Explosive Remnants of War in North Africa

This article looks at explosive remnants of war in North Africa (Algeria, Egypt, Libya, Morocco and Tunisia) from different perspectives, including the scope and history of the ERW, its impact and its relationship to security.

by Ayman Sorour [Protection of Armaments and Consequences]

Several countries in North Africa are affected by mines and ERW[1] as a result of the North African Campaign of World War II, also known as the Desert War, which was fought between 1940 and 1943.[2] Algeria, Egypt, Libya, Morocco and Tunisia are dealing with the contamination that has resulted from internal and regional conflicts over the past 60 years in addition to the Desert War contamination.

Algeria

Algeria is affected by ERW as a result of World War II, the Algerian War of Independence and ongoing conflicts with terrorist groups. There is no distinction between landmine and ERW estimates, and the contamination of each affected area is different depending on which conflicts occurred there. The contaminated areas in the east and west, known as the Morice and Challe lines, are mostly affected by mines, as are the strategic areas in the north that the Algerian Army secured with mines in its ongoing fight with terrorist groups. The other affected areas of the country are mostly ERW-affected due to battles fought during WWII. Algeria estimates there are 3,064,180 mines and ERW affecting 5,676 hectares (22 square miles)—3,036 hectares (12 square miles) in the eastern border area and 2,640 hectares (10 square miles) in the western border area. Terrorist groups have emplanted approximately 33,000 homemade bombs, and the Ministry of Interior cleared 20,000 of them between 1990 and 1997. Those bombs killed 4,000 people and injured 13,000 people.[3]

Humanitarian impact. Fifty-seven victims of mines and ERW have been reported in Algeria since September 1998; this includes 44 in 2002, 12 in 2000 and one in 1998.[4] There is no mechanism to survey mine/ERW victims; some figures mention the number of civilians victimised by mines/ERW during and after the independence war was 120,000, which is comprised of 40,000 killed and 80,000 injured. According to the Ministry of National Solidarity, there are 7,000 mine/ERW victims registered with either the Ministry of National Solidarity or the Ministry of Mujahideen. However, it is difficult to have exact statistics on both mines and ERW.

Economic impact. There is no evidence suggesting scrap metal from ERW is perceived by civilian populations in Algeria as being a potential economic resource as it is in some countries with ERW contamination. In recent years, livelihood activities have not been seriously affected because the majority of ERW is found in remote and mountainous areas. The National Association for Protection of Environment and Fight Against Pollution, a nongovernmental organisation, said that mines and ERW caused the death of 580,000 cows, 573,000 horses, 827,000 sheep and 9,000 camels during the colonial and independence war era. They also destroyed 93 agriculture trucks, and prevented the use of 721,000 hectares (2,784 square miles) of land for grazing.

ERW have not blocked access to community resources such as health centres, schools or religious sites. An Algerian Ministry of Defence official stated that ERW affected the implementation of development projects in the affected areas, such as road and railway projects. The Ministry did not give any details, stating that they do not have such information.

Outlook. Algeria became a State Party to the Ottawa Convention[5] 1 April 2002. Algeria created a national committee in 2003 that is responsible for implementing the Convention and to deal with the mine/ERW issue. Clearance began in November 2004, but it is progressing very slowly. The committee is in the process of finalising agreements to do assessments and planning with the United Nations Development Programme and the Geneva International Centre for Humanitarian Demining.

Egypt

Egypt is affected by ERW in two main areas. The first area is in the west and includes many locations from Borg Al-Arab, which is 60 kilometres (37 miles) west of Alexandria, to the Egyptian-Libyan border, with a 30-kilometre (19-mile) distance from the Mediterranean Sea, which is affected as a result of World War II battles in North Africa during 1942 and 1943. The second area is in the east and includes all of the Sinai Peninsula, the western coast of the Red Sea and the Suez Canal as a result of Egyptian-Israeli wars (1956, 1973, 1976), in addition to some areas in Sharqiya governorate that are not known as affected but have witnessed some ERW accidents.

There are an estimated 11.62 million to 12.45 million ERW that affect approximately 248,000 hectares (1,085 square miles) in the western area and 1.27 million to 1.53 million ERW that affect approximately 20,000 hectares (77 square miles) in the eastern area. This debris includes air-dropped bombs, bullets, fuzes and other types of ERW.

Humanitarian impact. In 1999, Egypt declared there had been 8,313 mine and ERW victims in the previous 20 years. It is very difficult to know how many of these were ERW victims since specific records were not kept. However, by extrapolating the data, we find the ERW victims can be estimated between 1,662 and 2,078.

Information on victims since 1998—in addition to the ratio of mines/ERW in Egypt—shows that the 500,000 people living in the western desert and the 600,000 people living in the Sinai are more affected by ERW than mines. Being a mine or ERW victim in one of the affected regions in Egypt is a complicated health issue because of the limited health services in these areas.

All of the victims are found in three groups of people—those who work on the development and repair of infrastructure, Bedouins, or farmers, which means that they lose their main income once injured. The social system in Egypt does not give any assistance for mine/ERW victims; they might get a one-time payment of up to US$80 after a long process of filling out paperwork to prove their injury. This amount is the same given to people affected in natural disasters. Every adult victim is responsible for a family, which, on average, consists of five persons, and the injury affects the family's future. Some of the families have had to take their children out of school to begin working to help the family survive after the main breadwinner in the family was injured. There is no psychological care for mine/ERW victims in Egypt, and this increases the victims' suffering in other ways.

Economic impact. Irrigation projects, which are an essential facet of development projects in desert areas, have experienced delays and increased costs because of the need to clear mines and ERW from prospective sites and routes. This happened with both the El Hammam Canal in the western area and the El Salam Canal in the eastern area, with a total of 833,000 feddans (864,654 acres) needing to be cleared before the irrigation and follow-on agriculture projects could begin. Mines and ERW are also a serious impediment to the development of traditional and nontraditional sectors of the power-supply industry in Egypt. The need to remove ERW delayed large-scale "wind farm"[6] projects in the western area and increased the costs of 500kV-power cable connecting Alexandria (the main port for Egypt and the second largest city) with the existing eastern electrical network, scheduled to be connected through the western area to the North Africa network, then maybe to the European Union.

The petroleum sector, which plays a leading role in Egypt's national income, is also affected by mines and ERW. Egypt estimates there are 4.8 billion barrels of oil and 13.4 trillion cubic metres of gas in the western area, and all petroleum areas (except for those in the sea) are in mine/ERW-contaminated or suspected areas. Any petroleum/gas project must budget for mine/ERW clearance before beginning production; this amount varies from area to area.

In 1998, a German tourist was seriously injured due to an accident involving unexploded ordnance in Elain Elsokhna on the Red Sea coast. In 1999 four tourists, two German and two Swiss, were injured after their car hit an unidentified mine or another kind of ERW in the western area. In addition, all tourist sites in Sinai and on the coast of the Red Sea are in close proximity to mines/ERW. These two accidents have not affected tourism, but one big accident could have a serious impact on tourism, which is Egypt's second largest source of revenue.

Mines/ERW affect accessibility to schools in the western area. In the governorate of Matrouh, all affected areas have to build more schools to make them easily and safely accessible for children. Mines/ERW affected the infrastructure and development of the new port and the attached free industrial zone of Elain Elsokhna on the Red Sea, which is on track to become the largest port in the Middle East by 2010. The Egyptian Army cleared this area for infrastructure, but some mine/ERW incidents occurred subsequently, requiring the area to be demined again to make sure the land was clear. These accidents made workers feel unsafe and delayed the project completion.

Outlook. Egypt has a very ambitious plan to move large numbers of its population to the western area in the next 20 years and there is a national committee in charge of the development of the northern coast. This will be a result of infrastructure, irrigation, agriculture, oil/gas exploration and tourism projects. While the Egyptian Army is the only authority that deals with demining, the 20-year development plan for the northern area includes demining of locations affected by mines/ERW.

Libya

Libya is affected by ERW in different areas in the northern part of the country because of the World War II campaign in North Africa, in the northeastern area at the Egyptian-Libyan borders because of the Egyptian-Libyan conflict in 1977, and in the southern area, including the Libyan-Chadian border, as a result of the Libyan-Chadian war from 1977 to 1987.

There are an estimated 1.5 to five million mines and ERW in Libya; some officials make estimates up to 10 million. This number includes approximately two million mines that were planted by the Libyan Army in the northeastern area and the border with Egypt. All available statistics, publications and photos show that ERW account for the majority of those numbers in the north and some areas in the south.

Humanitarian impact. There is no current estimated number of mine/ERW victims in Libya. It is estimated there were 12,258 victims during the period of 1952 to 1975, which includes 3,874 deaths and 8,384 injuries. Some publications show

Camels in affected areas in west-northern Egypt.
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ERW from western area of Egypt.

victim reports, but without dates, places or specific periods. Many publications and photos show that the majority of victims in Libya are ERW victims. Officials are sure there are new mine/ERW victims each month but do not have figures as there is no mechanism to collect such data on a national basis. The Libyan Jihad Center for Historical Studies counted 100,000 families affected directly or indirectly by mines and ERW. Libya was known for its fairly good health system in the past, but this has changed since the United States instituted international sanctions in 1986 and the United Nations followed suit in 1992.[7] Consequently, mine/ERW victims suffer from the shortage of rehabilitation and psychological care.

Economic impact. Mines/ERW affect the agricultural sector in Libya. It is estimated that approximately 295,059 hectares (1,139 square miles) in Libya cannot be used for agriculture because of mines/ERW. In 1972, the Ministry of Agriculture and Land Reclamation published an estimate of the total income loss from not using affected lands at 18,897,760 Libyan Dinars (US$14,475,728). Raising livestock is a very important source of income for people in Libya, and having adequate land for grazing is important for this industry. In 1976, Libyan authorities estimated 1,452,077 hectares (5,607 square miles) of affected land could not be used for grazing. In addition, 75,000 camels, 48,750 sheep and 1,250 cows were lost because of mine/ERW incidents. Due to rising population rates and the slow process of demining, these statistics have not seen much improvement over the past 30 years.

Mine sign beside road in western area of Egypt.

WWII mine field sign.

Many ports in Libya were affected by sea mines/ERW and clearing them was very expensive. These included Benghazi, Derna, Tobroq and Tripoli ports. Mines/ERW have affected the infrastructure of the transportation network in Libya, causing delays in road reconstruction. The oil sector is also affected by mines/ERW; they increase the costs of any petroleum project due to the need for demining before drilling can begin. The Great Man-Made River that brings water from underground in the south to the populated areas took much longer and cost significantly more than was originally expected to complete because of mine/ERW clearance.

Outlook. After decades of sanctions and with Libya's new strategy for trade and interaction with the world, many projects are planned to take place in different parts of the country, including for tourism. This will bring more people to the affected areas, which will have both humanitarian and economic impact. Libya established a National Program for Demining and Land Reclamation in 2005.[8] However, the country still does not have a future plan for national mine action.

Morocco

Morocco is not affected by ERW and mines except for the territories it controls in Western Sahara. Between 1975 and 1991, Western Sahara territories witnessed a sovereignty conflict among Morocco, *Frente Popular de Liberación de Saguía el Hamra y Río de Oro* (The Polisario Front)—a Sahrawi nationalist organisation—and Mauritania, before its withdrawal from the conflict in 1979. This conflict came after the withdrawal of the Spanish colonial forces from the territories. All parties to the conflict used a variety of weapons and munitions throughout their fighting.

Tunisia

Tunisia is affected by an unknown number of ERW and mines because of World War II conflicts in North Africa and anti-tank and anti-personnel mines it emplaced to secure its borders with Algeria and Libya. During its conflict with Libya from 1970 to 1980, Tunisia planted 1,530 anti-tank mines (including the Egyptian Mk71 and Mk7, the American M6A2 and the Yugoslavian


Unfenced ERW in the land without fence.


ERW victim on camel in western area of Egypt.

TMA3/TMA4)[9] in nine minefields along its border with Algeria and Libya. ERW-affected areas in Tunisia include Mareth, Matmata and El Hamma regions in the south, Kasserine and Faiedh regions in the centre, Le Cap-Bon and the northwest region of the country. Minefields planted by Tunisia include several booby traps that are attached to some of the anti-tank mines to prevent removal. However, the exact number of booby traps is unknown.

Humanitarian impact. The humanitarian impact of mines in Tunisia is very minor while the humanitarian impact of ERW from World War II is more significant, although it remains relatively small by international standards.

Most of the minefields and ERW-affected areas are located in remote desert areas with little or no local population. From 1991 to 2005, there were nine ERW victims. Three were killed because of World War II ERW: one in 1991, one in 1995 and one in 1996. In 2001, one child was injured by ERW while he was working as a shepherd. In 2002, four children were injured in two different accidents by ERW in the same manner.

Economic impact. ERW economic impact is limited due to the location of ERW in remote areas, except in some areas that are used for grazing. Any large-scale construction or engineering projects in Tunisia require prior clearance of all ERW by the engineering battalion of the armed forces.

Outlook. Tunisia has a national committee responsible for implementing the Mine Ban Convention and currently the Tunisian Army is the only authority that conducts demining. Tunisia began demining in late 2004 and is nearing clearance completion, but no plan has been made yet for ERW clearance. The Tunisian government intends to construct new roads throughout the country, including a road between Tunis and Tripoli. It also plans to build up a gas pipeline that will cross the Tunisian-Libyan border. To begin these projects, clearance of the mines/ERW on the border area is needed.

ERW in North Africa and Security Concerns

Beyond the basic economic and humanitarian impacts these North African countries face due to the presence of mines/ERW, these weapons create a security risk for civilians as well. Incidents involving the use of ERW and mines in criminal and terrorist activities have occurred in many of the affected areas in North Africa. Removal of ERW is important for the security of the region.

ERW can be used for criminal activities such as smuggling, illegal immigration, illegal fishing and disrupting political and security stability in affected communities. ERW can also be used in terrorist activities because it offers a significant amount of active explosives that can be used easily with a little bit of experience.

In October 2004, an unknown terrorist cell blew up the Hilton Taba Hotel and two small tourist camps located in Taba and south Sinai in Egypt. The official declaration of the Egyptian Ministry of Interior stated that the terrorists used explosives they took from mines and ERW in Sinai. According to Protection of Armaments and Consequences, a nongovernmental organisation working on the mine and unexploded ordnance problem in Egypt, unconfirmed reports stated that some people in the western desert used to sell explosives that were taken from mines and ERW to fishermen or to those who work in mining. Some claimed that the terrorist groups in Algeria use explosives they took from mines and ERW in Algeria. The Polisario Front stated that it used mines that Morocco emplaced in the six berms, or defensive walls, it built in Western Sahara during the sovereignty conflict.

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News Brief

Colombia Destroys Stockpile

The Colombian Congress recently created the Colombian Mine Action Centre and the organization is already making headway toward alleviating the threat of landmines and explosive remnants of war.

With the help of funds from the European Union, CMAC will begin a Landmine Impact Survey in 2007. Work on the LIS will be difficult because domestic conflict continues to hamper humanitarian efforts, and the conditions for a regular LIS are not present. LIS coordinators must prepare to reduce the exceptional risks posed by active domestic conflict before beginning survey operations.

The Colombian Military has agreed to train three more demining platoons to increase the national demining capacity. Currently only one platoon is dedicated to humanitarian demining efforts. It has been difficult for military leaders to gain support for this activity because training for demining removes soldiers from combat zones.

The Colombian Air Force recently destroyed its remaining stockpile of training landmines (totaling about 100 mines), and the destruction of the remaining 786 landmines is planned for completion by the end of 2007.