The datasets in this directory are from the UNDP Digital Atlas for South Sudan, as gathered by the UNDP IMWG team. Original sources for this data are:

|  |  |
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| **Dataset** | **Original source(s)** |
| CDE\_50m\_contour | 2008: USGS/SRTM/CRMA |
| Eq\_main\_rivers\_dem | 2008: USGS/CRMA, 2005: FAO/ UNJLC/ SIM, 2001: USGS/CRMA |
| Flood\_prone\_areas\_CDE\_2008 | 2008: CDE |
| Hydrogeological\_DEPHA\_1999 | 1999: DEPHA |
| Roads\_UNJLC\_2008 | 2008: UNJLC |
| Settlements | 2009: CRMA, 2008: IOM, 2007: TRMA/SIM, 2006:UNMAS |
| Spotheights\_CDE2008 | 2008: CDE |
| Water\_points\_SIM | date?: SIM |
| waterbodies | 2005: FAO/ UNJLC/ SIM |
| waterpoints | 2010: WES, 2009: IOM, 2009: UNICEF, 2009: AllS, 2008: Austrian RC, 2006: WES |
| Waterways\_CDE\_2008 | 2008: CDE |

Open data and licenses for each of these providers are:

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| **Provider** | **Data and licenses** |
| US Geological Survey, USGS | Is this from the USGS Topo maps at <http://nationalmap.gov/ustopo/index.html> - USGS licenses vary according to the map, so will have to find the original ones used. #FIXIT |
| University of Bern Centre for Development and Environment, CDE | CDE produce raster maps including two sets of South Sudan maps, available through <http://www.cde.unibe.ch/MapShop/>  License on the map is *“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. Southern Sudan Topographic Overview and Base Map Series {map} 1:500,000 and 1:1 Mio. Release 2.1/December 2008. Bern, CDE, 2008”.*  Sources cited by the map are:  “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](http://www.unsudanig.org), UNOCHA, UNICEF, UNJPC, UNMIS, UNMAS, WFP, Global Name and Gazetteer data.  Map sources: Eastview Information Services (EIS), Minneapolis, [www.cartographic.com](http://www.cartographic.com) (mainly Russian 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 (50m 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 +/- 100m. Wetlands, forest, bust/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 modeling, 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).” |
| NASA’s Shuttle Radar Topography Mission, SRTM |  |
| UNDP Crisis Recovery Mapping Agency, South Sudan, CRMA | Publishes “Digital Atlas” dataset, from which these datasets are taken. Are still working on which licenses to release it under (this is hopefully going to help them with that). |
| FAO |  |
| UN Joint Logistics Centre, UNJLC | Sudan 2008 logistics and planning map UNJLC-SDN-001-A1 at <http://www.logcluster.org/tools/mapcentre/general-logistics-planning-maps/sdn-general-logistics-and-planning-map> No license or attribution note on the map; notes are “*Produced by UN Joint Logistics Centre, Core Unit.* Data Sources: ADC, VMAP0, ESRI, WFP, UNJLC. Date created 01-Dec-2008. UN Joint Logistics Centre, Rome – Italy, email [maps@unjlc.org](mailto:maps@unjlc.org). Website unjlc.org/mapcentre”. |
| Sudan Interagency Mapping, SIM | [www.unsudanig.org](http://www.unsudanig.org) |
| Data Exchange Platform for the Horn of Africa, DEPHA | [www.depha.org](http://www.depha.org) – link to this website is broken. Found reference to source *“OLS data on DEPHA server”* in CDE map **sudan**.isachar.cz/files/ee%20relief%20map.pdf. A similar reference might be enough to cover us. (OLS is Operation Lifeline Sudan, who digitized several maps including Anglo-Egyptian Sudan Map Series 1936-1951 used in [this OCHA map](http://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&ved=0CCEQFjAA&url=http%3A%2F%2Fwww.elca.org%2F~%2Fmedia%2FImages%2FOur%2520Faith%2520In%2520Action%2FResponding%2520to%2520the%2520World%2FDiasaster%2520Relief%2FSudan%2520Referendum%2FRegions%2520of%2520Sudan%2520%2520%2520Detailed%2520%2520OCHA.pdf&ei=7Es6ULjCO8q50QWP0YDgDw&usg=AFQjCNEeGVGCkVEFAp6KZQqjHWYt4Gnl7A)). |
| Institute of Migration, IOM |  |
| TRMA |  |
| UNMAS |  |
| WES |  |
| UNICEF |  |
| AllS |  |
| Austrian RC |  |

Other open datasets found during this search include <http://freegisdata.rtwilson.com/>, <http://www.fao.org/geonetwork/srv/en/main.home>, <http://earthexplorer.usgs.gov/>