



IS RUSSIA USING ITS THERMOBARIC WEAPONS IN SYRIA?

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Keywords: Thermobaric weapons, Russia, Syrian Conflict, Russian military.

The Russian defence minister had stated that their military had so far tested 162 types of weapons in Syria and except for ten, all systems performed with optimum results. Though testing of the modern military systems is not one of their primary objectives in Syria, it has come as a bonus. Recently, some news reports claim that Russia used a thermo-baric weapon also known as the Father of All Bombs (FOAB) against an ISIS target in Syria. However, neither the Russian nor the Syrian government has confirmed the reports.¹ What gives this claim a certain level of credibility is that Russians had attacked an ISIS position in Syria around the same day and in the same city where the fuel-air bomb was claimed to have been dropped.

On that day the Russian defence ministry announced that it had terminated several top level ISIS commanders in an airstrike in the city of Deirez-Zor. These commanders reportedly include Gulmurod Khalimov, a US trained fighter and commander Abu-Muhammad al-Shimali.² However, the strike was described as a precision

strike and no mention was made on the use of a thermo-baric weapon.³ Nevertheless, this is not the first time it has been reported that the Russians have used a thermobaric weapon in Syria. In October last year, US claimed that the Russian indiscriminate airstrikes involved the use of thermobaric weapons as well.⁴ In fact, it is claimed that the Russian-Syrian coalition have been using the weapon ever since Russia began its bombing campaign in Syria.

A thermobaric weapon is the most powerful non-nuclear weapon. Only the US and Russia are known to have developed such a bomb. However, the Russians have managed to develop a more powerful bomb of that class with a yield of 44 tonnes while the US Massive Ordnance Air Blast (MOAB) has a yield of only 11 tonnes.⁵ The bomb uses a fuel air mixture to create the desired effect. An initial explosion spreads the fuel into the surrounding air which ignites after a fraction of a second. The fuel rapidly burns using the oxygen in the air. This creates intense heat and

extreme low pressure and shock wave resulting in massive destruction to life and property.

It makes perfect sense if Russia did indeed use the weapon to take out high value leadership target. It is to be noted that Russia is largely using dumb/gravity bombs to hit targets except for the cruise missiles and some PGMs. Russian aircraft do not have advanced targeting pods like western aircraft. At present only the Su-34 has a suitable system for target designation. Most of the targeting at present is done by old Soviet technology and on-board radar.⁶ Moreover, to avoid enemy air defence the Russian jets fly high altitude missions, away from the engagement envelope of MANPADs. It is a known fact that the opposition fighters in Syria are in possession of MANPADs supplied by Saudi Arabia and Qatar, probably with US support.⁷ Already, a few Syrian and Russian aircraft that had engaged in low altitude bombing runs had been shot down by rebels using Chinese made MANPADs. Since the targeting error is bound to be larger when unguided ordnance is delivered from higher altitudes, a powerful weapon like the thermo-baric weapon with a larger blast radius will be ideal for taking out high value targets.

However, there could be significant collateral damage as the Russian fuel-air weapon appears to be an unguided bomb. A video in Russian RT channel in 2007 shows the testing of the FOAB.⁸ In the visual of the bomb, no control surfaces or other arrangements to suggest presence of any guidance system could be seen. The descent of

the weapon is aided by a parachute. Though a Tu-160 Blackjack is shown in the highly edited video, the bomb release mechanism suggests that it is being tossed from the tail opening of a transport aircraft – probably an Il-76 or AN-124.

One of the accusations on the Russian air strikes is the massive number of civilian casualties as a result of inaccurate targeting. Some of these accusations by the west are based on information that is not credible. A US led coalition commander Lt. Gen. Stephen J. Townsend himself had expressed doubts on the reports of the Syrian Observatory for Human Rights which is quoted by various media outlets and the US government.⁹ Nevertheless, there are significant civilian casualties due to Russian airstrikes.¹⁰ Though the Russian Defence ministry denies any non-combatant casualties, independent sources like the *airwar.org* who verify civilian casualty claims from several sources to try and arrive at a figure comparatively closer to reality report that there were indeed casualties due to Russian bombings. The organisation publishes research data on non-combatant casualties caused by both the US led coalition¹¹ and the Russian, Syrian combine. Russian defence ministry's claim of zero casualty is difficult to accept as in an aerial bombing campaign of this nature unintended civilian casualties are unavoidable even with highly efficient PGMs and targeting systems. It is to be remembered that majority of the Russian bombings involve gravity bombs delivered from

very high altitude. Although, what is noteworthy is that Russia is achieving its military and political objective. Their strategy and tactics have so far been splendidly adapted to suit technological limitations, local conditions and other considerations. One of the keys for their successful aerial campaign against rebel forces and ISIS despite disruptive attempts by the US is the availability of accurate intelligence. Russia might be trying to reduce unintended civilian casualties by collecting accurate intelligence.

There are high chances that the Russian military might have used their FOAB against targets in Syria, as it is well known that most of their new weapons are being operationally tested there. The Russian defence ministry might have not officially stated it to avoid the already mounting criticism from the west. It is to be noted that US suspended talks with Russia over the prolonged conflict in Syria in 2016 citing the massive Russian aerial bombing with bunker-busting bombs, incendiary munitions, **cluster bombs**, barrel bombs and **thermobaric weapons**.¹² If at all this weapon is being employed by the Russians, it is highly probable that it would be reserved only for cases involving high value targets.

(Disclaimer: The views and opinions expressed in this article are those of the author and do not necessarily reflect the position of the Centre for Air Power Studies [CAPS])

Notes

¹ "Rumours fly that Russia has dropped 'The Father of All Bombs' in Syria", <http://www.thedrive.com/the-war-zone/14175/rumors-fly-that-russia-has-dropped-the-father-of-all-bombs-in-syria>, 7 September 2017

² "Did Russia use the 'Father of All Bombs' to kill senior ISIS commanders? Reports claim biggest ever non-nuclear bomb has been detonated near Syrian city of Deirez-Zour", <http://www.dailymail.co.uk/news/article-4868138/Did-Russia-use-Father-Bombs-ISIS-Syria.html>, 9 September 2017

³ *ibid*

⁴ "Tension with Russia Rises as U.S. Halts Syria Negotiations", <https://www.nytimes.com/2016/10/04/world/middleeast/us-suspends-talks-with-russia-on-syria.html>, 3 October 2016

⁵ "Russia's 'Father of All Bombs', the most powerful non-nuclear weapon known", <http://www.thehindu.com/news/international/the-hindu-explains-russias-father-of-all-bombs-the-most-powerful-non-nuclear-weapon-known/article18051156.ece>, 15 April 2017

⁶ "How the war in Syria will make Russia's Su-35 Even More Lethal", <http://nationalinterest.org/blog/the-buzz/how-the-war-syria-will-make-russias-su-35-even-more-lethal-21019>, 5 June 2017

⁷ "As Russian Planes Bombard Syrian rebels, debate over anti-aircraft missiles returns", <http://www.latimes.com/world/middleeast/la-la-fg-syria-downed-planes-20160501-story.html>, 1 May 2016

⁸ <https://www.youtube.com/watch?v=S2FGA3Z-oYM>, 12 September 2007

⁹ "Former coalition commander Lt gen Townsend responds to Airwars article on Raqqa", <https://airwars.org/news/former-coalition-commander-lt-gen-townsend-responds-to-airwars-article-on-raqqa/>, 15 September 2017

¹⁰ "Alleged civilian casualties from Russian airstrikes in Syria", <https://airwars.org/russian-civcas/>, accessed on 3 October 2017

¹¹ "US-led coalition is 'killing more civilians than Russia' ", <http://www.telegraph.co.uk/news/2017/02/23/us-led-coalition-killing-civilians-russia/>, 23 February 2017

¹² No.4