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## Mine-action Activities in Western Sahara

by Ginevra Cucinotta [ United Nations Mine Action Service ]

*Since 2007, the United Nations Mine Action Service has been implementing mine-action activities in Western Sahara. Although the parties to the conflict generally abide by a 1991 ceasefire, the expansive territory remains contaminated by an unknown quantity of mines and explosive remnants of war. The Mine Action Coordination Centre has provided technical coordination and quality assurance and plans to expand its mine-action operations.*

Since Spain's withdrawal from Western Sahara in 1976 and the ensuing conflict between Morocco and the *Frente Popular para la Liberación de Saguía el-Hamra y de Río de Oro (Frente POLISARIO)*, Western Sahara's territory has been contaminated with an unknown quantity of mines and explosive remnants of war. Although no full Landmine Impact Survey has been undertaken to date, a Dangerous Area Survey completed in 2008 by UNMAS and its implementing partner, Landmine Action, led mine-action experts to determine that Western Sahara is one of the most heavily mined territories in the world.

Across Western Sahara, a defensive minefield is in place along more than 2,000 kilometers (1,243 miles) of earthen berm, dividing control of the territory between Morocco and the *Frente POLISARIO*.<sup>1</sup> The area adjacent to both sides of the berm, as well as more than 200 other known contaminated areas throughout Western Sahara, constitutes a high threat to U.N. personnel and more than 10,000 Saharan nomads. This contamination is one of the factors impeding the repatriation of tens of thousands of Saharan refugees.

To address the need for further information and enhanced coordination regarding the mine/ERW threat, UNMAS deployed a Senior Technical Advisor for Mine Action to the U.N. Mission for the Referendum in Western Sahara (MINURSO) in 2007. A MINURSO Mine Action Coordination Centre was established in early 2008 to enhance the mine-action response, reduce the humanitarian risks and improve living and operating conditions for Saharans and U.N. personnel. The MACC also assisted in creating an environment that is conducive to peace and security in Western Sahara, allowing Saharan refugees to resettle.

While the mine-action response has improved considerably, more efforts and resources are needed to further enhance the mine-action activities in the territory to a level which is commensurate with the threat posed to civilians and U.N. Military Observers.

### Mine/ERW Contamination in Western Sahara

On the west side of the berm, there has been no known comprehensive mine-action survey undertaken to date. On the berm's east side, which is under the control of the *Frente POLISARIO*, Landmine Action completed a Dangerous Area Survey in five areas in 2008. The survey illustrated extensive contamination from mines, cluster munitions and other ERW, especially in the northeast near Algeria's border. The area between Oum Dreyga in the Moroccan-controlled Western Sahara and Mijek, in the *Frente POLISARIO*-controlled area, is also a particularly heavily affected region.<sup>2</sup>

A total of 225 hazardous areas east of the berm have been surveyed since 2006, resulting in the identification of 38

minefields, 186 cluster-munition-strike areas and one ammunition dump. All the hazardous areas and individual dangerous items identified were marked and mapped in the Information Management System for Mine Action and prioritized into high-, medium- and low-priority tasks based on specific criteria including proximity to main population centers, water points and routes, and the potential threat posed to the local population. No Dangerous Area Survey has been conducted in the buffer strip<sup>3</sup> yet.



A BLU 63 strike area.  
Photo courtesy of MINURSO

As of July 2010, Landmine Action surveyed a total of 740 ERW spot clearance areas where a small number of UXO were found, of which 328 were completed. The number of mine/ERW areas needing spot clearance is expected to increase substantially as clearance operations continue, and following the commencement of an officially requested survey along the buffer strip, which is also heavily mined. Since 2008, the Royal Moroccan Army has reported 244 suspected hazardous areas on the berm's west side according to the information available in the MACC database.

### Humanitarian Impact

Since 1975, more than 2,500 landmine casualties have been reported. A landmine victim survey has not been undertaken, and many accidents involving victims go unreported. Consequently, the figures available do not represent the entire number of victims in the territory. With the establishment of the MINURSO MACC in 2008, the reporting and analysis of accident and victim information has improved considerably. According to data provided

to the MACC by the MINURSO Military Observers, Landmine Action, nomadic populations and the *Frente POLISARIO*, 103 civilian casualties have been recorded since 1991, including 72 injured and 31 dead. Five of the casualties were U.N. Military Observers. Most mine/ERW victims were adults, shepherds or Royal Moroccan Army soldiers. Out of the 80 accidents recorded in the IMSMA database, four of the casualties were female and 76 were male. Anti-personnel and anti-tank mines were responsible for 86 percent of the accidents, while the remainder were caused by other ERW.

Since 1975, the Royal Moroccan Army has registered 2,187 casualties, including 1,643 injured and 544 killed.<sup>4</sup> The Moroccan Mine Victims Association reported an estimated 100 victims living in Smara on the berm's west side.<sup>5</sup> The International Committee of the Red Cross estimates the number of Saharan victims in the refugee camps to be as high as 450.<sup>6</sup> Most of the reported deaths noted in the IMSMA database occurred while the victims were travelling and immediately following the accident. However, one death occurred *en route* to the hospital.

### Socioeconomic Impact

Water scarcity, when coupled with poor infrastructure and social marginalization, limits daily life in the Sahara desert, negatively affecting health and food security. The majority of mine/ERW accidents occur along the berm. This is an area rich in wadis—temporary streams—and other water resources. During the dry season, when vegetation dries up and water becomes scarce, Saharan goat and camel shepherds must travel considerable distances across these dangerous areas searching for water. In the rainy season, this area provides extensive vegetation and several sites for water catchments, making it an ideal location—except for the hazardous ERW—for animal herding and small-scale agricultural sites.

Mines and ERW also affect the return of refugees. In the refugee camps<sup>7</sup> in Tindouf, Algeria, for instance, unemployment severely impacts mine/ERW victims, and professional growth opportunities are currently not available for them. Several victims, especially young people, have expressed the need to experience a transformation from being passive victims to motivated, engaged individuals.<sup>8</sup>

### Mine-action Coordination in Western Sahara

U.N. mine-action goals in Western Sahara are:

- To reduce the humanitarian risks and improve living and operating conditions for Saharans and U.N. personnel by providing technical support, coordination between partners and quality assurance (medical evacuation procedures, occupational health and safety, clearance procedures);

- To assist in creating an environment conducive to peace and security in Western Sahara that allows Saharan refugees to resettle.

UNMAS will continue to play a key role in ensuring that the mine-action response in Western Sahara evolves to meet the scope and scale of the threat and that operations are coordinated, prioritized, tasked and monitored to ensure they are conducted in accordance with International Mine Action Standards.

### Stockpile Destruction and Clearance

In 2005, the *Frente POLISARIO* signed the *Deed of Commitment for Adherence to a Total Ban on Anti-Personnel Mines and for Cooperation in Mine Action*, a declaration of its intent to abide by the guidelines consistent with the Ottawa Convention. Under the Deed of Commitment, the *Frente POLISARIO* commits itself to renounce AP mine use, destroy its stockpiles and cooperate in mine action through periodic monitoring involving verification visits by Geneva Call and reporting on the ban's implementation.<sup>9</sup>

Since 2005, the *Frente POLISARIO* reported the existence of 1,606 disarmed mines on display in the Military Museum in Rabouni and 10,000 stockpiled AP and anti-vehicle mines.<sup>5</sup> (This figure has not been confirmed.) Following the requirements of the Deed of Commitment, the *Frente POLISARIO* has publicly destroyed 8,642 stockpiled AP mines since February 2006. In February 2006, 3,321 mines were destroyed, followed by 3,321 in February 2007 and 2,000 in May 2008.<sup>10,11,12</sup>

Western Sahara's clearance operations are undertaken respectively by the Royal Moroccan Army on the west side of the berm and by UNMAS through its implementing partner Landmine Action on the berm's east side.<sup>13</sup>

Landmine Action conducted battle-area clearance of approximately 5 square kilometers (1.93 square miles) through visual and subsurface methods since 2008. Out of the 166 cluster-munition-strike areas found in the survey, 66 have been cleared. One ammunition dump found during the survey was also cleared. While no minefield clearance has been undertaken since the survey, seven AP mines, 30 AV mines, 5,561 other ERW and eight UXO items were found and destroyed. In total, 51 were handed back to communities in April 2010.



Landmine Action deminers ready to start visual battle area clearance.

*Photo courtesy of Landmine Action*

On the berm's west side, the Royal Moroccan Army conducts clearance activities and ERW destruction. Morocco reported the clearance of 1,133 square kilometers (438 square miles) and the discovery and destruction of 2,195 AP landmines, 7,000 UXO items and 97,293 other ERW between 15 January 2007 and 30 October 2009.<sup>14</sup>

### Mine-risk Education

Western Sahara has an increasing need for mine-risk education. West of the berm, the Moroccan government reported MRE activities around suspected-hazardous areas with the aim of protecting nomadic populations from this threat.<sup>15</sup> On average, 270 U.N. Military Observers and MINURSO's civilian personnel receive mine-awareness training from the MACC every year. The *Frente POLISARIO*-controlled territory currently has no MRE program. Local and international organizations are developing

plans for MRE activities, pending the availability of resources. Past MRE efforts involved the Norwegian People's Aid (1998–2000), the Saharawi Campaign to Ban Landmines (2005–07), Landmine Action (2006–07), Association of Mine Victims (2007) and Moroccan Association of Mine Victims (2007).

### Victim Assistance

Hospitals on the berm's west side are located in the cities of Awsard, Dakhla, Laayoune and Smara. In Laayoune, El Hassan Hospital periodically hosts a prosthetics workshop for mine/ERW survivors. The Moroccan government reported supporting the Royal Moroccan Army in transporting mine/ERW victims to hospitals and providing free assistance.<sup>15</sup> MINURSO has a casualty evacuation capacity in place in the proximity of team sites on both sides of the berm in the event of a mine/ERW accident. MINURSO also provides medical support through the Malaysian Medical Unit located in the MINURSO headquarters in Laayoune.



*Frente POLISARIO* authorities grant free medical support to mine/ERW victims in the Tindouf, Algeria, refugee camps. The hospital in Rabouni, Algeria, which also provides psychological assistance to the victims, tends to victims who cannot be treated in the camps. Saharan refugee camps host schools for children with disabilities run by the *Frente POLISARIO*. The Landmine Action Rapid Response Team operates and responds 24-hours a day, seven days a week east of the berm to emergency mine/ERW incidents.



A mine victim in the Chedid Cherif Landmine Victims Centre in Rabouni, Algeria.  
Photo courtesy of the author

The *Frente POLISARIO*-controlled areas have insufficient resources for health care and psychological assistance to mine/ERW victims. Funding is scarce, and international assistance is sought to respond adequately to the victims' needs. The scarcity of victim assistance resources also limits the work of the Chedid Cherif Landmine and War Victims Centre in the Rabouni refugee camp.<sup>5</sup> The ICRC's Rehabilitation Centre in Rabouni supports the Chedid Cherif Landmine and War Victims Centre in fixing orthotics and prosthetics, and training specialized personnel.<sup>16,17</sup> However, aside from programs promoted by the *Frente POLISARIO* authorities and partner organizations for persons with disabilities and economic reintegration, Saharan-mine/ERW-victim assistance is lacking.

### Future Activities

New minefields and cluster-munition-strike areas are being discovered as clearance and survey operations unfold. Nomadic shepherds, U.N. Military Observers and local citizens living in proximity to the contaminated areas face daily threats of mines/ERW. Given the territory's enormous size, the lack of infrastructure and the threat posed by the extent of contamination, expansion in the mine-action sector is urgently needed to create an environment conducive to peace, security and prosperity.

To enhance the current response and to help reach the U.N. mine-action goals, the MINURSO MACC seeks to expand its Western Sahara operations. A Programme Officer, an Operation Officer, and IMSMA Officer were recently added to increase capacity and help achieve these goals.

In 2010 and 2011, the MACC's activities will concentrate on resource mobilization to increase the number of BAC and explosive-ordnance-disposal teams available to complete clearance of ERW identified in the Dangerous Area Survey; as well as to begin dialogue and coordination to undertake future surveying and clearance in buffer-strip areas. Funds are being sought to support MRE-training development to mitigate risk exposure. Victim-assistance activities and socioeconomic-reintegration opportunities for mine/ERW victims will also be an area of interest to the MACC.

To achieve those objectives, the MACC seeks to increase collaboration and information sharing between the different Western Sahara mine-action stakeholders. In early 2011, the MACC plans to organize a mine-action workshop to discuss the future of the mine-action response. The workshop's aim is to coordinate mine-action activities with other stakeholders, as well as allow potential new partners to learn more about Western Sahara's contamination problem and mine-action activities. ↴



A U.N. military patrol accident in Oum Dreyga, August 2009.  
Photo courtesy of MINURSO

## Endnotes

1. The Berm is a three-kilometer-wide man-made defensive structure which divides Western Sahara between the Moroccan-controlled and *Frente POLISARIO*-controlled territories.
2. *Dangerous Area Survey: Western Sahara*, Landmine Action (2010).
3. In Military Agreement N. 1, the "Buffer Strip" is defined as the area covering a five-kilometer (three-mile) width that runs along the eastern side of the berm, to the south and east of this line. The berm is not included in the Buffer Strip.
4. "Morocco." *Landmine Monitor Report 2008*. New York: International Campaign to Ban Landmines. "Letter to Handicap International from the Mission of the Kingdom of Morocco to the European Communities." Å 23 July 2008. [http://www.the-monitor.org/index.php/publications/display?act=submit&pqs\\_year=2008&pqs\\_type=lm&pqs\\_report=morocco&pqs\\_section=](http://www.the-monitor.org/index.php/publications/display?act=submit&pqs_year=2008&pqs_type=lm&pqs_report=morocco&pqs_section=). Accessed 18 October 2010.
5. "Western Sahara: Ten-Year Summary." *Landmine Monitor Report*. New York: International Campaign to Ban Landmines. [http://www.the-monitor.org/index.php/publications/display?act=submit&pqs\\_year=2009&pqs\\_type=lm&pqs\\_report=western\\_sahara&pqs\\_section=](http://www.the-monitor.org/index.php/publications/display?act=submit&pqs_year=2009&pqs_type=lm&pqs_report=western_sahara&pqs_section=). Accessed 18 October 2010.
6. The International Committee of the Red Cross. *Annual Report (2008)*, 375. <http://tinyurl.com/2ep9aus>. Accessed 14 October 2010.
7. There are five refugee camps outside of Tindouf and near to Rabouni: Laayoune Camp, Awsard Camp, Smara Camp, Dakhla Camp and 27th February.
8. *Assessment Report: Potential development projects to complement mine action in Western Sahara*, Landmine Action (December 2008).
9. "Deed of Commitment Under Geneva Call for Adherence to a total ban on Anti-Personnel Mines and For Cooperation in Mine Action." *Conciliation Resources*. <http://www.c-r.org/our-work/accord/engaging-groups/geneva-call.php>. Accessed 18 October 2010.
10. Geneva Call and Saharawi Campaign to Ban Landmines, Western Sahara: The Frente POLISARIO starts to destroy its landmine stockpile, Press Release, 27 February 2006.
11. Geneva Call and Saharawi Campaign to Ban Landmines, The Frente POLISARIO destroys second landmine stockpile, Press Release, 1 March 2007.
12. Geneva Call and Saharawi Campaign to Ban Landmines, The Frente POLISARIO carries out third landmine destruction operation, Press Release, 21 May 2008.
13. The Frente POLISARIO has also sporadically undertaken clearance activities.
14. "Intervention of H.E. Noureddine Khalifa." Second Review Conference of the *Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-personnel Mines and on Their Destruction*, Cartagena, Colombia. 1 December 2009.
15. Statement of H.E. Ambassador Omar Hilale Permanent Representative of the Moroccan Kingdom, Ninth Meeting of the State Parties to the *Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-personnel Mines and on Their Destruction*, 26 November 2008. Geneva, Switzerland, 24–28 November 2008.
16. As of April 2010, 43 landmine victims were fitted with prosthetics and three received orthotics.
17. Nine locally hired staff were trained, including five prosthetic and orthotic technicians and four physiotherapists.

## Biography



**Ginevra Cucinotta** is currently working as Programme Officer for the UNMAS Western Sahara program. Before joining UNMAS, she worked as Junior Project Officer with the Linking Mine Action and Development program and the evaluation function of the Geneva International Centre for Humanitarian Demining. Also, Cucinotta has field experience with the National Regulatory Authority UXO/Mine Action of the Lao PDR and has interned for the Geneva based NGO, Geneva Call. She holds a Master of Arts from the Graduate Institute of International Studies in Geneva, Switzerland, and a Bachelor/Master in social and political sciences from Trinity College, University of Cambridge in the United Kingdom.

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