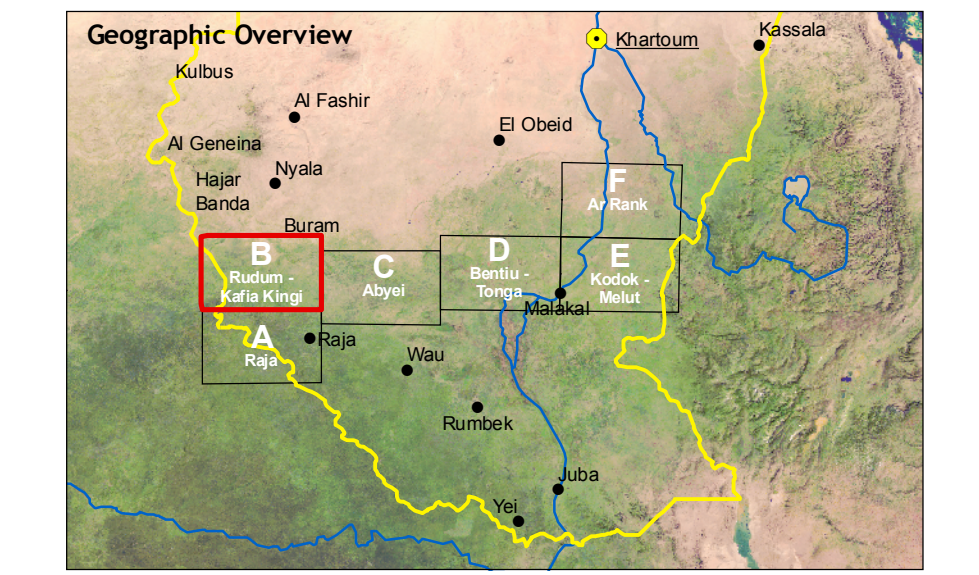


Rudum - Kafia Kingi

SUDAN

Topographic Field Map North/South Border Map Series

Map sheet: Rudum - Kafia Kingi
South Darfur, Western Bahr el Ghazal,
Central African Republic



1:250'000

Raster Resolution: 90 meters
 UTM Grid: 25 Kilometer Interval
 Geographic Grid: 30 Kilometer Interval
 Projection: Universal Transverse Mercator (UTM)
 UTM Zone: 32E
 Meridian of Origin: 27 degrees 00 minutes E of Greenwich
 Latitude of Origin: Equator
 Horizontal Datum: WGS84
 Vertical Datum: Mean sea level
 Spheroid: WGS84

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- | | |
|---|--|
| <ul style="list-style-type: none"> ● State capital ● Principal town ● Secondary town ● Administrative town ● Settlement (overlaid) ● Settlement (not overlaid) ● Built-up area ● Vulnerable area ● Schools | <ul style="list-style-type: none"> — National boundary — Geographical features ▲ Hill or mountain — Tribal area — Dinka: Nomadic or tribal area — Hydrological features — Main river — Seasonal river — Occasional river — Epitonic river — Dry river — Canal (wet or dry) — Canal (unfished) — Pipeline — Railway (CDE) — Railway (non-operational) — Main road (ES) — Gravel road (ES) — Street (ES) — Dirt road or track (ES) — Bridge — River crossing |
| <ul style="list-style-type: none"> ○ Spot height — Main contour (100 m interval) — Intermediate contour (50 m interval) — Supplementary contour (25 m interval) | <ul style="list-style-type: none"> — Land cover classes — Sparse vegetation (single shrubs, grassland) — Shrubby vegetation (scrubland) — Dense vegetation (forest, mature crops) — (Irrigated, rainfed) agriculture — Built-up area — (Subsidence, volcanic) — Wetlands — Marshes, swamps — Surface Water — (perennial waterbodies) |

Disclaimer:
 The boundaries, demarcation and any other information shown on this map do not imply any judgement 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 (CDE) assumes no liability for any direct, incidental, special, or consequential damages whatsoever. The publisher (CDE) is not responsible for claims by any third party.

Project information:
 The present map was prepared for the *North-South Border Commission*, whose work is in progress as part of the implementation of the Comprehensive Peace Agreement signed on January 9, 2005. The map sheet is part of a series of maps 1:250,000 and 1:100,000 covering the tentative border area of the northern and southern part of Sudan. The map and the geographical database were prepared by the Centre for Development and Environment (CDE) of the University of Bern, Switzerland.
 Map authors: Heidi Christen, Swann Jürg, Henning Christian, Gisbert Ullrich, Erika von Elmendorf, Geoprocessing Unit, Centre for Development and Environment, Institute of Geography, University of Bern.

Technical data sources:
 Imagery sources: Most of the line and point features (mainly roads, tracks, pipelines, air strips, as well as resettled villages, water surfaces and meanders) were added, based on satellite image interpretation by CDE.
 Satellite sources used: Terra / ASTER vnr data for 2002-2006, Landsat ETM+ 7-4-2 and Landsat TM 4-3-2-1 data for 2002 and Digital Globe QuickBird 2 imagery for 2003-2005.
 Internet sources: Geonetwork of UNCSIS, www.uncsis.org; UNEF; UNLAC; UNMO; UNMA; WFP; OLS data on DERRA server; FAO AfrCover project; Global Name and Gazetteer data; Global Wetland Data (GWD); Google Earth Pro; NCRC North-South and individual communications within the international aid community.
 Map sources: Eastview Information Services (ES), Minneapolis, USA (<http://www.eastview.com>) (mainly Russian Military Topographic Map, 1:200,000 and 1:100,000 series).
 Other sources consulted: in particular the Topographic Map Series 1:250,000 published by the Sudan Survey Department 1934-1937 (partly revised 1974).

Data compilation:
 Georeferencing of spatial data was obtained through image-to-image and vector-to-image rectification. Except for the non-digitized areas, the North-South Border Topography Mission (SBTM) data were used as the principal reference for topographic features and the development of the digital terrain and the highly detailed drainage model. The DTM has a 90-meter resolution and shows contours (100 m intervals), structural belts (200 m intervals), slope aspects, spot heights and a shaded relief. In flat areas the DTM was calculated based on spot heights and contours from map sources. Gravel control points were applied for image rectification. Average geometric distortion is estimated to be below +/- 100 m, including those built and check points were derived from Landsat TM, MODIS (VCF and EVI), and FAO AfrCover data (agriculture). Information was classified and used for the verification of the vector data and applied. Vector modeling, geodata compilation, and digital cartography were done with ESRI ArcGIS 9.2 and ArcSWAT (WAGNER 2.1, slope reclassification, track and path features were extracted based on satellite data provided by Google Earth Pro 4.1).
 The CDE (University of Bern) would welcome any information that could improve this map. For comments and suggestions, please contact the CDE at info@cde.unibe.ch.
 Digital maps, pdf, 8 page files, and further project information are accessible on CDE's Sudan Map Download Server at <http://www.cde.unibe.ch>.
 Please note that when information is used in other mapping products, the source of the map must be credited or cited: CDE, University of Bern, SUDAN Topographic Field Map (map) 1:250,000, Draft Release 1.1 (December 2007), North/South Border Map Series, Bern: CDE, 2007.

