








A DIRTY DOZEN CLUSTER MUNITIONS

Human Rights Watch believes that all inaccurate and unreliable cluster munitions should be prohibited. The dirty dozen below are not the only objectionable types of cluster munitions but are singled out because they are either among the most widely used, have caused the most civilian harm, or pose the greatest threat to civilians due to their high failure rates and inaccuracy.

	155mm Projectiles		Rockets		Bombs								Aerial Dispensers	
	M483A1 & M864	M395 & M396	M26 MLRS	M87 Orkan	Rockeye		CBU-87 CEM	RBK Series	BL-755	CB-500	CBU-58B	Beluga	KMG-U	
Synonymous names	DM-602 DM-612	CME DM-632 DM-642 DM-652 L20A1	DM-662 KaG-88 KaG-90 L20A1	..	Ababeel-50	Mk.-7 Mk.-20 CBU-59	CBU-78 CBU-99 CBU-100	CBU-103	RBK-250 RBK-275 RBK-500	RBL-755	CB-130 CB-250	..	BLD-66 BLG-66	..
Producers	Germany Pakistan Turkey US	Argentina India Israel Germany	Romania Switzerland US	South Korea US	Bosnia- Herzegovina Iraq Yugoslavia	US		US	Former USSR	UK	Chile	US	France	Former USSR
Submunition number & type	88 or 72 grenades: M42 M46 DM-1348	63 or 49 grenades: M85 DM-1383 DM-1385		644 M77 grenades	288 KB-1 grenades	247 Mk.-118 bomblets		202 BLU-97 bomblets	Variable payload of AO-2.5, AO-1Sch, PTAB 2.5/M, OFAB 2.5, ShOAB-0.5 bomblets	147 bomblets	240 PM-1 bomblets	650 BLU-63 bomblets	152 BLG-66 bomblets	Variable payload of AO- 2.5, ODS-OD, PTAB 2.5, PTAB-1M bomblets
Reported submunition failure rate <small>(operational failure rates may be higher)</small>	3-14% based on testing	1.3-2.3% based on testing		5-23% based on testing	Not Known	2% based on testing; operational failure rates higher		4-6% based on testing	Not Known	Average of 6.4% based on 15 years of tests	Not Known	Not Known	Not Known	Not Known
Submunition Photo														
Locations used	Iraq Kuwait Lebanon Western Sahara	Iraq Lebanon		Iraq Kuwait Lebanon	Albania Bosnia- Herzegovina Croatia Iraq	Albania Iraq Kuwait Syria Yugoslavia Vietnam		Afghanistan Albania Iraq Kuwait Yugoslavia	Afghanistan Chechnya Tajikistan	Albania Croatia Eritrea Falklands(Malvinas) Iraq Kuwait Yugoslavia	Eritrea Ethiopia Iraq Sudan	Cambodia Iraq Kuwait Laos Lebanon Western Sahara Vietnam	Chad Iraq Kuwait Sierra Leone	Afghanistan Chechnya Tajikistan
Removed from Service <small>(Cluster munition stockpile amounts indicated where known)</small>	Belgium Germany Netherlands (120,000) UK	Denmark		Netherlands (16,000)	..	Argentina Australia Canada Denmark (200) France Norway	..	Czech Republic Poland	Belgium Germany Netherlands Portugal Switzerland	..	US	Argentina France	Czech Republic Poland	
Under Review	Canada	Norway (53,000)		France Germany	..	..	..	Hungary	..	..	..	..	..	Hungary
In Service <small>(Cluster munition stockpile amounts indicated where known)</small>	Bahrain (1,000) Greece Israel Jordan (28,704) South Korea Morocco Netherlands (54,000) Pakistan Turkey US (3.3 million)	Argentina Austria Finland Germany Greece India Italy Israel Romania Switzerland UK (59,364) US (5,000)		Bahrain (1,578) Egypt (2,910) Greece Israel (18,000) Italy Japan South Korea Turkey UK US (369,576)	Bosnia- Herzegovina Croatia Iraq Serbia	Egypt (1,300) Greece Honduras (120) Indonesia Israel Jordan (150) South Korea Morocco (800) Oman Pakistan (200) Spain Thailand (500) Turkey (3,304) US (58,762)	Egypt (760) Greece Italy Japan South Korea Netherlands Oman Poland Saudi Arabia (1,200) Turkey UAE US (109,508)	Belarus Bulgaria Croatia Cuba Guinea Bissau India Iraq North Korea Libya Romania Slovakia Syria Ukraine	India Iran Italy Nigeria Oman Pakistan Saudi Arabia Serbia Thailand UAE UK	Chile Eritrea Ethiopia Iraq Sudan	Israel Morocco (1,752) Saudi Arabia (1,000)	Greece India	Algeria Angola Cuba India Iran Iraq North Korea Libya Mongolia Romania Slovakia Sudan Syria Ukraine Yemen	

AT-A-GLANCE: GLOBAL OVERVIEW OF CLUSTER MUNITION POLICY AND PRACTICE				
<ul style="list-style-type: none">• All states should support the Norwegian-led initiative to develop urgently a legally binding international agreement to prohibit cluster munitions that cause unacceptable humanitarian harm.• Pending conclusion of a new treaty, states should immediately adopt a national moratorium on use, production and trade of cluster munitions and/or take other steps at the national level to mitigate the negative humanitarian impact of cluster munitions.• Use of cluster munitions in or near populated areas should be prohibited.• Use, production and trade of unreliable and inaccurate cluster munitions should be prohibited, and existing stockpiles should be destroyed. Post-conflict measures should be strengthened. Cluster munition users should accept responsibility for clearance, risk education, provision of information, and victim assistance.			Examples of Policy and Practice <ul style="list-style-type: none">• Norway is taking the lead in organizing an international process to develop a treaty to prohibit cluster munitions that cause unacceptable humanitarian harm.• Belgium adopted legislation banning cluster munitions, which entered into force on June 9, 2006.• Actions to prohibit or restrict cluster munitions have been introduced in the parliaments of Australia, Austria, Demark, France, Germany, Italy, Luxembourg, Netherlands, Sweden, Switzerland, UK, and the US.• The European Parliament in December 2001 adopted a resolution calling upon CCW States Parties to declare an immediate moratorium until an international agreement has been negotiated on the regulation, restriction or banning of the use, production and transfer of cluster munitions.	
Declaration on Cluster Munitions made by States at the Third Review Conference of the Convention on Conventional Weapons (CCW) CCW/CONF.III/WP.18; November 20, 2006 <p>“Call for an agreement that should inter alia: (a) prohibit the use of cluster munitions within concentrations of civilians; (b) prohibit the development, production, stockpiling, transfer and use of cluster munitions that pose serious humanitarian hazards because they are for example unreliable and/or inaccurate; (c) assure the destruction of stockpiles of cluster munitions that pose serious humanitarian hazards because they are for example unreliable and/or inaccurate, and in this context establish forms for cooperation and assistance.”</p>				
CCW Protocol V on Explosive Remnants of War (ERW) Entered into force on November 12, 2006. Ratified by 29 states as of February 1, 2007: Albania, Australia, Bulgaria, Croatia, Czech Republic, Denmark, El Salvador, Estonia, Finland, France, Germany, Holy See, Hungary, India, Ireland, Liberia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Nicaragua, Norway, Sierra Leone, Slovakia, Sweden, Switzerland, Tajikistan, and Ukraine.			A Common Understanding of Cluster Munitions Introduced by Germany CCW/GGE/XIII/WG.1/WP.10, March 8, 2006. <ul style="list-style-type: none">• Cluster munitions means a munition which contains submunitions with explosives. These are deployed by means of delivery and are designed to detonate on impact with a statistical distribution in a pre-defined target area.• Cluster munition delivery means include artillery shells, missiles or aircraft.• The characteristics of cluster munitions are a lack of an autonomous target detection capability and a unusually high number of dangerous duds that pose serious humanitarian concerns after the use. The term “cluster munitions” does not cover direct-fire munitions, flares and smoke ammunition, sensor-fused ammunition with an autonomous target detection capability, submunition without explosives, and landmines.	
Countries that Produce Cluster Munitions (34)				
Argentina Belgium Brazil Bulgaria Canada Chile China Egypt France	Germany Greece India Iran Iraq Israel Italy Japan North Korea	South Korea Netherlands Pakistan Poland Romania Russia Serbia Singapore	Slovakia South Africa Spain Sweden Switzerland Turkey UK US	<ul style="list-style-type: none">• Germany announced in June 2006 that it will not procure any new cluster munitions and will examine whether its existing cluster munitions can be entirely replaced by alternative munitions.• Argentina, Denmark, Germany, Norway, and Switzerland have stated that they will not procure, and in some cases use, cluster munitions that have a hazardous dud rate of greater than one percent and will not use those without the capacity to self-destruct or self-neutralize. The UK announced in March 2005 that it would implement a similar policy by 2015.• Poland, South Africa, and the US have announced national policies for the future procurement of cluster munitions that establish a minimum submunition reliability rate.• KBC Bank in Belgium has disinvested in the following publicly-traded companies because of their involvement in the production of cluster munitions: Aerostar, Alliant Techsystems, Aselsan, BAE Systems, European Aeronautic Defense and Space (EADS), Finmeccanica, GenCorp, General Dynamics, Honeywell International, L-3 Communications, Lockheed Martin, Magellan Aerospace, Northrop Grumman, Poongsan, Raytheon, Rheinmetall, and Thales.
Countries that Stockpile Cluster Munitions (73)				Countries Observing a Domestic Prohibition, or a Moratorium, or Supporting a Moratorium
Algeria Angola Argentina Austria Azerbaijan Bahrain Belarus Bosnia & Herzegovina Brazil Bulgaria Canada Chile China Croatia	Cuba Czech Republic Denmark Egypt Eritrea Ethiopia Finland France Georgia Germany Greece Guinea Guinea Bissau Honduras Hungary	India Indonesia Iran Iraq Israel Italy Japan Jordan Kazakhstan North Korea South Korea Kuwait Libya Moldova Mongolia	Morocco Netherlands Nigeria Oman Pakistan Poland Portugal Romania Russia Saudi Arabia Serbia Singapore Slovakia South Africa Spain	Sudan Sweden Switzerland Syria Thailand Turkey Turkmenistan Ukraine UAE UK US Uzbekistan Yemen Zimbabwe Belgium Holy See Ireland Mexico New Zealand Norway

TIMELINE OF CLUSTER MUNITION USE		
Date	Location	Details
1943	USSR	Soviet forces use air-dropped cluster munitions against German armor. German forces use SD-1 and SD-2 butterfly bombs against artillery on the Kursk salient.
1943	United Kingdom	German aircraft drop over 1,000 SD-2 butterfly bombs on the port of Grimsby.
1960s-1970s	Cambodia, Laos, Vietnam	US forces make extensive use of cluster munitions in bombing campaigns. The ICRC estimates that in Laos alone, 9 to 27 million unexploded submunitions remain, and some 11,000 people have been killed or injured, of which more than 30 percent have been children. An estimate based on US military databases states that 9,500 sorties in Cambodia delivered up to 87,000 air-dropped cluster munitions.
1973	Syria	Israel uses air-dropped cluster munitions against non-state armed group (NSAG) training camps near Damascus.
1975-1988	Western Sahara	Moroccan forces use cluster munitions against NSAG.
1978	Lebanon	Israel uses cluster munitions in southern Lebanon.
1979-1989	Afghanistan	Soviet forces make use of air-dropped and rocket-delivered cluster munitions. NSAG also use rocket-delivered cluster munitions on a smaller scale.
1982	Lebanon	Israel uses cluster munitions against Syrian forces and NSAG in Lebanon.
1982	Falkland Islands (Malvinas)	UK aircraft drop cluster munitions on Argentinean infantry positions near Port Stanley, Port Howard, and Goose Green.
1986	Chad	French aircraft drop cluster munitions on a Libyan airfield at Wadi Doum.
1991	Iraq, Kuwait, Saudi Arabia	The US and its allies (France, Saudi Arabia, UK) drop 61,000 cluster bombs, containing some 20 million submunitions. The number of cluster munitions delivered by surface-launched artillery and rocket systems during the Gulf War is not known, but one source estimates that over thirty million DPICM submunitions were used in the conflict.
1992-1995	Bosnia and Herzegovina	Forces of Yugoslavia and NSAG use available stocks of cluster munitions during civil war.
1992-1997	Tajikistan	Use by unknown forces in civil war.
1994-1996	Chechnya	Russian forces use cluster munitions against NSAG.
1995	Croatia	On May 2-3, 1995, an NSAG uses Orkan M-87 multiple rocket launchers to attack civilians in Zagreb. Additionally, the Croatian government claimed that Serb forces used BL-755 bombs in Sisak, Kutina, and along the Kupa River.
1996-1999	Sudan	Sudanese government forces use air-dropped cluster munitions in southern Sudan.
1997	Sierra Leone	Nigerian ECOMOG peacekeepers use Beluga bombs on the eastern town of Kenema.
1998	Ethiopia / Eritrea	Ethiopia and Eritrea exchange aerial cluster munition strikes, Ethiopia attacking the Asmara airport and Eritrea attacking the Mekele airport. Ethiopia also dropped BL-755 bombs in Gash-Barka province of western Eritrea.
1998-1999	Albania	Yugoslav forces launch cross-border rocket attacks and NATO forces carry out six aerial cluster munition strikes.
1999	Yugoslavia (including Kosovo)	The US, UK, and Netherlands drop 1,765 cluster bombs, containing 295,000 bomblets.
2001- 2002	Afghanistan	The US drops 1,228 cluster bombs containing 248,056 bomblets.
2003	Iraq	The US and UK use nearly 13,000 cluster munitions containing an estimated 1.8 to 2 million submunitions in the three weeks of major combat.
2006	Lebanon	Israeli forces use surface-launched and air-dropped cluster munitions against Hezbollah. The UN estimates that Israel used up to 4 million submunitions.
2006	Israel	Hezbollah fires over 100 Chinese-produced Type-81 122mm cluster munition rockets into northern Israel.

In addition, unconfirmed reports cite use of cluster munitions in Angola, Colombia, Kashmir, Nagorno-Karabakh, Pakistan, Sri Lanka, Turkey, and Yemen.