November 2009

IEDs: A Major Threat for a Struggling Society

Pablo Esteban Parra Gallego
Programa Presidencial para la Acción Integral contra Minas Antipersonal

Follow this and additional works at: https://commons.lib.jmu.edu/cisr-journal

Part of the Defense and Security Studies Commons, Emergency and Disaster Management Commons, Other Public Affairs, Public Policy and Public Administration Commons, and the Peace and Conflict Studies Commons

Recommended Citation
Available at: https://commons.lib.jmu.edu/cisr-journal/vol13/iss3/19

This Article is brought to you for free and open access by the Center for International Stabilization and Recovery at JMU Scholarly Commons. It has been accepted for inclusion in Journal of Conventional Weapons Destruction by an authorized editor of JMU Scholarly Commons. For more information, please contact dc_admin@jmu.edu.
Bibliomines

The GICHD is collaborating with the national mine-action centers of Senegal (Centre National d’Action Antimines du Sénégal) and Mauritania (Programme National de Démincage Humanitaire pour le Développement) and the mine-action training center of Benin (Centre de Perfectionnement aux Actions post-conflituelles de Démincage et Diplomation) to carry out the Bibliomines project. The Bibliomines online library was created for French-speaking communities affected by mines and ERW, and for national actors within mine action. The library collects and makes existing documents on mine and ERW action accessible in French. The materials on the Bibliomines Web site include the following:

• Documents from mine-affected countries
• Documents from international institutions
• Conventions and texts of international law
• Documents developed for national implementation (legislation, strategies, national standards, procedures, programs, etc.)
• Studies, surveys, publications, etc.

In addition to facilitating access to mine-action-related documents in French, Bibliomines promotes the production and dissemination of new documents and creates opportunities for cross-sectoral exchanges of expertise.

The Bibliomines Web site can be accessed via the GICHD Web site or at www.bibliomines.org.

Recent Publications

Recent publications from the GICHD include an updated version of the Guide to Cluster Munitions,1 the first edition was published in November 2007. This guide presents some content of the Convention on Cluster Munitions and information on stockpile destruction, while offering new findings in procedures for survey and battle-area clearance. Another recent GICHD publication is the Guide to Mechanical Demincing Handbook. A full list of all GICHD publications can be found at http://www.gichd.org/gichd-publications/overview. See Endnotes, Page 78

Notes

2. The materials of all GICHD publications can be found at http://www.gichd.org/RecentPublications. See Endnotes, Page 78.
4. Anti-personnel mines: IEDs using plastic, glass or metallic containers, with different amounts of explosives, different kinds of shrapnel generating objects, and concurrent activation systems. Designed to detonate with contact by or proximity to its victim, they are concealed in the ground or in vegetation. The most sophisticated anti-personnel mines are undetectable by metal detectors and have chemical-activation systems that can last for many years. Since a single victim can activate most roadside IEDs, they are classified as AP mines and known as victim-activated IEDs—unless they have a remote-controlled activation system.

5. Improvised land-service ammunition: The pressure Colombian Armed Forces exerted on illegal armed groups closed most of those organizations’ access to weapons markets, forcing them to forge most of their land-service ammunition.

Materials Used and How IEDs Work

IEDs typically consist of a main charge, a booster, a detonator and an initiation system. Depending on their objective, IEDs in Colombia are built in different shapes and sizes, with varied materials and activation devices. IEDs can act just by the power of the detonation (blast), but most of the time they contain multiple kinds of shrapnel, and evidence suggests that chemical or biological toxic elements are sometimes added to enhance the damage to victims. Depending on the IED's purpose, sometimes the builder adds a shaped charge to defeat armor, but most of the time, IEDs in Colombia are designed as anti-personnel landmines. IEDs that are meant to destroy armored vehicles or buildings are shaped to focus the effect of the explosive's energy, mainly to create more damage to a highly resistant object. When an IED is built in a shape-charge manner, it is most likely anti-vehicle and not AP. Each IED found in Colombia is unique because its producer uses only locally available materials. Since they are tailored for a specific objective, IEDs are usually more difficult to prevent, detect and neutralize than regular ammunition.

IEDs built by inexperienced people or with defective materials can fail to accomplish their task. Illegal groups in Colombia, however, have developed advanced techniques, employing sophisticated elements of conventional ammunition that make IEDs more reliable and lethal, including electronic components, cell phones, remote controls, and magnetic and optical fuses. The complexity of IEDs is only limited by the training and creativity of the designer and by the availability of specific materials.

IED builders usually rely on the container of the device for fragmentation purposes. A detonated car bomb will have a devastating effect resulting from the pieces of the car itself flying at high speed. Nevertheless, IEDs have been found with added shrapnel, like nails and bolts, to inflict worse damage. To avoid metal-detector discovery of improvised landmines, illegal groups in Colombia avoid metallic materials, instead adding glass and plastic for fragmentation effect. At first, landmine victims suffer wounds from the explosion, and later develop infections from fragments that weren’t detected by X-rays.

Due to logistical constraints of illegal groups, their IEDs seldom contain military explosives. They are more often built with ammonium nitrate and fuel oil (ANFO) or other types of improvised explosives, which widely affect their destruction capability. Allegedly, several products, like coffee or paint, are added to those explosives to avoid canine detection. Most components of IEDs are relatively easy to find in rural markets. IEDs in Colombia have commonly a powerful (5 pounds) of explosives, but some have been found to hold more than 20 kilograms (44 pounds) of explosives.

The most common type of detonator found in Colombia is the electrical detonator, although non-electrical and chemical detonators have also been found. The latter are commonly used in landmines to avoid detection by metal detectors and weathering of the batteries. Further studies are needed, but evidence indicates that battery-initiated landmines decay after just months in the open. Similarly, the byzantine nature of ammonium nitrate and defects in the waterproofing of IEDs generally render ANFO ineffective after being abandoned for several months.

Activation mechanisms vary widely, depending on the type of IED. Car bombs and house bombs usually have a mixture of timers, remote controls and victim-activated fuses. The nature of the objective, the amount of resources spent and the risk inherent to the activity oblige the designers to use more sophisticated and reliable activation systems. Booby traps generally have a victim-activated system, but some are also activated by a simple remote-control device. IED landmines are all victim-activated with pressure-release, tension, or tension-release systems. Depending on their strategic purpose, these landmines can have several initiation systems, including magnetic and photosensitive fuses.

How did Colombia Become so Affected?

After Colombia won its independence from Spain in the beginning of the 19th century, rural violence became widespread throughout the country, the result of unfair land distribution, fraud property rights and obscure political interests. From the second half of the 20th century until today, leftist guerrillas—mainly the Fuerzas Armadas Revolucionarias de Colombia (Revolutionary Armed Forces of Colombia or FARC) and the Ejército de Liberación Nacional (National Liberation Army or ELN)—have ravaged the country, and since the 1980s, drug cartels and paramilitary self-defense groups have only added to the level of violence in this already complicated setting.
Most of the drug cartels, guerrillas and paramilitary groups began using IEDs in Colombia during the 1980s and 1990s. During that time period, Eta and Ebas (known as ETA or Basque Homeland and Freedom), Irish Republican Army and other terrorist groups came to Colombia to train FARC and ELN members in the construction and use of IEDs. But over the years, FARC and ELN had already developed a state-of-the-art technique that allows them to build and utilize an ever-expanding number of IEDs to disrupt Colombian State Forces and intimidate the population. causing death or injury to 7,428 people, 34 percent of which were civilians.9

During this same period, 471 municipalities of Colombia (43 percent) reported at least one landmine victim. To the Programa Presidencial para la Acción Integral contra Minas Antipersonal (Presidential Program for Mine Action or PAICMA),9 the use of IEDs and other indiscriminate weapons by FARC and ELN contributed to the decision by the United States, the European Union and several other countries to classify the two organizations as terrorists groups.6,7

Scope of the Problem

Between 2002 and 2007, 5,200 terrorist acts involving various IEDs took place in Colombia. Though the number of bombings saw an 81 percent reduction during that period, the use of IEDs is still relevant. Despite the efforts of Colombian Armed Forces, illegal groups successfully executed 347 terrorist acts involving IEDs in 2008, and 178 during the first six months of 2009.8

Most of these IEDs were used against the Colombian Armed Forces by means of roadside charges, car bombs and booby-trapped buildings. Some were used against key infrastructure throughout the country, like pipelines (734 bombings) and power lines (1,713 bombings), affecting the national economy. Others were used against civilian targets, or affected the civilian population due to their indiscriminant nature, similar to the attack on gas cylinders on the church of Bojayá (2 May 2002), where 119 civilians lost their lives, or the bombing of the social club El Nogal (7 February 2003), where 36 died and more than 200 were wounded.

Additionally, FARC and ELN also use victim-activated IEDs, effectively making them landmines. Between 1990 and 1 July 2009, there were 4,289 landmine accidents in Colombia, causing death or injury to 7,428 people, 34 percent of which were civilians.9

The abundant use of IEDs and other indiscriminate weapons by FARC and ELN has already developed a state-of-the-art technique that allows them to build and utilize an ever-expanding number of IEDs to disrupt Colombian State Forces and intimidate the population. As a result of these efforts in 2008, the following were detected and destroyed:

- 17,353 IEDs
- Six car bombs
- 1,431 gas cylinders filled with explosives
- 108,197 kilograms (238,534 pounds) of explosives
- 97,174 detonators
- 105,306 meters (65 miles) of detonating cord
- 22,736 meters (14 miles) of safety fuse.10

More and better intelligence must supplement the national capacity to counter IEDs. Information is the key issue in the fight against terrorist attacks and minefields. It is as important for the prevention of the use of new IEDs as it is for finding, neutralizing and destroying the ones already in the ground. The government is already working on this issue, with the cooperation and technical assistance of several allied countries.

An international advocacy campaign against the use of indiscriminate weapons by illegal armed groups in Colombia will soon be implemented. Regardless of its size, technology and budget, no national counter-IED capacity is enough to stop the losses caused by these weapons. Iraq and Afghanistan are clear examples of this statement. Perhaps the Second Review Conference of the Ottawa Convention, to be held 30 November–4 December 2009 in Cartagena, Colombia, will send a clear message to FARC and ELN to stop using landmines, and to reduce the use of IEDs against the people of Colombia.

See Endnotes, Page 78