



<b>Political boundaries</b>	<b>Settlements</b>	<b>Infrastructure features</b>	<b>Hydrological features</b>	<b>Elevation classes</b>	<b>Land cover classes</b>
State boundary (tentative)	State capital	Airstrip (CDE)	Canal (unfished)	below 400 m	Forest
National boundary	Principal town	Main road (CDE)	Pipeline	401 - 450 m	Bushland
North-South demarcation line 1956 (tentative)	Secondary town	Gravel road (CDE)	Main river	451 - 500 m	Sparse vegetation
	Administrative town	DIRT road (CDE)	Seasonal river	501 - 550 m	Arable land
	Settlement (verified)	Street (CDE)	Occasional river	551 - 700 m	Surface water
	Settlement (not verified)	Railway (CDE)	Episodic river	701 - 900 m	
	Built-up area	Open operational	Dry river	901 - 1300 m	
		Bridge (ES)	Lake and riverbed	1301 - 1800 m	
		Main road (ES)		1801 - 2500 m	
		Gravel road (ES)		above 2500 m	
		Street (ES)			
		DIRT road and track (ES)			
	<b>Geographical features</b>				<b>Wetlands</b>
	Hills and mountains				Freshwater marshes and floodplains
					Rain brackish and saline wetland

<b>Topography</b>	<b>Project Information</b>
Spot height	The present map sheet is composed of field maps (1:250,000) and is one of nine 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 project is being released as a technical contribution to support the humanitarian, peace-keeping and recovery efforts in Southern Sudan. Boundaries, towns, locations, 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 welcome any information that could improve this map. For comments and suggestions, please contact the CDE at <a href="mailto:info@cde.unibe.ch">info@cde.unibe.ch</a> .
Mean contour (10m interval)	<b>Data compilation</b>
Intermediate contour (40m interval)	Georeferencing of spatial data was obtained through vector-to-image rectification. Except for the non-staging 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 spot heights, altitudinal belts and shaded 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. Average geometric distortion is estimated to be below +/- 10 cm. Wetland (WCP and EIV) and FAO AICover data (agricultural) information was classified and cross-validated. Verification on terrain was not applied. Raster mosaicking, georeferencing and digital color interpretation were done with ESRI ArcGIS 9.1 and Leica ERDAS IMAGINE 8.7.
Supplementary contour	<b>Data sources</b>
	Most of the line and point features were provided by Earthview Information Services, Minneapolis, USA (ES) based on the National Military Topographic Map, 1:200,000 and 1:100,000 series. Many minor objects (settlements, dams, etc.) are not shown. Spot heights, as well as resampled villages, water surfaces and meanders) were added based on satellite image interpretation by CDE.



<b>Projection</b>	<b>Map Datum</b>
Universal Transverse Mercator (UTM)	WGS84
UTM Zone: 33 Q (24 degrees East)	Mean sea level
Marsden of Origin: Equator	Spheroid: WGS84
Horizontal Datum: WGS84	
Vertical Datum: Mean sea level	
Spheroid: WGS84	

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