



# Satellite Sentinel Project

**ALERT: HUMANITARIAN EMERGENCY**

**ON THE MOVE:  
EVIDENCE OF CIVILIAN DISPLACEMENT  
AND SAF CONTROL OF KADUGLI**

**18 JUNE 2011**



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PREPARED BY



Harvard  
Humanitarian  
Initiative

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Satellite Sentinel Project (SSP) analysis of DigitalGlobe satellite imagery collected 17 June 2011 confirms reports that the Sudan Armed Forces (SAF) control Kadugli and that civilians have been displaced to a location north of the town. More than 300 structures consistent with temporary shelters for IDPs (Internally Displaced Persons) are visible close to the wall of the UN Mission in Sudan (UNMIS) compound. However, it is likely many more IDP structures are obscured by the heavy cloud cover visible in the imagery.

At least 89 military-type vehicles and possible towed artillery pieces are visible in Kadugli town, corroborating reports that large numbers of military vehicles recently arrived there. The vehicles and apparent artillery appear to include 20 possible towed artillery, 22 heavy and light trucks, nine apparent armored vehicles, and 38 light vehicles consistent with land cruisers. The vehicles and apparent towed artillery appear capable of imminent forward movement. Their disposition is largely consistent with UN documents obtained by McClatchy Newspapers indicating that a major northern-aligned offensive against forces aligned with the Sudanese People's Liberation Army (SPLA) in South Kordofan may occur soon.

### HUMANITARIAN SITUATION IN KADUGLI

The United Nations Office for the Coordination of Humanitarian Affairs (OCHA) stated on 15 June that more than 61,000 people have been displaced in and around Kadugli. UN agencies report that the security situation is hampering efforts to provide assistance to the displaced, including the provision of emergency food aid and medical supplies. An unknown number of UN staff reportedly evacuated UN facilities in Kadugli on approximately 12 June. The UN reported that 31 UN evacuees arrived in El Obeid as of 13 June. The exact number of staff evacuated and the dates of evacuation are not known.

### BACKGROUND ON RECENT FIGHTING IN SOUTH KORDOFAN

In the weeks since violence erupted in South Kordofan on 5 June, fighting has escalated between forces loyal to the SPLA and the SAF supported by northern-aligned Popular Defense Forces (PDF) within Kadugli town and across the eastern Nuba Mountains region. At least two SPLA-controlled locations outside Kadugli have been targeted by aerial and artillery bombardments: planes reportedly bombed civilian structures while targeting the 9th Division of the SPLA, while the UN has reported that the airfield at Kauda, located within 100 meters of an UNMIS compound, was bombed on 14 June. In Kadugli, the SAF have reportedly staged attacks on civilian infrastructure, engaged in widespread looting, and have conducted extra-judicial killings and house-to-house searches for opposition forces.

(continued)

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### ABOUT THE PROJECT

Satellite Sentinel Project conducts regular, intensive monitoring of Sudan to assess the current human security situation and identify potential threats to civilians.

Analysis prepared by Harvard Humanitarian Initiative. Imagery and additional analysis provided by DigitalGlobe. Cover image from razed village of Todach provided by Tim Freccia for the Enough Project.



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### POLITICAL STATUS OF SOUTH KORDOFAN

Although South Kordofan lies north of the contested 1956 boundary between Arab-dominated northern Sudan and the primarily Christian and animist South, much of the religiously mixed Nuba population allied with the SPLA during the North-South civil war. When southern Sudan formally secedes from the North on 9 July, the future of South Kordofan and the Nuba people will remain uncertain. The 2005 Comprehensive Peace Agreement stipulated that the status of South Kordofan should be determined through the nebulous process of “popular consultation,” which, like the referendum for the determination of Abyei, has been delayed indefinitely.

### FINDINGS

- DigitalGlobe imagery shows relatively low levels of activity in Kadugli town, with the exception of increased activity in and around SAF military installations.
- At least 305 structures consistent with IDP temporary shelters are clearly visible on the outskirts of the UNMIS compound.
- Satellite imagery confirms the presence of at least 20 possible towed artillery pieces and 89 military-type vehicles including 22 heavy and light trucks, nine apparent armored vehicles, and 38 light vehicles consistent with land cruisers.
- The visible, possible towed artillery pieces are either attached to vehicles or are positioned with closed tows in preparation for movement.

### CONCLUSIONS

- As Kadugli town has seen an influx of SAF forces and equipment, a considerable portion of the civilian population of Kadugli has been displaced.
- Given that the entirety of the IDP camp appears obscured by cloud cover, the number of shelters present near the UNMIS compound could reasonably be consistent with reports of approximately 6,000 IDPs seeking refuge at the UNMIS base.
- The presence of new military-type vehicles and possible artillery is consistent with reports of SAF deployment of additional forces and materiel into Kadugli since 5 June.
- The disposition of materiel is indicative of capacity for imminent forward movement and is consistent with reports of a planned SAF offensive in South Kordofan.

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250 STRUCTURES  
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PERSONS CAMP

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IDP CAMP



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### CONCENTRATION OF IDPs AT UNMIS COMPOUND

At least 250 structures consistent with an internally displaced persons camp are clearly visible at the north end of the UNMIS compound. This, in addition to at least another 55 structures to the east, is consistent with 16 June UN reports that approximately 6,000 civilians have sought refuge at the UNMIS facility.

Also on 16 June, a UN peacekeeping spokesperson announced that the Kadugli UNMIS compound would become a safe haven for civilians, and that a company of Bangladeshi peacekeepers had been deployed to Kadugli as reinforcements.





LIGHT VEHICLES

HEAVY TRANSPORTS

7 PIECES  
TOWED ARTILLERY  
ATTACHED TO  
HEAVY TRANSPORTS

FOXHOLES

SAF BASE

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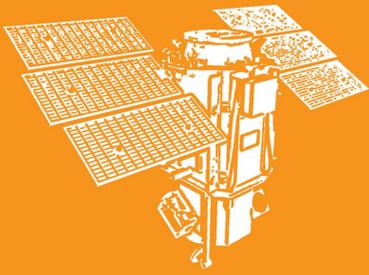
LIGHT VEHICLES

LIGHT VEHICLES

GOVERNOR'S  
RESIDENCE



Satellite Sentinel Project



# Satellite Sentinel Project

## ABOUT THE PROJECT AND THE PARTNERS

### THE WORLD IS WATCHING BECAUSE YOU ARE WATCHING.

The Satellite Sentinel Project – conceived by George Clooney – combines satellite imagery analysis and field reports with Google’s Map Maker technology to deter the resumption of war between North and South Sudan. The project provides an early warning system to deter mass atrocities by focusing world attention and generating rapid responses on human rights and human security concerns.

This project is the result of an unprecedented collaboration between Not On Our Watch, the Enough Project, Google, DigitalGlobe, the Harvard Humanitarian Initiative, and Trelon, LLC.

The project works like this: Commercial satellites passing over the border of northern and southern Sudan are able to capture possible threats to civilians, observe the movement of displaced people, detect bombed and razed villages, or note other evidence of pending mass violence.

Google and Trelon design the web platform for the public to easily access the images and reports. Harvard Humanitarian Initiative provides system-wide research and leads the collection, human rights analysis, and corroboration of on-the-ground reports that contextualizes the satellite imagery. The Enough Project contributes field reports, provides policy analysis, and, together with Not On Our Watch, and our Sudan Now partners, puts pressure on policymakers by urging the public to act. DigitalGlobe provides satellite imagery and additional analysis.

The Satellite Sentinel Project marks the first sustained, public effort to systematically monitor and report on potential hotspots and threats to security along a border, in near real-time (within 24-36 hours), with the aim of heading off humanitarian disaster and human rights crimes before they occur.

Not On Our Watch – co-founded by Don Cheadle, George Clooney, Matt Damon, Brad Pitt, David Pressman, and Jerry Weintraub – has provided seed money to launch the project. To support the Satellite Sentinel Project, donate at [www.satsentinel.org](http://www.satsentinel.org).

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