

Focus: On a Comprehensive Test Ban Treaty

On August 10, the Conference on Disarmament (CD) decided to give its *Ad Hoc* Committee on a Nuclear Test Ban a mandate to negotiate a comprehensive nuclear test ban treaty (CTBT). The CD's decision followed the announcement in July that the US is extending its ban on nuclear testing, in place since October 1992, for a further 15 months, through September 1994. These historic developments are key steps towards a goal that has occupied a central position on the multilateral arms control and disarmament agenda for the better part of four decades, and that Canada has long advocated.

Background

Discussions and negotiations on limiting nuclear tests and pursuing a comprehensive test ban have been held on and off since the late 1950s: multilaterally, in the Eighteen-Nation Committee on Disarmament in Geneva and its successor bodies (today the Conference on Disarmament); trilaterally, among the US, the USSR and the UK; and bilaterally, between the US and the USSR.

Although an underground test ban proved elusive during the Cold War, three other agreements concerning testing were reached. In 1963, due largely to public concern about the effects of radioactive fallout, the US, the USSR and the UK arrived at the Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water, commonly referred to as the Partial Test Ban Treaty (PTBT). Over 115 states, including Canada, are parties to the PTBT. France and China have not become parties. France announced in 1974 that it would refrain from conducting atmospheric tests. China conducted its last atmospheric test in 1980; in March 1986 it confirmed that it would no longer test in the atmosphere.

In 1974, the US and the USSR signed the Treaty on the Limitation of Underground Nuclear Weapon Tests, usually called the Threshold Test Ban Treaty (TTBT). The TTBT prohibits any underground nuclear weapon test having a yield in excess of 150 kilotons and restricts testing to specified areas. Each party agreed to use its national technical means of verification and not to interfere with the means of verification of the other party.

The parties also agreed to exchange information necessary to improve assessments of the yields of explosions.

In 1976, the two states signed the Treaty on Underground Nuclear Explosions for Peaceful Purposes, known in short form as the Peaceful Nuclear Explosions Treaty (PNET). This Treaty regulates the explosions each party may conduct outside its nuclear weapon test sites (and which may, therefore, be presumed to be for peaceful purposes). Like the TTBT, it establishes an upper limit of 150 kilotons for any such explosion. Any group explosion is also limited to 150 kilotons unless each of its individual explosions can be identified and each yield determined to be not more than 150 kilotons, and the aggregate yield does not exceed 1.5 megatons.

Following further negotiations and agreement on two protocols detailing verification arrangements for the TTBT and the PNET, both were ratified by the US and the USSR and entered into force on December 11, 1990.

Why a Test Ban?

Explosive tests are conducted to develop and refine the design of nuclear weapons and to check their reliability.

While a CTBT would not stop nuclear weapon states from making additional weapons using old designs, it could put a brake on their development of new and "improved" weapons. Some experts argue that nuclear weapons can be perfected using only laboratory methods. Indeed, a CTBT presumes that relatively trustworthy safety and reliability checks can be done in the lab. Even so, without a test in the field, a country could never be 100 percent certain that a weapon would work as intended. It thus might be reluctant to deploy an untested design, particularly when older, tested options are available. In terms of nuclear disarmament, though, a CTBT is no substitute for further negotiated reductions in existing nuclear arsenals.

It is harder to guess the impact of a test ban on states seeking nuclear weapons. Media reports suggest that some "threshold" states might have developed nuclear weapons without testing them; unlike the nuclear weapon states, they might be more

willing to rely on a deterrent based on laboratory results alone. Also, such states would not be bound by a CTBT unless they signed it, something they might be unlikely to do unless their broader security concerns were dealt with. A nuclear test ban is probably not sufficient in and of itself to encourage threshold states to renounce nuclear weapons. It certainly is not an alternative to universal adherence to the Nuclear Non-Proliferation Treaty (NPT).

To a large extent, the importance of a CTBT lies in its symbolic value. The test ban has been at the heart of UN arms control and disarmament debates for the last 35 years. Its achievement would be further evidence of the willingness of existing nuclear powers to reduce their reliance on nuclear weapons. Thus, the CTBT has the potential to give a boost to non-proliferation efforts, in particular, to efforts to reinforce the NPT.

The NPT contains a provision (Article VI) under which each of the parties undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control. The NPT also includes in the preamble a reference to the declared intention of the parties to the PTBT to seek to achieve the discontinuance of all test explosions of nuclear weapons for all time and to continue negotiations to that end.

In 1995, a conference will be convened to decide whether the NPT will continue in force indefinitely or be extended for an additional fixed period or periods. Many states support the view that a CTBT would be a significant fulfilment of the nuclear weapon states' obligations under Article VI. Some believe that without a cessation of nuclear testing, it might not be possible to extend the NPT well beyond 1995. Other states, including Canada, are of the opinion that the NPT independently offers benefits for the security of all states and, by its indefinite extension, will continue to do so. Nonetheless, a CTBT would undoubtedly improve the climate of the extension process. The CTB has figured in past NPT review conference debates, to the extent that differences on the issue prevented agreement on a final docu-