SOUTHERN SUDAN

Topography


Geographic Overview
Port Sudan
Khartoum
Kassala
Al Fashir
El Obeid
Nyala
A Southern Blue Nile
Malakal
B Bahr el Ghazal
Raja
Wau
Rumbek
C Jonglei
D Western Equatoria
Juba
E Eastern Equatoria
Yei
Northern Darfur
Northern Kordofan
White Nile
Sennar
Blue Nile
Southern Darfur
Southern Kordofan
Upper Nile
Unity
Western Bahr el Ghazal
Northern Bahr el Ghazal
Warrab
Jonglei
Lakes
Western Equatoria
Central Equatoria
Eastern Equatoria
Ethiopia
CAR
DRC
Uganda
Kenya
1:1'000'000
0 25 50 75 100 km
N
Settlements
State capital
Principal town
Secondary town
Administrative town
Settlement (verified)
Settlement (not verified)
Built - up area
Vulnerable area (camp, idp)
Political boundaries (not authoritative)
National boundary
State boundary (tentative)
County boundary (tentative)
Tribal area
Dinka Nomadic or tribal area
Hydrological features

Raster Resolution: 90 meters
UTM Grid: 100 kilometer interval
Geographic Grid: 2 degree interval
Projection: Universal Transverse Mercator (UTM)
UTM Zone: UTMZ 35
Meridian of Origin: 27 degrees 00 minutes E of Greenwich
Latitude of Origin: Equator
Horizontal Datum: WGS84
Vertical Datum: Mean sea level
Spheroid: WGS84

Disclaimer:

The boundaries (north/south, state and international), denominations, and any other information shown on this map do not imply any judgment about the legal status of any territory, or constitute any official endorsement or acceptance of the boundaries on the part of any Government. The publisher, the Centre for Development and Environment (CDE), is not responsible for claims by any third party and assumes no liability for any direct, incidental, or consequential damages whatsoever.

Project information

The Southern Sudan Topographic Overview and Topographic Base Map Series (Release II) are part of a **Capacity Development Programme in Geoinformation Management** funded by the **Swiss Agency for Development and Cooperation (SDC)** to support the Government of Southern Sudan. The geospatial database covers the entire area of the States of Southern Sudan. The map series consists of five completely revised, updated and enhanced map sheets 1:500,000 and a single map sheet 1:1 Mio. The geographic database consists of field data provided by GoSS- and UN-agencies (e.g. UNMIS, UNOCHA, UNJLC, UNICEF, etc.), a compilation of thematic layers derived from satellite imagery and geospatial models, all developed and composed by the **Centre for Development and Environment (CDE)**, University of Bern, Switzerland.

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Data sources

Most of the line and point features were added based on satellite image interpretation.

Satellite sensors used: Terra/ASTER-vnir data for 2002-2006, Landsat ETM+ 7/4/2, EarthSat NaturalVue data of 2000), and Digital Globe Quickbird 2 imagery (2003-2005).

Internet sources: GeoNetwork of SIM (Sudan Interagency Mapping) www.unsudanig.org, UNOCHA, UNICEF, UNJLC, UNMIS, UNMAS, WFP, Global Name and Gazetteer data.

Map sources: Eastview Information Services (EIS), Minneapolis, www.cartographic.com (mainly Russian Military Topographic Maps, 1:200k and 1:100k).

Data compilation

Georeferencing of spatial data was obtained through image-to-image and vector-to-image rectification. Except for the non-sloping area, NASA's Shuttle Radar Topography Mission (SRTM) data were used as the principal reference for topographic features and the development of the digital terrain and drainage model. The DTM has a 90-meter resolution and shows contours (50 m intervals), slopes, aspects, spot heights and shaded relief. In flat areas the DTM was calculated based on spot heights and contours from map sources. Ground control points were not applied. Average geometric distortion is estimated to be below +/- 100 m. Wetlands, forest, bush/shrub and agricultural areas were derived from Landsat ETM+, Terra MODIS (VCF, EVI), and FAO AfriCover data (agriculture). The land cover model was cross-validated. In situ verification of data was not applied. Raster modelling, geodata compilation, and digital cartography were done with ESRI ArcGIS 9.3 and Leica ERDAS IMAGINE 9.2. Minor settlement, tracks and foot path features were extracted based on high resolution imagery (only partial coverage).