

Satellite Sentinel Project

Monitoring the crisis in the Sudans.

Impact: Indiscriminate Bombardment by a SAF Antonov, South Kordofan, Sudan (Report)

March 15, 2012



[Satellite Sentinel Project report on Antonov bombardment 15 March 2012](http://satsentinel.org/sites/default/files/SSP_26_Impact_FINAL.pdf)

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The [Satellite Sentinel Project](http://satsentinel.org/) (SSP), through [Harvard Humanitarian Initiative](http://hhi.harvard.edu/) (http://hhi.harvard.edu/)'s analysis of [DigitalGlobe](http://www.digitalglobe.com/) (http://www.digitalglobe.com/) satellite imagery (<http://www.flickr.com/photos/enoughproject/sets/72157629223170458/with/6982336419/>), has collected evidence consistent with apparent indiscriminate aerial bombardment in progress by the Sudan Armed Forces (SAF) in South Kordofan, Sudan. The indiscriminate targeting of civilian populations and infrastructure can constitute a war crime under international law. [1]

[Plumes of grey smoke can be seen](http://www.flickr.com/photos/enoughproject/sets/72157629223170458/with/6982336419/) (http://www.flickr.com/photos/enoughproject/sets/72157629223170458/with/6982336419/)

rising from the ground at two separate locations north of the village of Angarto, South Kordofan on 8 March 2012. One plume is visible 600 meters north and the other plume is visible 1.6 km/ 1 mi north of Angarto. In a second image captured six minutes later, fire is visible at one of the apparent impact sites.

An aircraft consistent with an [Antonov An-26 'Curl'](http://www.flickr.com/photos/enoughproject/sets/72157629223170458/with/6982336419/) is seen

(<http://www.flickr.com/photos/enoughproject/sets/72157629223170458/with/6982336419/>) flying north over Tira Mandé, which is 6.5 km/ 4 mi north of Angarto. The apparent Antonov An-26 was traveling at approximately 320 miles per hour, striking the second site approximately 11 seconds after striking the first. The Antonov An-26 is approximately 250 km/ 156 mi away from the El Obeid airstrip, 90 km/ 56 mi away from the Kadugli airstrip, and 30 km/ 19 mi away from the Talodi airstrip; each of these airstrips is under SAF control. SAF routinely uses Antonov aircraft to indiscriminately bombard civilian populations in South Kordofan, Darfur, and Blue Nile State.

No military infrastructure or military units appear visible at or near the locations of the smoke plumes, based on satellite imagery analysis. A source directly communicated to SSP that other towns in the area were also allegedly bombed by a SAF Antonov six days earlier, on 2 March 2012.

SSP concludes that the plumes are consistent with aerial bombardment because of the similar color of the smoke and the appearance of a pair of plumes of differing heights but similar shapes at approximately the same time at the two separate locations. This is consistent with the explosion at the more southern location having occurred first. The pair of plumes appear less than two kilometers away from each other in a relatively straight line, directly in the likely north-bound flight path of the apparent Antonov An-26.

Additionally, the SAF-controlled airstrip at Talodi, approximately 48 km/ 30 mi from the Kauda Valley, has apparently been paved since 13 January 2012. An area adjacent to the runway that is consistent with a [helipad appears to have been built since 13 January](http://www.flickr.com/photos/enoughproject/sets/72157629223170458/with/6982336419/)

(<http://www.flickr.com/photos/enoughproject/sets/72157629223170458/with/6982336419/>) as well. The El Obeid, Kadugli and Talodi airstrips, all capable of basing Antonovs, are within the likely range of the apparent Antonov An-26 over Tira Mandé. SSP cannot determine at present whether the Talodi airstrip is fully operational.

Sources

1. Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol 1), Geneva, 8 June 1977, Article 85(3)(b). Article 85 was adopted by consensus. CDDH, Official Records, Vol. VI, CDDH/SR. 44, 30 May 1977, p. 291.