access to sanitation, although there are wide regional variations. The ratio of populations who have access to sanitation networks is only 6%, while the ratio of urban populations who have access to septic tanks is not more than 3.5%.

Potable water and sanitation management

Inadequate access to safe water and poor hygiene and sanitation practices are among the main constraints in the prevention and control of diseases. This sector is urgently in need of strong management that could initially focus on several priority areas, including: development of a minimum set of standards for water and sanitation services; participatory planning and the implementation of water projects with civil society; integrating water and sanitation development with health, education, housing and population programmes; coordinating the development of low-cost sustainable water supplies; protecting catchment areas and promoting rainwater collection and storage; and facilitating gender-oriented management of community water projects. Presently, most water programmes are being managed by local and international humanitarian organizations that also provide technical, material and capacity-building support. Over the medium term, developments in water and sanitation should focus on supporting private-sector investment in the area of sanitation, water resources development, provision of water services, and the manufacture of water and sanitation equipment; developing and improving civil society and NGO networking in the areas of water and sanitation and housing; re-planning and re-location for populations affected by war and natural disaster; and a multi-sectoral approach so that drinking water services, education and environmental sanitation are provided as a package and tailored to suit rural areas and the urban fringes. The roles of water corporations in the states in relation to other concerned government units, civil society organizations and private companies would need to be clarified.

Natural resources management

The challenges for natural resource management are mostly institutional, and are brought about by weak technical capacity and the lack of a coherent policy. Foremost are: the lack of regulatory measures and weak enforcement; the absence of community involvement in decision-making on the sharing of benefits and responsibilities of natural resources; and lack of comprehensive planning data on forests and other natural resources. The Forestry Department under the Secretariat of Agricultural and Animal Resources is still elaborating interim guidelines on conservation and management of all government and communal forests for sustainable production of domestic and commercial products while protecting the environment.

As these guidelines are being further elaborated, it would be opportune to identify additional policy proposals that should be addressed over the short to medium term, especially those falling within the current interests of several international aid organizations. These include: developing a legal and institutional framework for forest and wildlife conservation; development of biodiversity and environmental issues; pro-poor, gender-responsive natural resource-based sustainable livelihood programmes; and better management of natural ecosystems.

Gender issues

The priority in this sector should be given to addressing the institutional barriers to gender parity, of which there are many but which are not insurmountable. The most important is conflict, and ensuring peace and security for all Sudanese – but especially for women – remains the single, most important challenge. Even though the law has given women equal rights without discrimination of gender, race or religion, gender discrimination persists. Improving women's rights means addressing inequality in access to resources and education, early marriage, traditional division of labor and household chores, and integrating gender in national development strategies and plans. Moreover, women will remain disenfranchised unless they can achieve their rights to health – particularly safe motherhood.

Implementation of a comprehensive, gender-sensitive development policy and enforcing laws that will lead to societal changes of attitudes towards women should form a basic part of the reconstruction strategies in the Sudan, mainstreaming gender issues in legislation, policies and programmes in all sectors of the economy. Appointing women to positions of leadership in the political and administrative structure at all levels would also be strategic, signaling the emancipation of women from their traditional bondage. Partnership with national and international agencies, donors, the private sector and institutions that are working to empower women and girls would be particularly helpful to create and maintain a high level of momentum of change in this sector.

Information and communication technologies

Many manufacturing firms in Sudan are constrained by the lack of local demand for information technology goods and services. This is partly because most people live below the poverty line and lack purchasing power, but also because of competition from imports. Priority strategic interventions would be required in this sector to: increase local demand through the promotion of ICT literacy, making Sudanese businesses think globally and act locally; using ICT to leapfrog in processing, design and marketing, making available the benefits of new technologies to industrial development; and using ICT to replicate best practices in production, marketing and manufacturing according to international standards and specifications.

The government's reconstruction programming priorities should, therefore, include a number of strategic focal points for ICT development and deployment, such as: developing a national ICT strategy for government and business sectors; enhancing national capacities for the effective use of new technologies for analysis and policy formulation, implementation and monitoring; encouraging the use of ICT by national institutions, especially research and academic institutions, and in all government ministries; ensuring that university ICT courses include not just theory but also practice, so that students emerge with practical experience;

encouraging private sector-led electronic-commerce initiatives and providing the essential ICT infrastructure and incentives support; and launching ICT-intensive projects, such as the Sudanese Geographic Information System (GIS) Invest-Map at the Ministry of Investment, and connecting it with sub-networks in relevant ministries as well as with the Sudanese UNIDO (SPX) Network.

Food security: Resurrecting the “African Breadbasket”

Sudan should aim at continuously and progressively improving its socio-economic development and competitiveness in regional and world trade, in small steps if necessary, rather than catching up with others who have already laid the foundation for development even during the colonial times. As agriculture is its most abundant resource and it is renewable, unlike oil or natural gas, it should beat an economic path back to the early colonial vision of the Sudan being the breadbasket, the largest food producer, in the region.

While that vision of the African breadbasket may no longer be attainable in reality as many of its neighbors have reached much higher and sustained levels of growth and productivity, still it emphasizes the value of competing from a position of strength, through the ownership and control of many untapped natural resources for food production, manufacturing, minerals and services, while enjoying (at least during the medium term) the relative stability of oil revenues as a source for development financing. With durable peace, the business of laying down the foundations for production and re-training of lost skills, acquisition of technology and development of marketing arrangements and infrastructure can proceed in earnest.

Oil – The key to Sudan’s development

Sudanese production and export of light, sweet crude – the most easily refined, and therefore most desirable oil – have risen rapidly in the last few years, with Sudan’s Ministry of Energy reporting production exceeding 500,000 barrels per day despite internal upheaval, including the unrest in the northern region of Darfur. Sudan has proven reserves of some 563 million barrels of oil, with the potential for far more in regions of the country made inaccessible by conflict.

The ever-increasing demand for energy resources by China to fuel its fast-expanding economy has led to large contracts for the purchase of oil from Sudan and other African countries (Algeria, Angola, Chad, Gabon, Equatorial Guinea, and Nigeria). According to the US Energy Information Administration, China accounted for around 40% of total growth in global demand for oil in the last four years. In 2003, it surpassed Japan as the world’s second-largest oil consumer, after the United States. In the first 10 months of 2005, Chinese official sources say, Chinese companies invested a total of US\$175 million in African countries, primarily on oil exploration projects and infrastructure. In January 2006, the state-owned Chinese energy company, CNOOC Ltd., announced it would buy a 45% stake in an offshore oil field in Nigeria for US\$2.27 billion. China already has a significant presence in many African countries, notably Sudan: China bought 50% of Sudan’s oil exports in 2005,

which accounted for 5% of China's oil needs. "China is very deeply engaged in exploiting Africa's oil resources".²¹

Experts say China has adopted an "aid-for-oil" policy and is using this to secure ever-increasing supplies of oil from producers in Africa. This need to find increasing oil resources is now the driving force in Chinese foreign policy²². China's manufacturing sector has created enormous demand for aluminum, copper, nickel, iron ore, and oil. China "has been able to adapt its foreign policy to its domestic development strategy"²³ to an unprecedented level by encouraging state-controlled companies to seek out exploration and supply contracts with countries that produce oil, gas, and other energy resources. At the same time, Beijing aggressively courts the governments of those countries with diplomacy, trade deals, debt forgiveness, and aid packages. The strategy appears to be working: China has gained access to key resources around the world, from gold in Bolivia and coal in the Philippines to copper in Chile and natural gas in Australia. And, of course, oil from Africa.

From 2002 to 2003, trade between China and Africa doubled to US\$18.5 billion, and then nearly doubled again in the first 10 months of 2005, jumping 39% to US\$32.17 billion. Most of the growth was due to increased Chinese imports of oil from Sudan and other African nations. China's foreign direct investment in Africa represented US\$900 million of the continent's US\$15 billion total investments in 2004. China is now the continent's third most important trading partner, behind the United States and France, and ahead of Britain. It is a win-win situation for China so far. Experts say Chinese companies see Africa as both an excellent market for their low-cost consumer goods, and a burgeoning economic opportunity as more countries privatize their industries and open their economies to foreign investment.

"Oil for Development" programme

Sudan should explore an "integrated packages of aid" deal with China, following the model used by Angola, for example. Angola is presently selling around 25% of its total oil production to China, under an arrangement where China provides a package of loans amounting to US\$2 billion. Under the deal, Chinese companies will build civil and social infrastructure projects in Angola (roads, bridges, railway network, schools and hospitals, etc.) including the laying out of a fiber optics-based communication system. This Chinese strategy of offering poor countries trade deals combined with aid could also be a win-win strategy for Sudan at this stage of its development, the idea being to "help it get on its feet and learn to walk again on its own".

Therein lies a truly golden opportunity for Sudan to explore an "oil for development" programme with China and other countries, to include the exchange of technology, know-how, machinery and equipment, manufacturing contracts and other in-kind payments for oil, and the construction of much needed civil works and infrastructure in Sudan.

IX. Promoting business development and economic inclusion through the intellectual property system

²¹ See [Elizabeth Economy](#), by C.V. Starr, Senior Fellow and Director for Asia Studies at the Council on Foreign Relations.

²² See "[China's Global Hunt for Energy](#)," by David Zweig and Bi Jianhai in the September/October 2005 issue of *Foreign Affairs*.

²³ *Ibid.*

At the same time that Sudanese oil revenues are securing for Sudan the essential infrastructure and required mix of equipment, capital, raw materials and skilled manpower to re-establish its economic production, a national strategy on indigenous innovation, creativity, and the widespread legal exploitation of intellectual property should also be pursued. Development of intellectual property establishes one of the best-known foundations for micro, small and medium-sized enterprise developments, sustainable export strategies and domestic goods manufacturing and marketing, especially after the basic infrastructure has been established and a peace-derived business environment prevails. It is a strategy that is relevant to any sector, but particularly for the Sudan it would have maximum impact on, for example, agriculture and food production, manufactured consumer goods, agricultural and industrial capital equipment, information and communication technology, transportation, and other IP-rich sectors in post-war Sudan.

The urgent business of priming up the economy with the arrival of peace may be achieved in a number of ways. In the circumstances in the Sudan, it will be crucial to: invest in education and skills development training, especially in science and technology fields; and provide public funding for research and development (R&D) and partnerships with industry to invest private capital in infant industries and promising R&D. Investment in human capital and strategic skills is not only basic to any economic growth but also necessary to improve Sudan's absorptive capacity, that is, the ability of the labor force and industry to recognize and apply new information as they emerge to advance business profits or to develop new businesses.

Increasing Sudan's stock of knowledge, know-how and technological development capacity is the ultimate objective of the increased level of investment in R&D. It is well known, however, that because there is a time lag between investment spending and outcome or result, the benefits of R&D are often difficult to measure and follow up. It is common practice to use the level of patenting activities as proxy measures of R&D outcomes, or to evaluate the productivity of R&D expenditure.

In order to promote increased investment in R&D, governments can usually either offer tax incentives to R&D investors (deductions applied to pre-tax profits to lower the corporate tax bill), or can make the intellectual property system, especially patents, more attractive as an incentive for investing in R&D. Anti-trust measures, confidentiality agreements and secrecy, trademarks and copyrights all provide to one extent or another inducement for firms to invest in R&D.

In this regard, the government has a wide scope, subject to existing international treaties, to strengthen the intellectual property regime so as to encourage further innovative activity. In most developing countries, however, there is often a need to balance the protection of R&D investment on the one hand, and not hindering the progress of other innovative activity to continue to a make profit²⁴, on

²⁴ This is a popular ethical issue on the ownership of creations of the mind, and one commonly observed as a key factor in determining the public acceptance of intellectual property rights as a policy tool for economic and social development. The notion that creations of the mind or actual products should be allowed to freely move from one individual, business or community to another to improve day-to-day social and economic well-being is a continuing debate in many academic, legal, economic and cultural circles – especially where the concept of intellectual property is relatively new, as in many developing countries.

the other hand. This is because even with an easier, more streamlined or simplified patent system, the rate of innovation would not necessarily be faster. The normal tendency, therefore, as in many developing countries, is for lower quality patents (or lower standards of intellectual property) to be tolerated, many representing only minor improvement over previous inventions (for example, petty patents), or characterized by marginal technological change, or less important potential impact on economic and technological development.

Because science and technology development virtually crawled to a dead stop in the Sudan many years ago, new innovations and new technologies that make older technologies obsolete or more costly would be common occurrences in post-war Sudan. This Sudanese re-creation of the Schumpeterian theory of “creative destruction” (i.e., emergence of new technologies that render older ones obsolete) would provide incentives for investment in innovation by new firms, as well as encouragement of older industries to develop products that improve upon their older ones. This “Schumpeterian competition” would be amongst the new driving forces of industry, where the race for new technology, new market crazes, new sourcing of supply or of resources for older products, new business organizations, new marketing styles, etc., would dominate the business landscape.

In post-war Sudan, technological information in the public domain not restricted by any intellectual property or contractual arrangements could be a rich source of business ideas especially for micro enterprises and small and medium-sized companies. Public domain information, for example, exists freely as ideas or facts contained in a patent granted over 20 years ago; more recent patents no longer maintained by their owners; or artistic works whose copyright term has expired. The latter includes a large part of the work undertaken by universities and government R&D agencies, and those offered under license and subsequently released (mainly by the private sector for software innovations) or Creative Commons, which directly exclude some or even all copyright protection. A third but more limited and more complicated source falls under the category of patent disclosures.

X. Special focus on South Sudan

With a peace agreement signed, the political and economic situation looks optimistic. The prospective new Government of National Unity and GOSS share the mammoth task of implementing the peace agreement, and of ameliorating past deficits on development by reallocating expenditure from the civil war to pro-poor development. The oil production is of particular importance to South Sudan, where daily oil production is expected to rise from 310,000 barrels in 2004 to over 375,000 barrels in 2005, or a growth of about 10%. It is estimated that for each dollar increase in the price of a barrel of oil, Sudan’s export value will increase by about US\$81 million, or 0.4% of GDP²⁵. The macro-economic environment also provides a promising and historic opportunity to consolidate peace and reallocate expenditure to pro-poor development strategies.

²⁵ UN Country Team and Government of Sudan, in their Interim Unified Report on Sudan’s performance on the MDGs.

On March 9 and 10, 2006, the first-ever Consortium²⁶ for the Sudan was held in Paris, attended by Salva Kiir Mayardit, First Vice President, and senior ministers from the Government of National Unity (GNU) and GOSS. Over a hundred “partners” from the global economic community also attended, including representatives of international aid organizations.

The policy dialogue on economic, structural and institutional reforms was central to the discussions. The broad conclusion was that while implementation of the Comprehensive Peace Agreement (CPA) was making progress, except in Abyei, southern Kordofan and Blue Nile, Darfur continues to be in critical crisis from a humanitarian perspective, overshadowing the peace process. The situation in eastern Sudan was also noted. Moreover, the level of commitment to support pro-poor development is not sufficient to ensure tangible results on the ground.

On macro-structural policies, the Consortium noted that, in 2005, economic growth has remained robust (8% per year), especially in the non-oil sector, and foreign direct investment reached US\$2.4 billion. A further increase in the rate of growth is projected for the coming years. Inflation has been contained within single-digit levels and is targeted to fall slightly to 7.5% in 2006.

A key issue is the channeling of large transfers to the South as provided for under the CPA and a substantial increase in transfers to the northern states to support domestic pro-poor spending. While pro-poor spending increased in 2005 relative to 2004, poverty remains pervasive in the South and other regions. According to the Consortium report, the commitment of the GNU to improve oil sector transparency was welcomed, including the publication of detailed oil sector data, the completion of audits of the state-oil company Sudapet, regular transfers of state oil companies’ profits to the treasury, restructuring of the central bank and the introduction of a new national currency.

Cross-cutting themes include the need to focus on women and children and gender, space for civil society and NGOs. The centrality of poverty eradication and the Millennium Development Goals to Sudan’s development goals was reaffirmed.

On the issue of poverty, it was agreed that the keys to accelerating progress on poverty eradication on the part of the GNU revolve around improving governance and transparency, adopting urgently needed measures to support rural development – especially small farmers and firms, supporting private sector development and trade, reducing bureaucratic barriers to business registration, customs, land use, implementing the tariff reform programme, rationalization of the tax system, and allocating government and donor resources to water and sanitation, health and education in support of poverty reduction.

For the GOSS, the keys to accelerated progress in poverty eradication were laid out in terms of efforts to ensure the development of basic infrastructure and social services, and pro-poor spending efforts.

On the donor side, the Consortium noted the commitments made for funding to support Phase 1 of the Interim Period (though end 2007) which is on-track. Out of a total of

²⁶ As reported in a joint Statement by the World Bank, the UN, and the IMF on Sudan (Press Release No. 06/50, March 10, 2006, Paris, France).

US\$4.5 billion pledged through 2007, about 38% have so far been reported. Overall reported assistance has increased significantly, from US\$383 million in 2003 to over US\$1.7 billion in 2005. While this was significantly driven by increased humanitarian assistance to Darfur, which peaked at US\$890 million in 2004, assistance to southern Sudan rose to US\$680 million in 2005, with large shares of humanitarian and recovery support alongside an increase in development assistance. The total confirmed support for 2006 is nearly US\$1.8 billion, of which roughly US\$1 billion are for humanitarian assistance.

It was agreed among partners and with the Sudanese, that development assistance, especially to marginalized areas, should not be conditional upon a peace agreement in Darfur. It was clear that a failure of the CPA and a failure to deliver peace dividends in the South would have broad adverse repercussions for the whole country. At the same time, it was agreed that early planning for post-conflict financing of recovery and development needs should begin, to enable the dividends of peace to flow and to underpin sustainable development.

It is expected that future events should be held in Sudan. The value of having discussions that are more specific at each Sudan Consortium was recognized. The Sudan Consortium could focus its efforts more on pro-poor spending definitions and trends, the adoption of Government Finance Statistics and reporting, and progress on the Public Expenditure Review and related areas. It may also be appropriate at that stage to review post-conflict development planning for Darfur, including in the light of lessons learned since the signing of the CPA.

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