

Satellite Sentinel Project

A Satellite Snapshot of South Sudan's War

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Situation Report: A Satellite Snapshot of South Sudan's War

January 11, 2014

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For the past month, South Sudan has been engulfed in an expanding civil war. Unlike Sudan, where the Satellite Sentinel Project pioneered its work, with a few limited exceptions, South Sudan's government has been allowing both journalists and humanitarians to operate around the country, even as violence spreads. As a result, harrowing videos, interviews, and photographs documenting the crisis have been emerging for weeks.

The United Nations estimates that over 395,000 people have been displaced by violence, 352,000 internally, of which 60,000 have sought shelter at U.N. compounds around the country. Another 43,000 are refugees in neighboring countries including Sudan, Ethiopia, Kenya, and Uganda, with an estimated 3,000 to 4,000 people from South Sudan arriving daily in Uganda alone. Although no mortality surveys have been conducted, conservative estimates suggest that thousands have died in the fighting, which was triggered by a political struggle between competing factions of the ruling party.

With the release of this report, the Satellite Sentinel Project augments existing reporting on South Sudan's civil war with satellite imagery of Mayom and Bor, captured from 300 miles above the earth. Digital Globe imagery offers independent confirmation of the scale of South Sudan's civil war with vivid evidence of the intentional destruction of civilian dwellings and market areas. UN bases in both Bor and Bentiu are crowded with displaced people. Images of Mayom show civilians fleeing en masse.

South Sudan's crisis is not unfolding in the dark, but enhanced documentation efforts are essential to combat impunity and ensure accountability for crimes committed during the course of hostilities. The Satellite Sentinel Project will continue to monitor all parts of South Sudan experiencing violence.

On the Run in Mayom

The town of Mayom is located in South Sudan's strategically important and oil-rich Unity state, which is also a stronghold for opposition leader Riek Machar. Home to many other key state politicians, Mayom was one of the first towns to fall into the opposition's hands during the outbreak of violence in December with the defection of a division of South Sudan's army in the area.

The South Sudan Liberation Army, or SSLA, formerly a rebel movement that has been recently integrated into the South Sudanese army, has played a significant role in the fighting in Mayom. In mid-December, SSLA commander Maj. Gen. Mathew Pul Jang promised to fight alongside government soldiers, against Riek Machar's forces, to liberate the country's oil fields. "In three days, the former SSLA fighters will be in Bentiu town [the capital of Unity state]," the group said in a statement issued to Sudan Tribune. "Civilians and U.N. staff are advised to leave the town because the former SSLA forces will use heavy artillery to dislodge Maj. Gen. James Koang if he doesn't change his mind before the deadline given to him."

While the breakaway contingent of South Sudanese People's Liberation Army, or SPLA, forces held Mayom, other members of SPLA regrouped in a nearby area. This group, joined by an SSLA force, together fought those who had seized Mayom, resulted in a series of bloody battles that have devastated the town.

One resident reported that Mayom had become a "ghost town," with "many dead bodies." Satellite imagery secured on January 10 shows extensive destruction of huts, or tukuls, in Mayom since December 11, 2013. (see Figures 1, 2 and 3) Armed forces aligned with President Salva Kiir announced that they had taken control of the town on January 9, 2014, but conflicting reports emerged over cattle raiding in the aftermath of the government victory.

Mayom's strategic importance is underscored by its proximity to South Sudan's oilfields. DigitalGlobe images from December 30, 2013 of the oil fields near Teshwin in Unity State showed damage to several pieces of equipment, including oil storage tanks and manifolds. Images to a large oil storage tank from August 23, 2013 contrast sharply with those from December 29, 2013. (see Figure 4) Images of an oil manifold show similar destruction. (see Figure 5). Fighting shut down Unity state's oil fields and caused oil production across the country to drop by 45,000 barrels per day to 200,000 barrels per day. Oil revenues represent 80 percent of South Sudan's GDP and generate 98 percent of income for the government. Although the government of South Sudan claims that Upper Nile state is still pumping about 200,000 barrels per day, traders have already begun plans to adjust to lower oil volumes.

Approximately 175,000 people live in Mayom county, and 200,000 live in Rubkona county. Civilians from both areas are fleeing because of increasing violence. Many who have fled Mayom have found refuge at the United Nations Mission in the Republic of South Sudan, or UNMISS, compound in Bentiu, in the heart of Rubkona County, which has also been rocked by fighting in recent days. Some 8,000 people have sought shelter in the U.N. compound in Bentiu, although reports indicate that many are fleeing the city in the wake of the government's assault. An increase in the population sheltering in the Bentiu compound visible between December 30, 2013 and January 6, 2014, when the compound was last imaged. (see Figure 6) As of January 10, the South Sudanese government claims it controls Bentiu.

The Battle for Bor

Bor has been a flashpoint for violence due to its symbolic significance to both factions. South Sudan's ruling party, the Sudan People's Liberation Movement, rallied around Bor during the course of the second civil war, which eventually led to the country's independence. After originally falling to the opposition forces early on in the fighting, Jonglei state's capital was recaptured by government forces on Christmas. Since then, the capital has exchanged hands once more. The town remains at significant risk for continuing violence as the government has pledged to regain control of the area. Government forces were marching towards Bor earlier this week, and SPLA spokesperson Philip Aguer claimed that they would take Bor soon as "the rebels - are now retreating back."

The small village of Mogiri, on the road between Bor and Juba, shows evidence of extensive destruction. At least 30 intentionally burned structures are visible in imagery of the village, which is near Mongalla. (see Figure 7). The evidence of destruction from December 25 suggests that the destruction occurred during the first government offensive to retake Bor. It is difficult to identify which faction was responsible for this destruction in Mogiri, especially since Mongalla has become a significant front in the war.

Bor's main market shows visible damage to at least 16 buildings. At least three buildings were severely damaged between December 25, 2013 and January 8. (see Figure 8). Ten buildings were destroyed in the two-day period between January 8 and January 10. (see Figure 9). Significant damage and destruction also occurred in late December, when the town exchanged hands twice.

Many civilians in Bor have sought refuge in the UNMISS compound in town. A significant growth of population is visible from December 23, 2013 to January 10, 2014. (See Figure 10) Others fled south to Juba or across the river to Aweriel in Lakes state.

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- [3] Ibid.
- [4] Small Arms Survey, "The Conflict in Unity State," January 11, 2014, p. 1, available at <http://www.smallarmssurveysudan.org/fileadmin/docs/facts-figures/south-sudan/HSBA-The-Conflict-in-Unity-State.pdf>.
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- [8] Ibid, pp. 2-3. See also Carl Odera and Ben Makori, "Fears grow of civil war in S.Sudan; rebels seize town," Reuters, December 22, 2013, available at <http://www.trust.org/item/20131222184102-ixz7z>; Sudan Tribune, "Unity state: Defected general in full control of Mayom, says commissioner," December 24, 2013, available at <http://www.sudantribune.com/spip.php?article49305>.
- [9] South Sudan: Ex-Rebels Issue Three-Day Ultimatum for Surrender of Dissident Unity State Commander," Radio Tamazuj, "Mayom: 'Ghost town, burnt down, many bodies,'" January 8, 2014, available at <https://radiotamazuj.org/en/article/mayom-%E2%80%98ghost-town-burnt-down-many-bodies%E2%80%99>.
- [10] South Sudan News Agency, "New Twist After SPLA Victory in Mayom County," January 9, 2014, available at <http://southsudannewsagency.com/news/top-stories/new-twist-after-spla-victory>; Sudan Tribune, "S. Sudan army says recaptured oil-rich town from rebels," January 10, 2014, available at <http://www.sudantribune.com/spip.php?article49512>.
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Figure 1

Mayom
destroyed

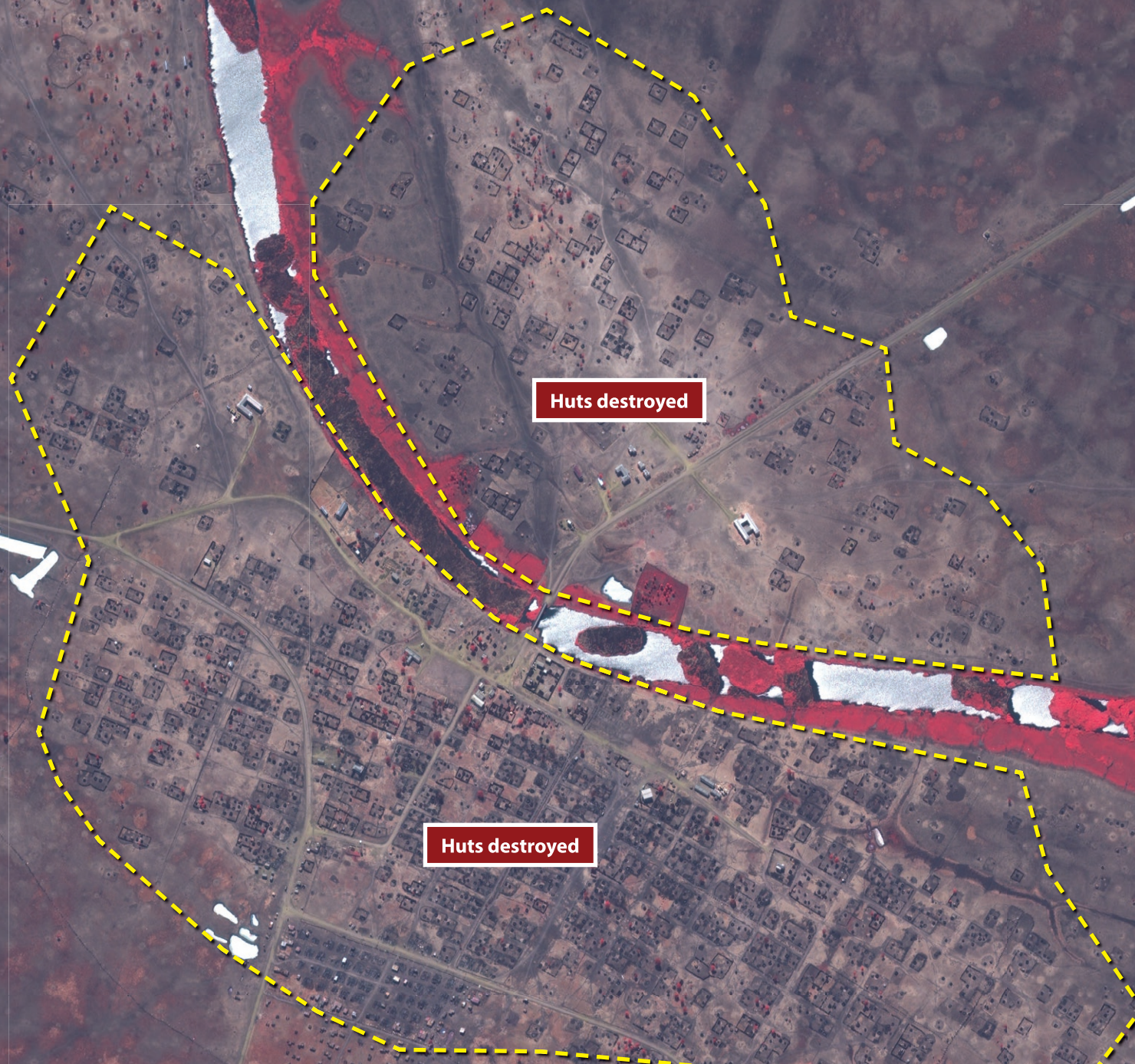


Figure 2

Huts and tukuls
destroyed



Figure 3

Huts and tukuls
destroyed



DigitalGlobe

DigitalGlobe Panchromatic Image
December 11, 2013



Mayom, Unity State, South Sudan
DigitalGlobe Color Infrared Image
January 10, 2014

Figure 4

Oil tank
damaged



DigitalGlobe

DigitalGlobe Natural Color Image
August 23, 2013



Teshwin, Unity State, South Sudan
DigitalGlobe Natural Color Image
December 29, 2013

Figure 5

Oil manifold
damaged



DigitalGlobe

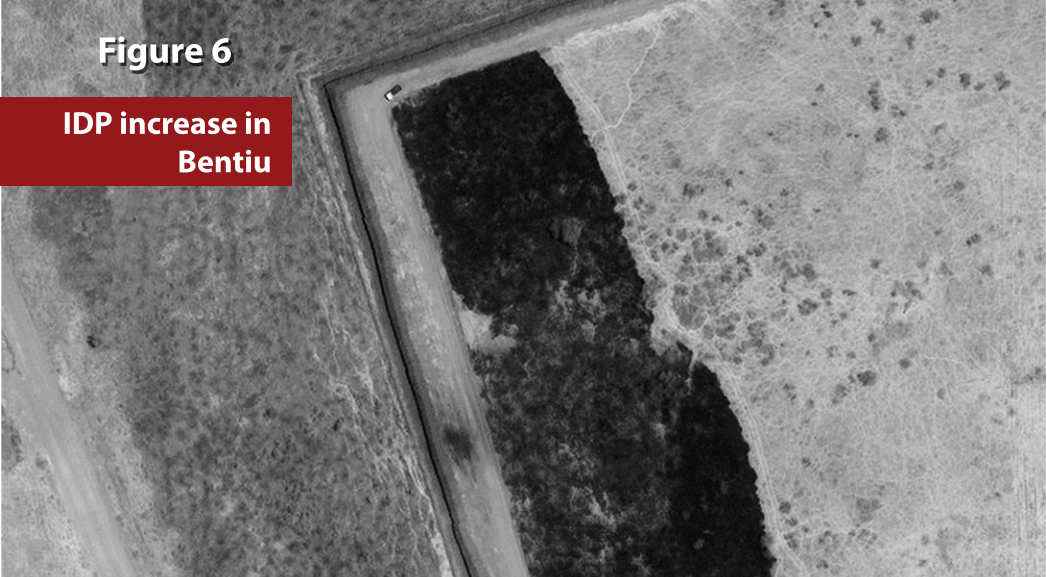
DigitalGlobe Natural Color Image
August 23, 2013



Teshwin, Unity State, South Sudan
DigitalGlobe Natural Color Image
December 29, 2013

Figure 6

IDP increase in Bentiu



DigitalGlobe Panchromatic Image April 4, 2013



DigitalGlobe Natural Color Image December 30, 2013



Bentiu, Unity State, South Sudan
DigitalGlobe Natural Color Image
January 6, 2014

Figure 7

Burned shelters



Figure 8

Buildings destroyed in Bor



Figure 9

Buildings destroyed in Bor



Destroyed buildings 



Newly Destroyed buildings 

Figure 10

IDP camp at Bor



Expanded area

