



Political boundaries

- State boundary (tentative)
- National boundary
- North-South demarcation line 1956 (tentative)

Topography

- Spot height
- Main contour (100m interval)
- Intermediate contour (40m interval)
- Supplementary contour

Settlements

- State capital
- Principal town
- Secondary town
- Administrative town
- Settlement (verified)
- Settlement (not verified)
- Built-up area

Geographical features

- Hills and mountains

Infrastructural features

- Airstrip (CDE)
- Main road (CDE)
- Gravel road (CDE)
- Dirt road (CDE)
- Street (CDE)
- Railway (CDE) (non-operational)
- Bridge (EIS)
- Main road (EIS)
- Gravel road (EIS)
- Street (EIS)
- Dirt road and track (EIS)

Hydrological features

- Canal (unfinished)
- Pipeline
- Main river
- Seasonal river
- Occasional river
- Episodic river
- Dry river
- Lake and riverbed

Elevation classes

- below 400 m
- 401 - 450 m
- 451 - 500 m
- 501 - 550 m
- 551 - 700 m
- 701 - 900 m
- 901 - 1300 m
- 1301 - 1800 m
- 1801 - 2500 m
- above 2500 m

Land cover classes

- Forest
- Bushland
- Sparse vegetation
- Arable land
- Surface water
- Wetlands
- Freshwater marshes and floodplains
- Brackish and saline wetland

Scale and Projection

Scale: 1:500'000

Scale bar: 0 to 25 km

Projection: UTM Zone 35 (false)

Geographic Grid: 30 minutes interval

UTM Zone: UTM 35 (false)

Horizontal Datum: WGS84

Vertical Datum: Mean sea level

Spheroid: WGS84

Project Information

The present map sheet is composed of field maps (1:250,000) and is one of the maps of the Southern Sudan State Map Series (1:500,000). The maps and the geodatabase were prepared by the Centre for Development and Environment (CDE) of the University of Berne, Switzerland, with funding from the Swiss Federal Department of Foreign Affairs. The map is being released as a technical contribution to support the humanitarian, peace-keeping and reconstruction efforts in Southern Sudan. Boundaries, transportation, settlement locations and the North-South demarcation line of 1956 shown on this map are not authoritative and should not be considered as such. The CDE (University of Berne) would well welcome any information that could improve this map. For comments and suggestions, please contact the CDE at info@cded.unibe.ch.

Data sources

Most of the line and point features were provided by Earthwatch Information Services, Minneapolis, USA (EIS) based on the Russian Military Topographic Map, 1:200,000 and 1:100,000 Series. Many recent objects (mainly infrastructure, such as roads, pipelines, air strips, as well as resettled villages, water surfaces and meanders) were added, based on satellite image interpretation by CDE (mainly 5m EarthSat 7/4/2 and SMC).

Data compilation

Georeferencing of spatial data was obtained through vector-to-image rectification. Except for the non-stippling area, NASA's SRTM data were used as a reference for topographic features and for the development of a digital terrain model (DTM). The DTM has a 90-meter resolution and shows contours, artificial wells and shading relief. In flat areas the DTM was calculated based on spot heights and contours from map sources. Ground truthing and control points were not applied. Aerial geometric distortions are estimated to be below +/- 150 m. Wetlands, forest, both and shrub cover were derived from Landsat TM, Terra MODIS V2 and V3, and FAO AICover data (agriculture). Information was classified and cross-validated. Verification on terrain was not applied. Raster modelling, geodata compilation and digital cartography were done with ESRI ArcGIS 9.1 and LISA ERM 1.0 (Landscape ERM 1.0).

Version: Draft release 1.5
September 2005

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