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Human Rights Watch Position Paper on “Smart” (Self-Destructing) Landmines

The concept of smart (i.e., self-destructing) mines certainly has humanitarian allure. In theory, a mine that blows itself up in a relatively short period of time is preferable to a mine that lasts for decades, and should pose less danger to civilians. A smart mine MAY be a safer mine, but it is NOT a safe mine -- there will still be unacceptable risks for civilians, there will still be new mine victims, and the clearance task (while less dangerous) will be just as time-consuming and costly, perhaps even more so. One can argue that in some ways smart mines could pose even greater dangers to civilians because of the large numbers used in a random fashion.

It was evident very early in the ban movement that the large number of countries that have only dumb mines would not even consider giving them up if richer, more technologically advanced countries were going to be allowed to keep the types of mines in their inventories. A ban on just dumb mines was a non-starter for nations like Cambodia and Mozambique. There would not be a ban treaty today if smart mines had been deemed acceptable.

Although few people are aware or recall it today, the United States and the United Kingdom launched a major joint international initiative in late 1994 that was aimed precisely at promoting smart mines. It was called the US-UK Export Control Regime and was intended to convince nations to give up or at least reduce the number of dumb mines in their arsenals and replace them with smart mines. It gained stunningly little support from anywhere, much hostility from many quarters, and the initiative died in a matter of months. Shortly after that, in 1996, we witnessed the failure of the revision of the Landmine Protocol of the Convention on Conventional Weapons (CCW), which again was largely aimed at promotion of smart mines. Out of those failures, the Ottawa Process was launched, and in no small part, the process that resulted in the 1997 Mine Ban Treaty was based on the rejection of a smart mines approach to resolving the landmines crisis.

Over the years, government after government became convinced that a comprehensive ban on all antipersonnel mines -- smart or dumb, hand-layed or remotely delivered by aircraft and artillery, used offensively or defensively, used...
on borders or elsewhere -- was the only viable humanitarian solution. Allowing "exceptions" like smart mines or border mines would, at best, result in marginal improvements from a humanitarian perspective.

Ongoing use, production and export of smart mines is a major step back from existing policy in nearly every nation, including the United States. It has been official US policy since 1994 that ALL antipersonnel mines should be banned, both smart and dumb. This policy is enshrined in a Presidential Decision Directive issued in 1998. Regrettably, the target date for this ban was 2006, and it was dependent on development of alternatives. But, the US had accepted that smart mines should be eliminated, and spent hundreds of millions of dollars to find alternatives to smart mines. It is also the case that the US has prohibited export of all antipersonnel mines, both smart and dumb, since 1992, and that the US has not produced smart antipersonnel mines since 1997 (though no legal prohibition is in place).

Globally, we are unaware of any exports of smart mines by any nation since the mid-1990s. Other big nations, like Russia and China, have said their intention is to eliminate all antipersonnel mines, smart and dumb, though without any time frame.

Following in bullet form are the key humanitarian, technical, and political arguments against smart (self-destructing) mines:

Dangers to Civilians:

* Self-destruct mechanisms are not 100% reliable. The Landmine Protocol of CCW (to which the US and China belong) allows a 10% failure rate. Technical experts say less sophisticated production methods can result in failure rates much higher.

* Smart mines are usually scattered by aircraft or artillery at a rate of thousands in a matter of minutes, with little precision; given the failure rate for self-destruction, many dangerous mines will remain on the ground. Because of the huge number of smart mines that are typically employed at one time, the danger to civilians could be greater than hand-laid dumb mines. We have already seen that smart mines are sometimes used in populated areas. Russian mines that are supposed to self-destruct are now causing civilian casualties in Chechnya.

* Because smart mines are usually scattered (or remotely-delivered), there is no way to accurately mark or map or fence the smart mine minefields.

* Civilians in smart mine fields not only face the danger of stepping on mines that have failed to self-destruct, but the danger of hundreds of those mines randomly self-destructing at unknown times.

* Because smart mines self-destruct, and do not last for an indefinite period of time, some nations might compensate by using greater numbers of mines and/or by using them repeatedly in the same area.
* The Landmine Protocol, in addition to self-destruct mechanisms on scatterable mines, requires a "self-deactivation" feature (a battery goes dead so the mine's firing chain cannot be started, the mine becomes inert). But the protocol allows 120 days (17 weeks) before self-deactivation must occur. In warfare today, civilians often return to conflict zones in that period of time. And there is no guarantee that the batteries will in fact go dead in that period of time.

* It should also be noted that the restrictions on use of smart mines (such as reliability requirements) contained in the Landmine Protocol affect very few countries. Countries that are party to the protocol who haven't already banned smart mines include the US, China, India, Pakistan, Finland, Israel, South Korea and Estonia.

* Smart mines will still deny land to civilians. Because they are usually remotely-delivered, smart mines are usually on the surface of the ground, not buried. The 10% or so of the mines that have failed to self-destruct (even if they have self-deactivated), and the mines that failed to arm when delivered (estimated at another 10%), will at least for a period of time be visible on the ground. Civilians will not enter the area, fearing that the visible mines are still dangerous. In many places, the mines will eventually be overgrown or otherwise obscured.

* A landmark study published in 1996 by the International Committee of the Red Cross cited the views of a military Group of Experts (more than 30 retired officers from about a dozen countries). With respect to smart mines, they concluded, "Because of the vast numbers [of mines] involved, and the complete absence of any [mine] marking, it is likely that the number of civilian casualties resulting from a large-scale strike with remotely delivered mines will greatly exceed the casualty rates seen with conventional minefields.... Even the doubtful benefit of self-destruction and self-deactivation at a later date will not prevent widespread casualties in the initial days after the strike. There is little doubt that the development of remotely delivered mines has increased the probability of a major rise in post-conflict mine casualties."

Problems for Mine Clearance:

* Large numbers of smart mines will fail to self-destruct; each will pose the same danger to civilians and to deminers as dumb mines, unless and until they self-deactivate (if they have such a feature).

* Smart mines that have failed to self-destruct, but which have self-deactivated, will have to be treated by deminers as live mines that may potentially explode. Thus, a field that has unexploded smart mines in it will have to be cleared with the same care as any other minefield. The time and cost will be similar. The job may be made easier by the fact that most smart mines should be on the surface, not buried -- though vegetation will overgrow, sands will shift, etc. But the job may be made more difficult by the large numbers of mines present (given the propensity to use thousands at a time in remote-delivery). US smart mines (Gator mines) were still being cleared from Kuwait several years after Operation Desert Storm.

Political/Military Problems:

* Acceptance of use of smart mines will legitimize use of other antipersonnel mines.
* Experience has shown that nations -- especially those in the developing world where mines have been used the most -- are unwilling to give up the dumb mines in their arsenals, if more wealthy and technologically advanced nations insist on the right to keep the smart mines in their arsenals. We have heard governments say that they are unwilling to make the world safe for US mines and US mine exports.

* Poorer armies and rebel groups will reject a smart mine only solution. They not only will be unable to afford smart mines, they don't have the technology to deploy them. And they likely prefer mines that last a longer period.

* Governments have argued that they have as legitimate an argument to keep dumb mines as the US and others do to keep smart mines. The US argues that smart mines are necessary for the type of maneuver warfare it specializes in; other governments argue that dumb mines are necessary for the type of long-term border defense problems they face (and for which smart, self-destructing mines are not useful). Those nations will also argue their mines pose little danger to civilians because they are in marked and fenced minefields in border areas only. The point being that, if one doesn't insist on a comprehensive ban on all types and uses of antipersonnel mines, each nation will be able to claim unique requirements and justifications.

* Some nations have claimed that it would take 15-20 years to convert their mine stockpiles to self-destruct mines. The Landmine Protocol allows nations 9 years before the regulations on use of smart mines come into effect.

* Neither the US nor other nations that have promoted smart mines have also proposed an immediate ban on dumb mines.