

and contributes a lot to the accomplishment of the mission of the contingent in MINUSTAH. Consequently, it is very important to encourage research to create mechanisms to evaluate the return of the investment during the training (level V evaluation).

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Mine action and the Brazilian participation in Humanitarian Demining missions

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ABSTRACT: This article aims to explain what Mine Action is and show the Brazilian participation in regional and international programs. It seeks to report the work carried out by the Brazilian Peace Operations Joint Training Center (CCOPAB) for the professional preparation of Officers and NCOs from the Brazilian and friendly nations Armed Forces, so that they can all be monitors and supervisors in Humanitarian Demining missions under aegis of international organizations. It also underscores the strategic and political importance of the Brazilian participation in Mine Action programs all around the world, projecting Brazil in the international scenario by means of CCOPAB.

KEYWORDS: Mine Action, humanitarian demining, landmines.

Introduction

A conflict may produce long-term effects for the population even after its end, due to the signature of a peace agreement or to end hostilities between parties; to illustrate that one can mention the landmines and the Explosive Remnants of War - ERW.

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Landmines are ammunition set to detonate by the presence, proximity or contact of a person and/or vehicle, being activated by its victims who can be either civilians or from the military. These mines can be classified as anti-personnel or anti-tank landmines. ERWs refer to all explosive ammo left behind on the ground after a conflict - an unexploded ordnance (UXO), for example.

Or abandoned ammunition: Abandoned Explosive Ordnance (AXO).

The anti-personnel mines have been used since the 16th century; however, its systematic use in the attack and protection of areas involved in belligerent conflicts was boosted during World War II, as an obstacle for the sappers who wanted to deactivate the anti-tank mines. Checking the efficiency and the low cost of this sort of instrument of war, the use of anti-personnel mines was spread to all parts of the world and its hazardous effects caused a great humanitarian impact.

UXO are all explosive ammunition whose fuze was initiated, set, used or by any other means are still in conditions of use. They could have been set, launched, thrown or projected, remaining inert because of a bad operation or any other reason. Those explosives remain on the ground during and after the conflicts, a similar danger posed by landmines.

AXOs are explosive ammunition which were not used during the armed conflict; they were abandoned on the ground and the control became ineffective. ERW may include artillery grenades, grenades, mortars, rockets and cluster bombs².

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²Cluster bombs consist of a hollow shell that releases several explosive submunition or bomblets in the air, hitting a wide area. According to the model, the number of submunition may range from several dozens to more than 600. Cluster munition can be either air-dropped or ground-launched.

Picture 1 - Mine contamination worldwide



Source: International Campaign to Ban Landmines (2015)

In the 90s, due to humanitarian impacts, six non-governmental organizations (NGOs) in Western Europe and in the USA started out an International Campaign to Ban Landmines (ICBL). The final goal of ICBL is a world free of landmines and ERWs, so that civilians do not fear becoming victims of those bombs. (TIBÚRCIO; MORAES, 2011).

ICBL reached its peak by having the 1997 Mine Ban Treaty - Ottawa Treaty signed, in which anti-personnel landmines were outlawed by the States parties that agreed on it. As per the Ottawa Treaty, all States parties shall prohibit the use, stockpiling, production or transfer of anti-personnel landmines, immediately after having it ratified by the respective Governments. It still requires states-parties to destroy their stockpiled APLs within four years and eliminate all APL holdings, including mines currently planted in the soil, within 10 years.

Picture 2 - Ottawa Treaty Signatories



Source: International Campaign to Ban Landmines (2015)

Still in the 90s, after the conflicts held in Central America, international humanitarian demining programs were created due to the efforts of national governments, the Organization of the American States (OAS), the Inter-American Defense Board (IADB), and the relevant participation of the Brazilian military.

Mine Action

The International Mine Action Standards (IMAS) are normative documents to avoid misinterpretation about mine action activities. Such norms contain several concepts and considerations to standardize procedures and raise the level of security in the activities. They were progressively formulated by means of a series of consulting activities, involving a great spectrum of mine action related organizations. They're periodically revised according to the changes that might come to improve the activities.

Mine Action is a system which aims to reduce the social, economic and environmental impact of landmines in certain regions. The objective is to reduce the risk from landmines to a level where people can live safely; in which economic, social and health development can occur free from the constraints imposed by landmine contamination, and in which the victims' needs can be addressed. Mine action comprises five complementary activities: Mine Risk Education (MRE); victim assistance; stockpile destruction; advocacy against the use of Anti-Personnel Mines (APM) and Humanitarian Demining. (IMAS 04.10)

The United Nations support Mine Action in forty countries and three territories by means of the United Nations Mine Action Service (UNMAS).

Picture 3 - Ottawa Treaty Nonsignatories



Source: United Nation Mine Action Service (2016)

complimentary activity like Mine Risk Education (MRE) or victim assistance. In other cases, it could be involved in all aspects, mainly focusing on Humanitarian Demining or stockpile destruction.

Understanding humanitarian demining

Humanitarian Demining is only one of Mine Action activities, being responsible for clearing landmines and ERW, including technical survey, mapping, marking, elaboration of documents after demining, liaison with the local community, and, at last, land restitution. All the activities can be carried out by civil or military organizations trained to accomplish these tasks.

In Humanitarian Demining activities, safety of personnel is strict and full of restrictions. These activities aim to clear a dangerous area by defining, identifying, removing or destroying all the danger coming from mines and ERW from a specified area to a specified depth (IMAS 09.20). Therefore, all the mines in a determined area shall be mandatorily destroyed, for restituting clear land to the population so that it can be safely used is the final product of the activity.

Some actions and procedures shall be previously carried out, aiming to improve future action plans, setting deadlines and periods of action, as well as specifying the area of operations. From the procedures, we can cite the impact survey, the non-technical and technical surveys.

The impact survey is an assessment of the social-economic impact caused by the actual or perceived presence of mines/ERW, in order to assist the planning and prioritization of mine action programs and projects, defined by the National Mine Action Authority (NMAA).

The non-technical survey refers to the collection and analysis of data about the presence of mine/ERW contamination. It aims to determine where mine/ERW contamination is present, defining its perimeter, without the use of technical intervention, i.e., without the use of clearance methods. This last aspect is essential regarding the

technical study. There is an intervention with verification/clearance elements in all the mined area (or in part of it) by making use of metal detectors or mine detection dogs (MDD).

The technical survey aims to define where mine contamination is present in one or more areas, and where it is not, to allow land release (IMAS 04.10).

The procedures previously mentioned are part of Quality Management (QM) which is divided into the humanitarian demining organization accreditation, monitoring of the clearance activities and land post-clearance inspection (IMAS 07.40). QM is present in all the process aiming to assure that the procedures adopted and approved by the National Mine Action Authority be appropriate, efficient and effective, making all the participants of the process feel confident. Consequently, making land users better trust the works carried out and also feel safe to make use of areas previously defined as a life threat.

The accreditation is a significant phase and it means that the organization which will carry out the Humanitarian Demining was formally authorized by the NMAA to clear dangerous areas. To do that, the organization has to undergo several verification processes to check its capacity to plan, manage, clear mine contaminated areas, and provide technically trained professionals, adequate equipment, support, operational procedures as per the established national and international norms. The accreditation is signed by the NMAA as a provisional agreement, which is subjected to revisions and changes whenever needed, due to situations that might occur during the works.

Monitoring of the activities, another component of QM, refers to the authorized observation of areas, activities or processes, done

by qualified staff, without being responsible for what they see. The Brazilian military are part of this activity due to those several Humanitarian Demining Missions Brazil has been taking part, checking if the organizations are doing the activities according to the norms established in the accreditation agreement.

The land inspection after clearance complements the accreditation and monitoring activities, making sure the objectives were reached (IMAS 07.40). It consists of measuring, examining and comparing a sample of a clear piece of land to preset parameters as quantity of existing metal, within the established depth level for clearance; it all comes before land restitution.

In Humanitarian Demining operations, usually, the most internationally used techniques for the detection of mines or ERW are the Manual Demining Technique, the Dog Demining technique and the Mechanical Demining Technique.

Brazilian participation in humanitarian demining operations

Brazil sets its international relations based on article 4 of the 1988 Federal Constitution, by the principles of defense of peace, pacific settlements of disputes, cooperation among nations for the progress of mankind, promoting cooperation in several levels of power and seeking an economic, political, social and cultural integration of the peoples in Latin America.

For such, the Brazilian diplomacy has been attempting to actively take part in pacific settlements of disputes as well as for the reduction of conflicts inside and outside the American continent, by means of a raising participation in PKOs and Humanitarian Aid, from both the UN and regional organizations.

Within peace missions, Humanitarian Demining performs a crucial role in detecting and destroying mines, supporting victims and sensitizing people in the affected areas (UNITED NATIONS, 2013). Brazil is based on Resolution 53/26 of the 1998 UN GA which encourages Member States, regional, intergovernmental, non-governmental organizations and foundations to keep providing assistance and cooperation in mine contaminated countries, where Humanitarian Demining is present.

Brazil, still, has stated that Peacekeeping Operations shall be supported by four pillars: security, institutional strengthening, national reconciliation and development. The balance between these elements is a priority, both in the conceptual debate resulting in the elaboration of UN guidance on the theme and in the work of Brazilian forces in those missions.

Since 1999, Brazil has been a signatory country of the Convention that prohibits the use, stockpiling, production or transfer of anti-personnel landmines, mostly known as the Ottawa Treaty. The Brazilian Government ratified the Convention by means of a national Decree Nr 3.128, of 05 August 1999. Understanding its obligations when ratifying the Treaty, the Brazilian State has actively taken part in demining programs under the aegis of international organizations, making use of its Armed Forces. The country supports mine action by monitoring the activities of humanitarian demining organizations and also by providing capacity-building.

The Brazilian participation in Humanitarian Demining operations is part of peace missions, strengthening the process of national reconciliation by means of institutional restructuring projects, helping rebuild the infrastructure and support the comeback of the economic

activity. Thus, contributing to strengthen the bonds between the National Defense Policy (NDP) and the Brazilian Foreign Policy (BFP).

In the ambit of multilateral organizations, Brazil has stood out in the Comprehensive Action Against Anti-personnel Mines (AICMA, initials in Spanish) from the Organization of the American States (OAS) with the participation in the Mission of Assistance to Remove Mines in Central America (MARMINCA), Mission of Assistance to Remove Mines in South America (MARMINAS), and at present moment, in the Inter-American Monitoring Group in Colombia (GMI-CO), providing military experts for those Inter-American Defense Board (IDB) related programs. In these missions, we can see the participation of military personnel from other American countries; yet, the Brazilian participation is constant and often outnumbered the others.

Since 2015, Brazil has sent military personnel to take part in the Inter-American Group of Technical Assessment (GATI) from IDB in Colombia, aiming to provide capacity-building to Colombian military personnel; therefore, supporting the country to have greater military capacity to work in humanitarian demining operations.

Brazil has also supported Humanitarian Demining processes in Angola, 1995-1997, under the aegis of the UN, during the United Nations Angola Verification Mission (UNAVEM III).

When it comes to bilateral agreements, the country has sent Armed Forces officers to Mozambique and Western Sahara to guarantee the quality of demining works. Besides, Brazil has also sent instructors to the *Centre de Formation au Déminage Humanitaire (Centre de Perfectionnement aux Actions post conflictuelles de Déminage et Dépollution*, Center for Humanitarian Demining Training) (CPADD) in Benin, in order to deliver classes on Quality Assurance Control

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Inspector for Portuguese speaking countries in Africa as well as a Mobile Training Team from CCOPAB to Angola, in order to contribute to Humanitarian Demining capacity-building.

In Colombia, Brazil still keeps military experts at *Base de Entrenamiento de Infantería de Marina* in the city of Coveñas, at *Escuela de Ingenieros (EsIng)* and at *Centro Nacional de Artefactos Explosivos y Minas (CENAM)*, both of them in Bogota. The advisory at the first two is focused on military personnel technical capacity-building for they are to take part in Humanitarian Demining Operations, and the last one focuses on planning and execution of the operations.

Picture 4 - Mobile Training Team in Angola



Source: CCOPAB

Humanitarian Demining Course at CCOPAB

The preparation of human resources from the Brazilian Armed Forces fostered the transformation, in 2010, of the Brazilian Peacekeeping Operations Training Center (CIOpPaz, acronym in Portuguese) into CCOPAB. CIOpPaz only had Brazilian Army personnel as its members, whereas CCOPAB has personnel from the three Armed Forces, from the state Police and Firefighter Corps. This integration has greatly been favoring the synergy of efforts of those professionals working towards the preparation of human resources to work in multidimensional peace missions, and so in Humanitarian Demining.

Picture 5 - Capacity-building of the Colombian Armed Forces



Source: Personal records

The Brazilian Peace Operations Joint Training Center's main mission is to support the preparation of military, civilian and police

personnel from Brazil and friendly nations for peace missions and humanitarian demining.

Working towards CCOPAB's mission, the Humanitarian Demining course was created by means of Ordinances Nr 172 and 173, of the Brazilian Army Staff Cabinet, of 25 October 2011, for both officers and NCOs. The course prepares the military to work as an International monitor and supervisor in Humanitarian Demining missions under the aegis of international organizations; advise the command and the upper echelon in the decision-making process of Humanitarian Demining related issues; technically support several UN bodies, OAS organs, host country governmental institutions, non-governmental organizations (NGOs) acting in PKO or Humanitarian Demining environments.

Since the creation of the course in 2011, CCOPAB has prepared 58 soldiers to work in Humanitarian Demining, from which 06 were from friendly nations as Chile, Peru and Uruguay.

The course is the only one delivered in Spanish at CCOPAB. It is offered once a year and it lasts for three weeks. The target audience is officers and NCOs from the Brazilian Armed Forces and from friendly nations; the course covers the following: General aspects regarding missions under the aegis of international organizations; general concepts and regulations for Humanitarian Demining, besides all the necessary theory and practice to carry out Humanitarian Demining works. This last module lasts for longer, once the monitor needs to learn Humanitarian Demining techniques and Operational Management.

The first week consists of understanding Mine Action world scenario and core subjects regarding the participation in Mine Action programs under the aegis of international organizations; then,

topics related to planning and Humanitarian Demining activities. The second week is about first aid; the second part of planning and humanitarian demining activities; specific mission approach by having Humanitarian Demining former members sharing their experience; video-conference with military personnel deployed in Humanitarian Demining missions; and finally covering manual, dog and mechanical demining techniques. At the end of the week, students take a test about topics from the first and second weeks.

Picture 6 - First Aid class



Source: CCOPAB

The third week consists of planning and accreditation activities regarding a Humanitarian Demining organization. This week, the military under training is in charge of evaluating the operational capacity of an organization that has to work as per national and international mine action regulations. After that, there is a practical test for the military under training, taking planning, execution and the conduct of the monitors into account.

Picture 6 - Practical class - 2015 Humanitarian Demining Course



Source: CCOPAB

Picture 7 and 8 - Operational Evaluation of a Humanitarian Demining Organization



Source: CCOPAB

Aiming to contextualize the course and improve the educational process, the student takes part, from the very beginning, in a fictitious scenario, based on the Brazilian experience in Humanitarian Demining missions; thus developing and stimulating the internalization of real situations, concepts and techniques. The scenario allows the acceleration of the educational process by means of a systemic environment, compatible to the reality in which the soldier is to work.

Being part of this scenario, the learning activity is facilitated by Case Studies, creating possibilities as:

- illustrate different points of view, topics and principles of Humanitarian Demining;
- develop the capacity to analyze and summarize; develop self-evaluation, behavior, confidence and responsibility;
- set a neutral environment in which students can freely tackle the problem;
- relate theory and practice; understand the complexity of a specific situation;
- develop personal skills, communication and comprehension; and, at last, develop decision-making and knowledge, besides stimulating the learning process.

Picture 9 - Students who completed the Humanitarian Demining course in 2015



Source: CCOPAB

At the end of the course, the soldier is prepared to accomplish his mission under the auspices of international organizations or bilateral agreements between Brazil and friendly nations. This way, CCOPAB aims to be a global leader in the excellence of the preparation of human resources for peace operations and humanitarian demining.

Final Considerations

Mine Action is an important tool for treaties that ban the use of landmines, and also for the removal of ERW. The program counts on the participation of several state actors, from civil and military society; all of them aiming to clear an ERW and mine contaminated area, making it possible the return of the population and the social and economic development of the region. The indiscriminate use of anti-personnel landmines at the end of the century, potentialized by ERW, made them a world threat affecting men, women and children, besides making the population fear the return to their homes. All this scenario guided the creation of international treaties as the Mine Ban Treaty and the creation of mine action programs in mine contaminated countries.

In a nutshell, we can say that mine action encompasses Humanitarian Demining activity, which is the removal of mine threats and ERW from an affected area. All the work is guided by international norms known as IMAS, which encompasses all the basic concepts and procedures necessary for the activities to be planned and developed.

Humanitarian Demining starts by the process of accreditation of an organization, then impact study, technical and non-technical surveys, mine and ERW removals, and finally land restitution to the local population. UN has supported international works by acting in mine contaminated countries through UNMAS. All the work is encompassed by quality management (QM) which consists of the accreditation of the Humanitarian Demining organization, monitoring activities and post clearance land inspection. Brazil has a greater participation in the monitoring of the activities carried out in MARMINCA and MARMINAS, supporting the Mine and ERW affected countries by

providing military experts to train local professionals. The Brazilian support is provided by means of international organizations as IDB or bilateral agreements as those with the government of Colombia.

In order to send military experts to work in mine action programs, Brazil has based this support on its Federal Constitution and International Treaties. We can highlight the participation of military experts in the OAS program, AICMA, as well as the training of Humanitarian Demining organizations in the African and American continents as Angola and Colombia, respectively. Both of them demonstrate the concern of the Brazilian foreign policy with its strategic surroundings, as well as the south-to-south cooperation with the African continent, amplifying the projection of power in the international scenario.

It is highlighted that the Brazilian participation in those missions is of great political and strategic importance for Brazil, being a key element for the support of integration processes developed in the American and African continents, by fostering dialogue, confidence and military cooperation for mutual defense. In the military field, it allows the enhancement of the military capacity, providing a better training of the troops, technical-military improvement, intellectual and technological specializations, and the exchange programs between military from other armed forces. It contributes to the production of doctrine, to the organization, training, material education, personnel and infrastructure in the field of defense, as well as to the integration of structures for joint actions, thus favoring the synergy of efforts and the improvement of operational efficiency.

CCOPAB, in turn, has stood out as an organization of excellence in the preparation of military personnel to perform activities regarding Humanitarian Demining, by means of its Humanitarian Demining

Course; it has also increased its participation in Mine Action by sending mobile training teams to the African continent, as well as instructors to provide capacity-building in mine contaminated countries. The course offered by CCOPAB shows the concern to provide the students with the best, connecting theory to practice; therefore, allowing the soldier to be prepared for difficulties that might be faced during the mission.

At last, even though Brazil is not affected by landmines, it has been present in Humanitarian Demining missions in the American continent, having representatives in MARMINCA, MARMINAS, and currently in Colombia; this way, following its constitutional principles. Due to the experience in mine clearance operations in the American continent, the Brazilian Military developed the necessary expertise for the training and deployment of personnel, being able to take part in Mine Action worldwide, either by means of south-to-south cooperation or by the participation in international summits on this theme. Brazil has a reference center (CCOPAB), when it comes to the preparation of human resources, being able to take part in subject matter exchange programs with other countries. Currently, the Center disseminates knowledge regarding the training of military personnel to be deployed in Humanitarian Demining missions.

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