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COUNTRY ANALYSIS BRIEFS

Sudan

Last Updated: March 2006

Background

A newly signed peace agreement and increased hydrocarbon exports have helped stabilize Sudan's economy.

Sudan, the largest country on the African continent, gained its independence from Egypt and the United Kingdom in 1956. A cultural and religious division has existed for many years between the northern, Islamic states and the predominantly Christian states in the south. The northern Sudanese primarily live in large urban centers, while those in the south primarily subsist on a rural economy. Sudan has considerable hydrocarbon resources and a large agricultural sector, though the country is considered one of the poorest in the world.

Stable prices resulting from International Monetary Fund (IMF)-approved macroeconomic policies have led to a slowdown in Sudan's currency depreciation and an improved fiscal balance. In 2005, Sudan's real gross domestic product (GDP) grew 6.4 percent and is expected to grow 5.7 percent in 2006. Sudan's oil exports have increased sharply since the completion of a major oil-export pipeline in 1999. Currently, 70 percent of Sudan's total export revenues come from oil exports. Despite high oil revenues, the country ran a current account deficit of $907 million in 2005. In an effort to bolster its trade potential, Sudan applied for World Trade Organization (WTO) membership, with the conclusion of negotiations expected in 2008. As early as June 2006, Sudan is expected to convert its managed-float Sudanese dinar currency into free-floating Sudanese pounds. The cost of converting over to the new currency is estimated at $100 million.

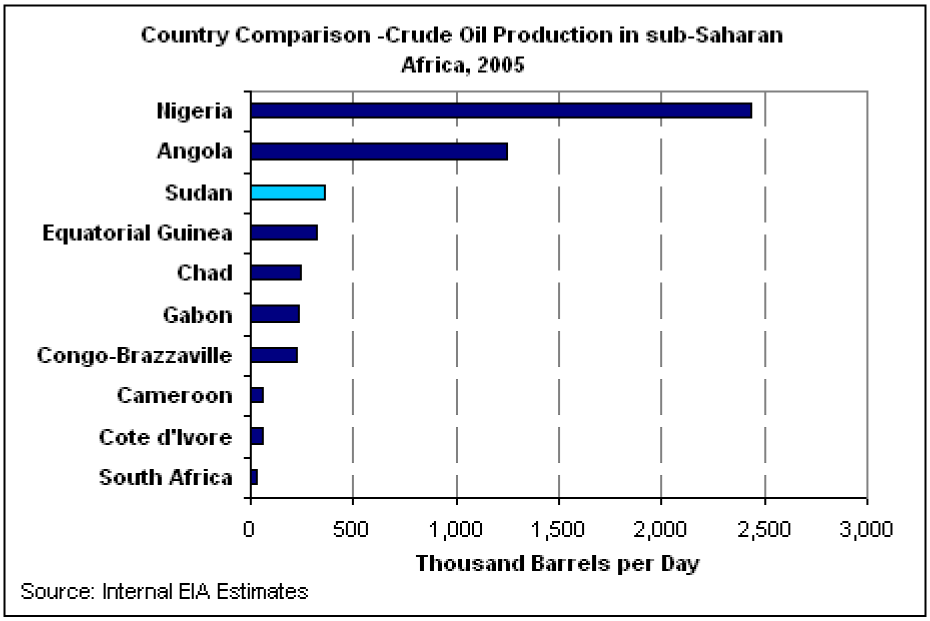
In December 2004, a peace declaration was signed between the Sudanese government and the Sudan People's Liberation Army (SPLA) in the south. Prior to the signing, several important issues were agreed upon by the two parties, which included the sharing of oil revenues (50:50), the application of Islamic religious law (will not be applied in the South), and self-determination for the southern Sudan (a referendum on secession will be held after a six-year transitional period). In January 2005, the two parties formally signed the Comprehensive Peace Agreement (CPA). Also in January 2005, the SPLA leader requested that the United Nations (U.N.) Security Council would deploy peacekeepers to monitor the tenuous peace in Sudan. The peacekeepers had to be from countries which did not have an interest in Sudanese oil.

Additional growth in Sudan's hydrocarbon and other industrial sectors will likely occur with a refurbished infrastructure, which has seen little improvement since the beginning of the country's civil conflicts in 1955. The Sudanese government has budgeted future revenues for infrastructure refurbishments and a multi-donor trust fund (MDTF) – administered by the World Bank – was created to support development projects. Investments from the MDTF will be divided between the Government of Southern Sudan (GOSS) and the national government in Khartoum. In November 2005, the MDTF gave the first disbursement of $20 million to the GOSS for the rebuilding of health and education services.

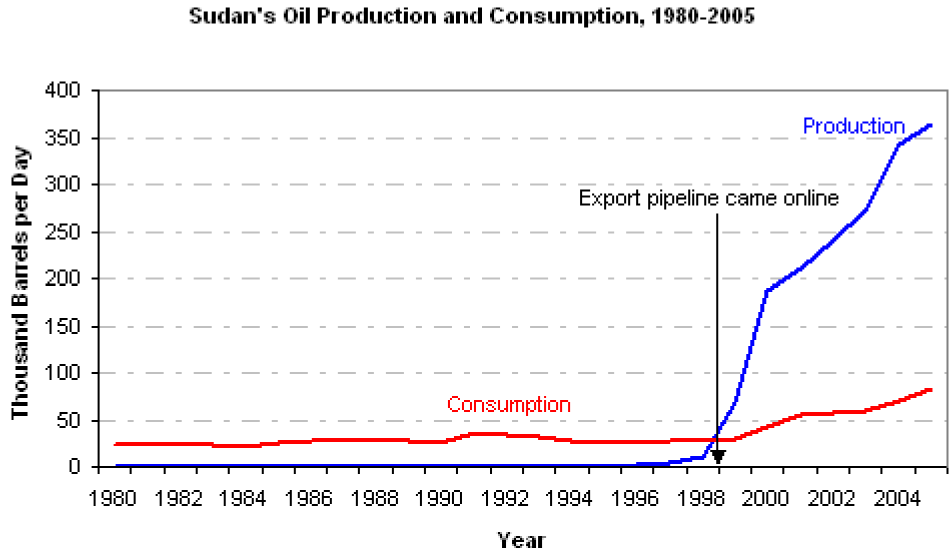
Oil

Sudan is working to become a significant world oil producer.

According to the *Oil and Gas Journal* (*OGJ*), Sudan contained proven conventional reserves of 563 million barrels as of January 2006. This is more than twice the proven 262 million barrels estimated in 2001. The Sudanese Energy Ministry estimates total oil reserves at five billion barrels. Due to civil conflict, oil exploration has been mostly limited to the central and south-central regions of the country. It is estimated that vast potential reserves are held in northwest Sudan, the Blue Nile Basin, and the Red Sea area in eastern Sudan.



Oil production has risen steadily since the July 1999 completion of an export pipeline that runs from central Sudan to the Port of Bashair. In 2005, crude oil production averaged 363,000 barrels per day (bbl/d), up from 343,000 bbl/d during 2004. The Sudanese government has set a production target of 600,000 bbl/d by the end of 2006. This target will likely be achieved if new projects come online and proposed output increases are realized. In 2005, Sudanese oil consumption averaged 82,000 bbl/d. This was a 15 percent increase over the 70,000 bbl/d consumed during 2004.



Source: International Energy Annual, IPM

Sector Organization

The Sudan National Petroleum Corporation (Sudapet) is active in Sudan's oil exploration and production. However, due to its limited technical and financial resources, the company takes a minor role in large upstream development projects. Sudapet also develops joint ventures with foreign companies in downstream projects. Foreign companies involved in Sudan's oil sector are primarily from Asia. They are led by the China National Petroleum Corporation (CNPC), India's Oil and Natural Gas Corporation (ONGC) and Malaysia's Petronas.

A new National Petroleum Commission is being formed in Sudan. The function of the commission will be to allocate new oil contracts, and to ensure an equal sharing of oil revenues between Khartoum and the Southern Sudan or GOSS. President Bashir will co-chair the commission with Vice-President Salva Kiir, who also heads the GOSS.

Exploration and Production

Exploration and development of Sudan's oil resources has been highly controversial. International human rights organizations have accused the Sudanese government of financing human rights abuses with oil revenues, including the mass displacement of civilians near the oil fields. Factional fighting in the South and rebel attacks on oil infrastructure have kept oil production and exploration from reaching full potential to date. In October 2004, for example, the Sudanese government prevented a militia attempt to sabotage the country's main oil export pipeline. However, the recent peace agreement between the government and the SPLA will likely lead to substantial investment in both production facilities and new exploration initiatives in the country. In January 2005, after the official signing of the CPA, Total, Marathon Oil Corporation, and the Kuwait Foreign Petroleum Company renewed their exploration rights in southern Sudan.

Greater Nile Oil Project

In 1996, Canadian independent Arakis Energy (Arakis) began development of the Heglig and Unity fields (Blocks 1, 2, and 4), estimated to contain recoverable reserves of 600 million to 1.2 billion barrels. Because the fields were not located near the Red Sea coast, Arakis entered into a consortium with the Greater Nile Petroleum Operating Company (GNPOC) to raise investment for a 994-mile pipeline from the fields to the Suakim oil terminal near Port Sudan. In September 1999, the first cargo of "Nile Blend" crude departed the export terminal. Although the pipeline was originally built to move 150,000 bbl/d, its current capacity is 450,000 bbl/d. Production from GNPOC's 10 fields is estimated at a combined average of 285,000 bbl/d. Currently GNPOC is looking to develop additional fields in Block 4. In 2002, Canada's Talisman Energy sold its 25 percent interest in GNPOC to India's ONGC in response to concerns over human rights abuses. Currently, GNPOC is operated by CNPC (40 percent), with partners Petronas (30 percent), ONGC (25 percent) and Sudapet (5 percent).

Blocks 3 and 7

In June 2004, Petrodar, a consortium of CNPC (41 percent), Petronas (40 percent), Sudapet (8 percent), Gulf Oil Petroleum (6 percent), and the Al-Thani Corporation (5 percent) awarded a $239 million contract to Malaysia's Ranhill International and Sudan's Petroneeds Services International for development work on Blocks 3 and 7. The blocks contain the Adar Yeil and Tale fields, with estimated recoverable reserves of 460 million barrels and an expected output of 120,000 bbl/d. Capacity is expected to increase to 300,000 bbl/d by late 2006. A pipeline linking the two fields to Port Sudan came online in November 2005. The project also includes a 300,000 bbl/d central processing facility at Al-Jabalayan and production facilities at Palogue.

Block 5A

In April 2005, the Sudanese government signed an agreement with the White Nile Petroleum Company for the development of the Thar Jath and Mala fields on Block 5A. The company has plans to drill 45 wells, which are due to come online in March 2006. Initial production capacity on the block is estimated at 80,000 bbl/d, which will flow through a 110 mile pipeline to Port Sudan. Total cost of the project is estimated at $400 million. White Nile Petroleum Company is a consortium of companies, which include Petronas (68 percent), ONGC (24 percent) and Sudapet (7 percent).

Block 6

In November 2004, CNPC's Fula field on Block 6 came online at a rate of 10,000 bbl/d. Currently, output on the block is at 40,000 bbl/d, but is expected to eventually reach 80,000 bbl/d. CNPC has constructed a pipeline that links the Fula field to the Khartoum refinery.

Refining and Downstream

According to *OGJ*, Sudan's three refineries had total refining capacity of 121,700 bbl/d in 2005. The two largest refineries, El Gily and Khartoum, both had capacities of 50,000 bbl/d. The Sudanese government has plans to increase capacity at the Khartoum refinery to 100,000 bbl/d. In July 2004, CNPC completed the first-stage expansion of the Khartoum refinery. The second-stage expansion of the refinery is currently underway, but a completion date has yet to be announced.

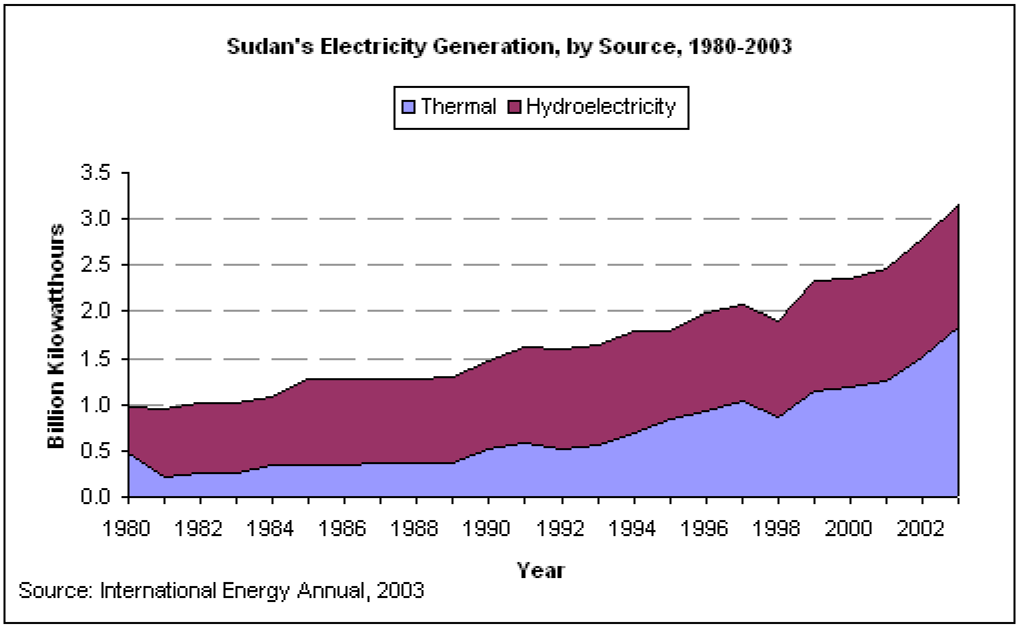
The Port Sudan facility, located near the Red Sea, is Sudan's smallest refinery, with a capacity of 21,700 bbl/d. In September 2005, a contract was awarded to Petronas to build a new refinery at Port Sudan. The refinery will be designed to process the "Dar Blend" (crude with high-acid content) found in Sudan's Melut basin, and it will have a capacity of 100,000 bbl/d. The refinery is expected to be operational in 2009. Petronas is joined by the Sudanese Ministry of Energy and Mining, with both entities holding 50 percent shares in the project.

In October 2004, Malaysian Peremba began construction of a $232 million marine export terminal for the Melut Basin Oil Development Project. The terminal will have a capacity of 2 million bbl/d. Malaysia's Nam Fatt and Italy's Bentinin have been contracted to build six pumping facilities in the basin by April 2006. Construction on an 870-mile pipeline linking the Melut Basin to the export terminal near Port Sudan was divided into four parts, with separate consortias to undertake each of the segments. In July 2004, a consortium led by MMC Corporation was contracted to build a 304-mile portion, and in August 2004, Russian Stroitransgas began construction on a 227-mile section. The terminal is expected to begin exporting oil by August 2006.

Electricity

Sudan aims to increase its electricity generation capacity over the next few years.

Sudan's electricity sector is plagued by poor infrastructure and frequent outages. In 2003, Sudan had 760 megawatts (MW) of electricity generation capacity, and total electricity generation of 3.2 billion kilowatthours (Bkwh). The country's main generating facility is the 280-MW Roseires dam located on the Blue Nile river basin, approximately 315 miles southeast of Khartoum. The facility has frequently been attacked by rebel groups, and low water levels often cause its capacity to fall to 100 MW.



Electricity is transmitted through two interconnected electrical grids, the Blue Nile Grid and the Western grid, which cover only a small portion of the country. Regions not covered by the grid rely on small diesel-fired generators for power, although blackouts and brownouts are common. Only 30 percent of the population currently has access to electricity, although the government hopes to increase that figure to 90 percent in coming years. In June 2004, Sudanese Electricity Minister Ali Tamim Fartak said that Sudan has secured more than $2 billion of the estimated $3 billion necessary to meet that goal.

Several projects are underway to increase Sudanese generating capacity. The largest projects include the proposed 1,250-MW Merowe and 300-MW Kajbar hydroelectric facilities in northern Sudan. France's Alstom, China's Harbin Power and several Arab investors have contributed funding to construct the Merowe facility, which is scheduled for completion in July 2008. China is financing 75 percent of the $200 million Kajbar dam construction, with Sudan providing the remaining 25 percent. Environmental groups have expressed concern about the Kajbar project, citing potential damage to the Nile ecosystem and the culture of displaced Nubian residents of the area.

In addition to the Merowe and Kajbar facilities, Sudan inaugurated two electric power stations in June 2004. The stations are estimated to have a combined capacity of 330 MW. In November 2004, Sudan's first independent power production (IPP) project (257 MW) came online. The diesel plant, located near Khartoum, sells output to the state-owned Sudan Electricity Corporation (SEC). Several additional power stations with a total capacity of 700 MW are scheduled for completion before 2008.

Foreign investment in the Sudanese power sector is expected to increase with the cessation of the civil war. In June 2004, for example, the United Arab Emirates (UAE) pledged to invest in the Sudanese power sector following the signing of a peace accord. In January 2006, the Export/Import Bank of India extended $350 million of credit to Sudan. The money will be used for constructing a 500-MW power plant, which will be built by India's Bharat Heavy Electricals Ltd.

Profile

Country Overview

President	Lt. Gen. Umar Hassan Ahmad al-Bashir (since 1989)
Location	Northern Africa, bordering the Red Sea, between Egypt and Eritrea
Independence	1 January 1956 (from Egypt and UK)
Population (2005E)	40,187,486
Languages	Arabic (official), Nubian, Ta Bedawie, diverse dialects of Nilotic, Nilo-Hamitic and Sudanic languages

Religion	Sunni Muslim 70% (in north), indigenous beliefs 25%, Christian 5% (mostly in south and Khartoum)
Ethnic Group(s)	black 52%, Arab 39%, Beja 6%, foreigners 2%, other 1%

Economic Overview

Minister of Finance	Zubeir Mohammed Hassan
Currency/Exchange Rate (3/3/06)	Sudan Dinars 228.570 SDD= US $1
Inflation Rate (consumer price index)	(2005E): 8.0% (2006F): 7.1%
Gross Domestic Product (2005E)	$25.8 billion
Real GDP Growth Rate	(2005E): 6.4% (2006F): 5.7%
External Debt (2005E)	$18.1 billion
Exports (merchandise, 2005E)	$4.9 billion
Exports - Commodities	oil and petroleum products; cotton, sesame, livestock, groundnuts, gum arabic, sugar
Exports - Partners (2004E)	China 64.3%, Japan 13.8%, Saudi Arabia 3.7%
Imports (merchandise, 2005E)	$5.1 billion
Imports - Commodities	foodstuffs, manufactured goods, refinery and transport equipment, medicines and chemicals, textiles, wheat
Imports - Partners (2004E)	Saudi Arabia 11.7%, China 10.7%, UAE 6.2%, Egypt 5.2%, Germany 4.9%, India 4.6%, Australia 4.1%, UK 4%
Current Account Balance (2005E)	-$658 million

Energy Overview

Minister of Energy and Mining	Awad Ahmed al-Jaz
Proven Oil Reserves (January 1, 2006E)	0.6 billion barrels
Oil Production (2005E)	360.9 thousand barrels per day, of which 100% was crude oil.
Oil Consumption (2005E)	81.9 thousand barrels per day
Net Oil Exports (2005E)	279.0 thousand barrels per day
Crude Oil Refining Capacity (2006E)	121.7 thousand barrels per day
Proven Natural Gas Reserves (January 1, 2006E)	3 trillion cubic feet
Natural Gas Production (2003E)	None
Natural Gas Consumption (2003E)	None
Electricity Installed Capacity (2003E)	0.8 gigawatts
Electricity Production (2003E)	3.2 billion kilowatt hours
Electricity Consumption (2003E)	2.9 billion kilowatt hours
Total Energy Consumption (2003E)	0.1 quadrillion Btus*, of which Oil (90%), Hydroelectricity (10%), Natural Gas (0%), Coal (0%), Nuclear (0%), Other Renewables (0%)
Total Per Capita Energy Consumption (2003E)	4.1 million Btus
Energy Intensity (2003E)	2,288.6 Btu per $2000-PPP**

Environmental Overview

Energy-Related Carbon Dioxide Emissions (2003E)	8.8 million metric tons, of which Oil (100%), Natural Gas (0%), Coal (0%)
Per-Capita, Energy-Related Carbon Dioxide Emissions	0.3 metric tons

(2003E)	
Carbon Dioxide Intensity (2003E)	0.1 Metric tons per thousand $2000-PPP**
Environmental Issues	inadequate supplies of potable water; wildlife populations threatened by excessive hunting; soil erosion; desertification; periodic drought
Major Environmental Agreements	party to: Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Law of the Sea, Ozone Layer Protection signed, but not ratified: none of the selected agreements

Oil and Gas Industry

Major Oil Ports	Port Bashair, Port Sudan
Foreign Company Involvement	China National Petroleum Corporation (CNPC), India's Oil and Natural Gas Corporation (ONGC) and Malaysia's Petronas, Total SA, Marathon Oil Corporation, and the Kuwait Foreign Petroleum Company
Major Oil Fields	Heglig, Unity, Adar Yeil, Tale, Thar Jath, Mala and Fula
Major Pipelines	994-mile pipeline from Heglig and Unity fields to the Suakin oil terminal – Pipelines under construction include the 870-mile linking Melut Basin to oil export terminal near Port Sudan and a 110-mile pipeline linking the Thar Jath and Mala fields to Port Sudan.
Major Refineries	El Gily (50,000 bbl/d), Khartoum (50,000 bbl/d), Port Sudan Refinery (21,700)

* The total energy consumption statistic includes petroleum, dry natural gas, coal, net hydro, nuclear, geothermal, solar, wind, wood and waste electric power. The renewable energy consumption statistic is based on International Energy Agency (IEA) data and includes hydropower, solar, wind, tide, geothermal, solid biomass and animal products, biomass gas and liquids, industrial and municipal wastes. Sectoral shares of energy consumption and carbon emissions are also based on IEA data.
**GDP figures from OECD estimates based on purchasing power parity (PPP) exchange rates.

Links

EIA Links

EIA - Country Information on Sudan

U.S. Government

CIA World Factbook - Sudan
USAID - Sudan
U.S. State Department Travel Warning - Sudan
U.S. State Department Consular Information Sheet - Sudan
U.S. Department of the Treasury, Office of Foreign Assets Control, Sudan Sanctions Fact Sheet (requires Acrobat Reader)

General Information

BBC Country Profile: Sudan
Human Rights Watch: "Sudan, Oil and Human Rights"
Africa News Service: Sudan
Washington Post World Reference: Sudan
Arab Net: Sudan
Sudan.Net
Darfur Information Center
Latest News from Sudan at Sudan.net
University of Pennsylvania African Studies: Sudan

Foreign Government Agencies

Embassy of the Republic of Sudan

Non-Governmental Organizations

Merowe Dam Project

Electricity

National Electricity Corporation

Oil and Natural Gas

China National Petroleum Company (CNPC)
Oil and Natural Gas Corporation (ONGC)
Petronas

Sources

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