

### **3.0 LANDMINES AND FUNCTIONING MECHANISMS**

The landmines considered in this study include anti-personnel mines, anti-tank mines, remotely delivered mines and other devices. The mines are traditionally used by organized military units as obstacles to the movement of troops and military vehicles.

Anti-personnel mines are designed to explode by the proximity or contact of a person and incapacitate, injure or kill one or more persons. The anti-personnel mines are effective based on either blast effects or projection of lethal fragments. The blast effects type of anti-personnel mines trigger the detonation of an explosive charge when a soldier steps on it, causing incapacitation or loss of life depending on the quantity of explosive. Fragmenting type of anti-personnel mines throw a spray of fragments like steel balls or pellets and are triggered by direct contact, pulling or severing a trip wire or command detonation.

Anti-tank mines are designed to immobilize a tank or other military vehicle by destroying the tracks or wheels or by penetrating inside the vehicle thereby incapacitating or killing the occupants. The anti-tank mines are effective based on blast effects caused by a large amount of explosive, or by projecting an explosively formed projectile (EFP) or a jet formed by a shaped charge. The anti-tank mines are mechanically fused to trigger upon contact with the vehicle and primarily incapacitate the vehicle by attack from underneath the vehicle. The new generation of anti-tank mines use magnetic, acoustic or seismic influence fuses.

The anti-personnel or anti-tank mines are laid in a minefield by hand or mechanized vehicles. These mines are either buried or scattered on the ground or in some cases are held above the ground on a support.

Remotely delivered mines are not laid by hand or mechanized vehicle, but are delivered by artillery, mortar, missile, rocket or dropped from an aircraft. These mines are scattered from the air as anti-personnel or anti-tank mines to control a specified area.

Other devices are placed either manually or through mechanized vehicle as anti-personnel or anti-tank mines and are normally activated by command detonation. These include off-route mines used against personnel or vehicles.