

# DAMAGE ASSESSMENT IN THE CITY OF MALAKAL, UPPER NILE STATE, SOUTH SUDAN

Analysis with WorldView-1 Data Acquired 15 March 2014 and WorldView-2 Data Acquired 18 January 2014 and 06 December 2013

Complex  
Emergency

Production Date:  
21/03/2014

Version 1.0

Glide Number:  
CE20131218SSD



This map illustrates satellite-detected areas of destruction in the town of Malakal as seen by the WorldView-1 satellite on 15 March 2014. UNOSAT identified a total of 9,878 destroyed residential and related structures and a total of 204 destroyed warehouse or commercial structures throughout the area analyzed. Comparison with pre-conflict building data for Malakal indicates the 22% of the city has been destroyed. The previous UNOSAT analysis of Malakal using an image from 18 January 2014 located 573 destroyed structures, meaning a massive increase in the level of damage is present as of 15 March 2014. The heaviest damage is found in the eastern and southern portions though is also present across the city. As of 15 March, active fires were visible in Malakal (see inset), as are fortifications and indications of military activity. This is a preliminary analysis and has not yet been validated in the field. Please send ground feedback to UNITAR / UNOSAT.

Type of Building	Estimated Number of Damaged Structures
Residential and Related Structures	9,878
Commercial/Warehouse Structures	204
<b>Total Damaged</b>	<b>10,082</b>

See inset for active fire and smoke plume

**LEGEND**

- Residential and Related Structures
- Commercial/Warehouse Structures
- Highway/Primary Road
- Secondary Road
- Local/Urban Road
- Airport

**Map Scale for A3: 1:30,000**

Satellite Data (1): WorldView-1  
Imagery Dates: 15 March 2014  
Resolution: 50 cm  
Copyright: DigitalGlobe  
Source: US Department of State, Humanitarian Information Unit, NextView License

Satellite Data (2): WorldView-2  
Imagery Dates: 18 January 2014  
Resolution: 50 cm  
Copyright: DigitalGlobe  
Source: US Department of State, Humanitarian Information Unit, NextView License

Satellite Data (3): WorldView-2  
Imagery Date: 06 December 2013  
Copyright: DigitalGlobe  
Source: US Department of State, Humanitarian Information Unit, NextView License

Road Data : OSM (via bbbike)  
Other Data : USGS, UNCS, NASA, NGA  
Analysis : UNITAR / UNOSAT  
Production: UNITAR / UNOSAT  
Analysis conducted with ArcGIS v10.1

Coordinate System: WGS 1984 UTM Zone 36N  
Projection: Transverse Mercator  
Datum: WGS 1984  
Units: Meter

The depiction and use of boundaries, geographic names and related data shown here are not warranted to be error-free nor do they imply official endorsement or acceptance by the United Nations. UNOSAT is a program of the United Nations Institute for Training and Research (UNITAR), providing satellite imagery and related geographic information, research and analysis to UN humanitarian and development agencies and their implementing partners.

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INSET: SMOKE PLUME IN MALAKAL