In an October 1998 Report[104], Human Rights Watch (HRW) questioned the apparent American development of dazzling as opposed to blinding lasers. They have also criticized the potential dual-use aspects of some target location and aiming lasers[105], and have queried the marketing of some of these systems to law enforcement agencies.

In one of their studies on lasers as weapons [106] (carried out in the early 1990s), the ICRC concluded that if production of anti-personnel lasers in industrial countries proceeds on a large scale, these weapons can be expected to become widely available. The fact that they are small, light and require no ammunition will make low-energy laser weapons attractive to insurgency movements, terrorists and criminal organizations. They are silent, the beam is invisible and it leaves no ballistic evidence. While their worst fears have apparently not yet materialized, the ICRC report underestimated the degree to which the technology in question had already diffused throughout the world, to the degree that many countries (including some less developed countries) are now capable of producing such weapons.

High energy laser weapons are being developed for air defence. The Tactical High Energy Laser (THEL) is a joint USA Israeli development for use against short range missiles.

> "The THEL low-cost per kill (about $3,000) will also provide a cost-effective defense against low-cost air threats. It features up to 60 shots without reloading and a P(k) near 1 at ranges of some 5 km. A joint US – Israeli program has been initiated to develop a THEL demonstrator using deuterium fluoride chemical laser technologies...
> THEL conducted test firing in FY1998, and Initial Operational Capability (IOC) was planned in FY1999."[107]

While such high energy laser weapon systems are clearly designed as anti-material weapons, it is unclear as to what effect their use might have on humans that fall within their energy beams. As well, like weapons such as the German 88 mm anti-aircraft gun of WW II, there is no apparent reason why they might not have their role changed to a ground based anti-material or even an anti-personnel weapon (although whether the weapon would have to be modified to do so is unknown). While clearly not an SALW problem, these issues do raise concerns regarding potential misuse and/or unintended collateral personnel casualties. While there is yet no evidence of the development of lethal anti-personnel lasers (lasers powerful

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[104] See: *http://www.lfc.com/ifw/archive/1998/10/10wr.html* for details

[105] According to a Department of National Defence official, the Canadian Forces are establishing requirements for "eye safe lasers" for future laser target acquisition and RF procurement. *Conversation* 16 March 1999.

[106] See: Kieman at *http://www.icrc.org/unicc/icrnews* for details.

[107] See: *http://fas.org/spp/military/docops.defense/97_dtap/weapons/ch100303*. See also: *http://www.trw.com/seg/sats/THEL.htm*