



Cluster Munitions in the Asia-Pacific Region

Prepared by Human Rights Watch

Globally, 34 countries are known to have produced over 210 different types of air-dropped and surface-launched cluster munitions including projectiles, bombs, rockets, missiles, and dispensers. Existing stockpiled cluster munitions contain billions of individual submunitions. Cluster munitions are stockpiled by at least 76 states and have been used in at least 30 countries and disputed territories. According to available information, at least 13 countries have transferred over 50 types of cluster munitions to at least 60 other countries. In the Asia-Pacific region:

- **China, India, Japan, North Korea, South Korea, Pakistan, and Singapore** have produced cluster munitions.
- **China, India, Indonesia, Japan, North Korea, South Korea, Mongolia, Pakistan, Singapore, Sri Lanka, and Thailand** stockpile cluster munitions; **Australia** announced in October 2007 that it is procuring a type of artillery-delivered sensor fuzed munition with two submunitions in each projectile.
- **China** and **South Korea** are known to have exported cluster munitions; companies in **India, Pakistan, and Singapore** publicly advertise cluster munitions for sale.

US forces made extensive use of cluster munitions in bombing campaigns in **Cambodia, Laos, and Vietnam** during the 1960s and 1970s. The scale of the use is highlighted by an analysis of US Air Combat Data for Southeast Asia by the non-governmental organization (NGO) Handicap International:¹

- At least 26 million submunitions were delivered in **Cambodia** by some 80,000 cluster munitions between 1969 and 1973;
- At least 260 million submunitions were delivered in **Laos** by over 414,000 cluster bombs between 1965 and 1973;
- Nearly 97 million submunitions were dropped in **Vietnam** by over 296,000 cluster munitions between 1965 and 1975.

Soviet forces used air-dropped and rocket-delivered cluster munitions during their invasion and occupation of **Afghanistan** from 1979 to 1989. A non-state armed group (NSAG) used rocket-delivered cluster munitions on a smaller scale during the subsequent civil war in the 1990s. Between October 2001 and early 2002, US aircraft dropped 1,228 cluster bombs containing 248,056 bomblets at locations throughout the country.

Production and Export of Cluster Munitions

A total of seven countries in the Asia-Pacific region are known to produce cluster munitions. Aside from Europe, this is the largest regional concentration of producing countries. While little detail is known about North Korea's production and export activities, all of the countries except Japan offer cluster munitions for sale.

China Northern Industries Company (NORINCO) produces a full range of air-dropped and surface-launched cluster munitions. Export activity is not known, but Hezbollah fired over 100 Chinese Type-81 122mm rockets into northern Israel in July/August 2006. Submunitions from these weapons were also found in southern Lebanon by deminers after the cessation of the conflict. Additionally, the NGO Landmine Action photographed a Rockeye type cluster bomb with Chinese-language external markings in Yei, Sudan in October 2006.

The **India** Ordnance Factories produce and advertise for export 130mm and 155mm artillery projectiles containing dual-purpose improved conventional munition (DPICM) submunitions, which are equipped with a self-destruct feature.² These projectiles are the result of a transfer of production technology from Israel Military Industries and are produced at a Khamaria Ordnance Factory near Jabalpur in Madhya Pradesh.³ Additionally, the Defense Research and Development Organization of the Ministry of Defence has developed a cargo rocket for submunitions for the 214mm Picacha multi-barrel rocket system.⁴

In 2001, the US provided assistance and technical data to support **Japan's** production of CBU-87 Combined Effects Munitions.⁵

Two companies in **South Korea**, Poongsan and Hanwha, produce cluster munitions. "South Korea stopped production of old types of cluster munitions," according to its Ministry of Defense, and "cluster munitions currently in production have a high level of reliability and

most are equipped with [self-destruct] mechanisms.”⁶ Poongsan transferred DPICM production technology to Pakistan in November 2004.⁷ The US also concluded a licensing agreement with South Korea in 2001 for production of DPICM submunitions for Multiple Launch Rocket System (MLRS) rockets.⁸

Pakistan Ordnance Factories produces and offers for export M483A1 155mm artillery projectiles containing 88 M42/M46 DPICM grenades.⁹ The South Korean company Poongsan entered into a licensed production agreement with Pakistan Ordnance Factories in November 2004 to co-produce K-310 155mm extended-range DPICM projectiles in Pakistan at Wah Cantonment.¹⁰ The Army took delivery of the first production lots in April 2008.¹¹ Jane’s Information Group credits the Pakistan Air Weapons Center with the production of the Programmable Submunitions Dispenser (PSD-1), which is reported to be similar to the Rockeye cluster bomb, and dispenses 225 anti-armor bomblets.¹² It states that the Pakistan National Development Complex produces and markets the Hijara Top-Attack Submunitions Dispenser (TSD-1) cluster bomb.¹³

The company **Singapore** Technologies Kinetics Ltd (ST Kinetics) produces two types of 155mm DPICM artillery projectiles (containing 63 or 49 grenades) equipped with electro-mechanical self-destruct fuzes with an advertised dud rate of 3 percent.¹⁴ The company also produces a 120mm mortar bomb which delivers 25 DPICM grenades.¹⁵

Stockpiling of Cluster Munitions

At least 11 countries in the Asia-Pacific region are known to currently stockpile cluster munitions and are detailed in the following table:

Country	Type Stockpiled	Country	Type Stockpiled
China	Type 83 projectile	North Korea	170mm rocket
	Type 59 projectile		240mm rocket
	Type 62 projectile		KMG-U dispenser
	Type 66 projectile	South Korea	RBK series bomb
	Type 2 bomb		M483A1 projectile
	Rockeye type bomb		M864 projectile
	BL-755 type bomb		M509A1 projectile
	Type 63 rocket		M26/M26A1 rocket
	Type 81 rocket		M261 Hydra rocket
	Type 90A rocket		ATACMS missile
WM-80 rocket	CBU-87 bomb		
WS-1B rocket	Rockeye bomb		

Country	Type Stockpiled
India	130mm projectile
	155mm projectile
	KMG-U dispenser
	BL-755 bomb
	BLG-66 bomb
	RBK series bomb
	Picacha rocket
	Smerch rocket
	Agni missile
	Dhanush missile
Prithvi missile	
Indonesia	Rockeye bomb
Japan	M483A1 projectile
	M26/M26A1 rocket
	M261 Hydra rocket
	CBU-87 bomb

Country	Type Stockpiled
Mongolia	KMG-U dispenser
Pakistan	M483A1 projectile
	K-310 projectile
	PSD-1 dispenser
	TSD-1 dispenser
	BL-755 bomb
Rockeye bomb	
Singapore	120mm mortar bomb
	155mm projectile
	CBU-71 bomb
Sri Lanka	RBK series bomb
Thailand	CBU-71 bomb
	Rockeye bomb

Australia announced in October 2007 that it is procuring a type of artillery-delivered sensor fuzed munition with two submunitions in each projectile. Additionally, Jane's Information Group lists Australia as possessing Rockeye cluster bombs but Ministry of Defence officials state that these weapons were removed from the inventory of the Australian Defence Forces many years ago.¹⁶

Participation by the Asia-Pacific Region in the Oslo Process

The growing number of countries participating in the Oslo Process from the Asia-Pacific region is an encouraging development. Countries from the region participating in major international conferences held in Oslo, Lima, Vienna, and Wellington are detailed below.

- Afghanistan, Indonesia, and New Zealand joined the declaration made at the Oslo Conference on Cluster Munitions on 22-23 February 2007, which committed them to “Conclude by 2008 a legally binding international instrument that prohibits the use and stockpiling of cluster munitions that cause unacceptable harm to civilians and secure adequate provision of care and rehabilitation to survivors and clearance of contaminated areas.” Cambodia endorsed the declaration shortly thereafter.
- 8 countries participated in the Lima Conference on Cluster Munitions in May 2007: Australia, Bangladesh, Cambodia, Indonesia, Japan, Laos, New Zealand, and Thailand.
- 15 countries participated in the Vienna Conference on Cluster Munitions in December 2007: Afghanistan, Australia, Bangladesh, Brunei, Cambodia, Indonesia, Japan, Laos, Nepal, New Zealand, Palau, Philippines, Samoa, Thailand, and Vietnam.

- 19 countries from the Asia-Pacific region have subscribed so far to the Wellington Declaration (as of 29 April 2008): Australia, Brunei, Cambodia, Cook Islands, Fiji, Indonesia, Japan, Laos, Malaysia, Marshall Islands, Nauru, Nepal, New Zealand, Niue, Palau, Papua New Guinea, Philippines, Samoa, and Vanuatu. Subscribing to the Wellington Declaration affirms the country's "objective of concluding the negotiation of such an instrument prohibiting cluster munitions that cause unacceptable harm to civilians in Dublin in May 2008" and is a prerequisite to full participation in the negotiations.

Countries from the Asia-Pacific Region that have not subscribed to the Wellington Declaration (as of 29 April 2008)

Afghanistan, Bangladesh, Bhutan, China, India, Kiribati, North Korea, South Korea, Maldives, Micronesia, Mongolia, Myanmar, Pakistan, Singapore, Solomon Islands, Sri Lanka, Thailand, Timor-Leste, Tonga, Tuvalu, Vietnam

¹ Handicap International, *Circle of Impact: The Fatal Footprint of Cluster Munitions on People and Communities*, (Brussels), May 2007, p. 23 (Cambodia), p. 30 (Laos), p. 39 (Vietnam).

² See the website of the India Ordnance Factories. For the 130mm projectile, which contains 24 submunitions, see: <http://www.ofbindia.gov.in/products/data/ammunition/lc/38.htm> For the 155mm projectile, which contains 49 submunitions see: <http://www.ofbindia.gov.in/products/data/ammunition/lc/38.htm> (accessed 14 April 2008).

³ "Ordnance Board to produce 'cargo ammunition' with Israeli company," *The Hindu*, 6 August 2006, online edition at: <http://www.hindu.com/2006/08/02/stories/2006080221121500.htm> (accessed 14 April 2008).

⁴ *Jane's Ammunition Handbook*, Terry J. Gander and Charles Q Cutshaw, eds. (Surry, UK: Jane's Information Group Limited, 2001), p. 637.

⁵ US Department of State, Office of Legislative Affairs, "Notification of Export Certification Pursuant to Section 36(c) of the Arms Export Control Act, Transmittal No. DTC 107-1," 1 October 2001.

⁶ Communication from South Korea Ministry of National Defense, to Pax Christi Netherlands, 3 June 2005.

⁷ "Pakistan Ordnance Factory, S. Korean Firms Sign Ammunition Pact," *Asia Pulse* (Karachi), 24 November 2006.

⁸ "US Army Aviation & Missile Command Contract Announcement: DAAH01-00-C-0044," US Department of Defense news release, 9 November 2001, http://www.defenselink.mil/contracts/2001/c11092001_ct575-01.html (accessed 28 November 2006).

⁹ Pakistan Ordnance Factories, "Products, Ordnance, Artillery Ammunition, 155mm HOW HE M483 A1-ICM," undated, <http://www.pof.gov.pk/mexports.htm#> (accessed 7 June 2006).

¹⁰ "Pakistan Ordnance Factory, S. Korean Firms Sign Ammunition Pact," *Asia Pulse* (Karachi), 24 November 2006.

¹¹ "Pak Army Gets First Lot of DPICM Ammunition," *PakTribune*, 12 April 2008 (online edition accessed on 17 April 2008).

¹² *Jane's Air Launched Weapons*, Robert Hewson, ed. (Surrey, UK: Jane's Information Group Limited, 2004), p. 389.

¹³ *Ibid.*

¹⁴ Singapore Technologies Engineering, "Product: 155mm Cargo Round," undated, <http://www.stengg.com/CoyCapPro/detail.aspx?pdid=151> (accessed 7 June 2006).

¹⁵ *Ibid.*

¹⁶ *Jane's Air Launched Weapons*, p. 835; Human Rights Watch interview with members of Australia's delegation to the Eleventh Session of the CCW GGE, Geneva, 10 August 2005.