

EXECUTIVE SUMMARY

The 1980 United Nations Convention on Certain Conventional Weapons, also known as the CCW Convention, restricts the use of landmines which may be deemed to be causing undue suffering or having indiscriminate effects, especially on civilians. The proposed revision to the Convention may require all landmines to have self destruct or self neutralizing and possibly passive self deactivation features in the future.

SNC Industrial Technologies conducted a study of technological and cost implications of retrofitting landmines with fuses incorporating self destruct or self neutralizing devices for the Department of National Defence in order to assess the implications for Canada on the various options considered for the revision to the CCW Convention. During the course of the study the information obtained from Department of National Defence, international companies manufacturing landmines, Jane's Information Group and the information available within SNC Industrial Technologies was analyzed. The analysis of the worldwide situation on landmines is grouped under NATO countries, Former Warsaw Pact countries and other countries.

The study found that there are a wide variety of anti-personnel and anti-tank mines available worldwide. A few of the anti-personnel mines and some of the anti-tank mines have self destruct or self neutralizing devices.

A large majority of anti-personnel landmines are small devices and are activated with single impulse pressure fuses. Retrofitting these existing mines with self destruct or self neutralizing devices is not economically practical due to redesign of most of the components. The existing pull fused anti-personnel mines would also require redesign of most of the components to replace the fuse with self destruct or self neutralizing features and as such retrofitting of these mines is also not economically practical.

The single or double impulse pressure fused anti-tank mines can be retrofitted with electronic fuses containing self destruct or self neutralizing devices. The cost of such retrofitting would be more than half the original cost of the mine. The tilt rod fused anti-tank mines could be retrofitted with new electronic fusing. The cost of such a retrofit would be more than 70% of the original cost of mine due to replacement of the fuse and modifications to the mine components.