

**- PROTOCOL V -**

**REPORTING FORMS  
PURSUANT TO ARTICLE 10, PARAGRAPH 2 (b) OF THE PROTOCOL AND THE  
DECISION OF THE FIRST CONFERENCE OF THE HIGH CONTRACTING  
PARTIES TO PROTOCOL V**

(As adopted by the First Conference at its second plenary meeting on 5 November 2007)

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HIGH CONTRACTING PARTY: BELGIUM

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DATE OF SUBMISSION: 31/03/2017

(dd/mm/yyyy)

This information can be available to other interested parties and relevant organizations

YES

NO

Partially, only the following forms:

A  B  C  D  E  F  G  H  I

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**FORM A:** Steps taken to implement Article 3 of the Protocol: Clearance, removal or destruction of explosive remnants of war

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Reporting for time period from: 01/01/2016 to 31/12/2016  
[dd/mm/yyyy] [dd/mm/yyyy]

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**Steps taken to implement the provisions of Article 3:**

Combat engineers and EOD personnel involved in mining and demining activities are educated and trained in all matters in accordance STANAG 2389 (Minimum standards of proficiency for trained explosive ordnance disposal personnel). During Clearance operations, IMAS standards are applied. For major operations, EOD teams are foreseen on a systematic basis. All personnel of the Belgian Service for removal and destruction of explosive devices is NATO certified and qualified (EOD/IEDD - Improvised Explosive Device Disposal).

**Any other relevant information:**

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**FORM B:** Steps taken to implement Article 4 of the Protocol: Recording, retaining and transmission of information

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High Contracting Party: BELGIUM

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**Steps taken to implement the provisions of Article 4 and the Technical Annex:**

Already before the entry into force of the Protocol V for Belgium, procedures existed within the Belgian Armed Forces for recording and retaining of information as foreseen in Article 4.

There's a two-fold recording and retaining information:

- Operational: each unit engaged in operations has to mention in its reports all use of explosive munitions and, if applicable, all abandon of munitions. If possible, the information reported will be in conformity with the criteria of the Technical Annex to the Protocol. These reports are in conformity with the international standards on mine action.
- Logistical: all use of munitions during operations is recorded and reported.

Both records are integrated at the Operations Center of the Armed Forces. The crosscutting of both records allows a clear picture of the use of munitions, of the places of their use as of the zones where possible Explosive Remnants of War would be situated.

Similar procedures exist for multinational operations. The recording and retaining of information is submitted via the foreseen operational and logistic chains to the Operational Headquarters responsible for the operations.

In 2012, the Defense Staff has issued particular directives to the military commanders (at all levels) in operations to assure the full implementation of Article 4 :

- ACOT-SPS-OPSJOIN-PSR-001 / PLJE from 11 October 2012 which regulates the implementation of Prot V by the Operations Division. This document gives clear directives for the recording, retaining and transmission of information about the use of ammunition during operations at Staff level.

- ACOT-SPS-SOPOPS-PSRC-001 / PLJE from 11 October 2012 are the Standing Operating Procedures (SOP OPS 3.7.3) for commanders in the field with directives for the recording of information and the transmission to the higher level. It also contains a template for the recording of the information as described in Art 4.

- All necessary directives are also recalled in the CHOD (Chief of Defence) OORDER (operation order) for the operations in which Belgian military are involved.

Any other relevant information:

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**FORM C:** Steps taken to implement Article 5 of the Protocol: Other precautions for the protection of the civilian population, individual civilians and civilian objects from the risks and effects of explosive remnants of war

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**Steps taken to implement the provisions of Article 5 and the Technical Annex:**

The civilian population is taken into account at every step of the planning and execution process of the mission. Keeping in mind that the first responsibility to inform the civilian population and to prevent it from running at risk remains in the hands of the civilian authorities, Belgian Defense will transmit as much possible information to the local authorities on identified contaminated areas. Most of the time, the Belgian detachment will transmit the information to the local "Mine Action Center", if deployed.

In some occasions, a "Mine Risk Education Program" in favor of the local population (children) and distribution of educational flyers is conducted by the Belgian detachment (e.g. in Lebanon).

In extreme situations and at the request of local authorities, Belgian Defense will support local authorities, when feasible, to restore the basic services to the civilian population: major access routes, etc.

Practical directives:

- Ammunition will be stored according to the procedures;
- No unused ammunition will be left on the field;
- Unexploded ordnance will be reported, where feasible;
- When the situation requires it, an EOD detachment will take part to the mission. One of their missions is to destroy unexploded ordnance, when possible.

Any other relevant information:

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**FORM D:** Steps taken to implement Article 6 of the Protocol: Provisions for the protection of humanitarian missions and organizations from the effects of explosive remnants of war

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**Steps taken to implement the provisions of Article 6:**

Belgian Defense will inform, when possible, humanitarian organizations on the risks related with hazardous areas and the necessity to coordinate the movements with the local "Mine Action Center", if deployed. The deployed Belgian Detachment will keep an updated map of the identified contaminated areas of its area of responsibility.

Practical directives: see Form C

Any other relevant information:

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**FORM E:** Steps taken to implement Article 7 and Article 8 of the Protocol:  
Assistance with respect to existing explosive remnants of war and cooperation and assistance

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**Steps taken to implement the provisions of Article 7 and Article 8:**

- Since 2016, Belgium has assumed the co-chair (with the People's Republic of China) of an UN working group initiated by UNMAS aiming at establishing international IEDD-standards
- Since May 2004, Belgium participates in the European Research Grouping Arrangement n°2 of the European Cooperation for Ammunition Destruction, with France, Luxembourg, the United-Kingdom and Germany.
- Since 2003 a handbook on EOD technical information was produced, translated in KHMER and handed over to the CMAC (Cambodia). Belgium guarantees technical information support on request.
- Since 2006 Belgian Defence participates in the Swedish Armed Forces owned EOD IS (Explosive Ordnance Disposal Information System). The data of this information system is also accessible for other States under condition of a bilateral agreement.
- Belgium regularly sends one or two demining skilled personnel to meetings related to Humanitarian Mine Action organized under the umbrella of NATO working group EOD, GICHD Review Board for IMAS, EDA working group, and assumes a liaison role between those organizations.
- from 2003 till 2010, Belgium organised EOD courses in French and English to train team leaders of other countries. Courses are now ad hoc organised based on requests.
- Since September 2006, Belgium contributes to UNIFIL with an Engineer/EOD capability. More than 13.000 UXO (mines included but mainly cluster munitions) have been cleared since then.

**1. Introduction :**

The projects listed here are based on financial contributions and the provisions of services. Note that the Belgian military experts working for SEDEE (Service for removal and destruction of explosive devices) have NATO certifications and qualifications:

- EOD (Explosive Ordnance Disposal)
- IEDD (Improvised Explosive Device Disposal)

The staff is qualified in mine clearance and in the handling of UXO.

**2. Projects :**

- Mine clearance and integral approach promotion in Colombia by Handicap International (€250.000)
- Landmine and Cluster Munition Monitor in different countries by ICBL (€25.000)
- Humanitarian mine clearance in Ukraine by Halo Trust (€250.000)
- Mine Risk Education in Myanmar by Mine Advisory Group (€90.000)
- Reducing threat of Conventional weapons and IED in Iraq by Handicap International (€500.000)
- Préparation aux risques des restes explosifs de guerre et appui psycho-social in Gaza by Handicap International (€747.000)
- Contribution to the mine call of the ICRC (€750.000)

Total amount disbursed in 2016 : 2.612.000 €

- Latvia: in 2014 Belgium participated with a mine clearing vessel in the Historical Ordnance Clearance operation (OPEN SPIRIT 2014) in the coastal waters of Latvia

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3-France . in 2014 Belgium participated with a mine clearing vessel in the Historical Ordnance Clearance operation (HO Ops - BAY of SOMME 2014) in the coastal waters of France.

1-Lebanon: in the framework of the UNIFIL Mission-South, Belgium had a demining capacity available composed of:  
- 1 demining platoon composed of 35 persons.

- 1 Liaison Officer in NAQOURA in support of the UNIFIL-staff.

This personnel rotates every four months and was redeployed 15 Nov 14

### Any other relevant information:

Research and Development:

Research and development activities are conducted as well at the national as the international level.

#### a. National level:

- The PARADIS project (a prototype for assisting rational activities in humanitarian de-mining using images from satellites <http://www.sic.rma.ac.be/Projects/Paradis/>) started in 1998. Initially, this project was funded by the Belgian federal Office for scientific, Technical and Cultural Affairs and the Belgian Ministry of Defense, and conducted by the Royal Military Academy (RMA) with - in the beginning - the participation of the department of Geography (IGEAT) of the Free university of Brussels (ULB). This prototype is highlighting very interesting solutions for the management of humanitarian de-mining operations using satellite images, maps, context information and the IMSMA database and involves key actors including end-users, image analysts and scientists. Now this Project is only funded by the Belgian Ministry of Defense. Since 2004, it is in a phase of optimizing the developed solutions and to this end has undergone different tests:

- in October 2005: with the help of NGO APOPO, tests have been performed in Mozambique in order to analyze the possibility to integrate the needs of APOPO in the system;

- since November 2005 : trials have been conducted in Afghanistan by the Belgian EOD-team in close (internet) collaboration with the SIC laboratory of the RMA;

- in June 2006, further validation tests for some modules have taken place in Belgium in collaboration with EOD personnel.

- in 2007, the PARADIS system has been finalized and presented to the end-users at SEDEE-DOVO. Presentations were targeting different levels of users (field officers, planners).

#### b. International level:

- The Royal Military Academy (RMA) was supporting the International Test and Evaluation Program (ITEP) by its participation to the executive Committee and to the different working groups, as well as by financing the ITEP secretariat. From 1st September 2004, the ITEP secretariat (<http://www.itep.ws>) is installed in the premises of the Royal Military Academy in Brussels, Belgium. The Memorandum of Understanding on the ITEP has come to an end in July 2010 without extension. Possible follow-on scenarios are under study.

- The RMA was chairing the CEN (Centre Européen de Normalisation) initiative to define a new standard on the soil characterisation for electromagnetic mine detection sensors. This project is funded by the European Commission and will last two years. The personnel costs are funded by the Belgian Defence in the scope of the BEMAT project (see above).

- The University of Brussels (VUB) was involved in the STREAM project (<http://stream.etro.vub.ac.be/home.html>), funded by the European Commission, on the development of (1) products, and (2) procedures for end-to-end technological platforms and tools for survey and decision support in humanitarian crisis: humanitarian demining and locations of refugee settlements. This project started in 2005 and will last 4 years.

- Two Belgian deminers and a scientist from the Royal Military Academy participated in the tests of the dual sensor detectors organized by Germany under ITEP umbrella (Oberjettenberg, 21 Sep 2009 – 16 Oct 2009).

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- Within the 7th Framework Programme (Security) of the European Commission a consortium of 26 European and Japanese partners co-ordinated by Prof. Yvan BAUDOIN and Dr Ir Yann Yvinec prepares a series of cost-effective tools integrated in a comprehensive modular toolbox for helping the clearing of larger areas affected by anti-personal landmines, cluster munitions, explosive remnants of war (ERW) and unexploded ordnance (UXO) and a related operational implementation of services, including standardization actions (TIRAMISU or Toolbox Implementation for Removal of Anti-personnel Mines, Submunitions and UXO)

Beside its management role, the Royal Military Academy, in particular:

- Define the Toolbox requirements and serve as Liaison Officer with an international Project advisory Board including the major stake-holders (UNMAS, GICHD, a.o.), with an End-User's Board including, in particular the Mine Action Centres of Croatia (CROMAC), Jordan (NCDR) and Cambodia (CMAC).

- Contribute (with the DLR of Germany) to the processing of remote sensing data (satellite and airborne) through feature extraction, segmentation, 3D model from stereo data and hyperspectral data in order to prioritize the mine actions;

- Contribute (with the Military Institute of Technology of Poland (WITI) and the University of Genova (DIME)) to safe mine actions (protection, neutralization) through the development of testing facilities in his laboratory of Ballistics;

- Contribute to stand-off detection (UGV, UAV) techniques in close cooperation with Sensor's developers;

- Chairs a CEN Workshop with a view of producing a CWA on the Use of Machines for Technical Survey and co-initiate a CWA on Personal Protection Equipment;

The ULB worked on the use of remote sensing methods for mine action.

SpaceTech Partners was in charge of the dissemination of the obtained results;

In 2015, the main activities of the TIRAMISU project were the testing (in Cambodia and in Croatia) of the tools and the large scale final demonstration which took place in SEDEE-DOVO (Service d'Enlèvement et de Destruction d'Engins Explosifs -Dienst voor Opruiming en Vernietiging van Ontploffingstuigen, in Oud-Heverlee, Belgium, on 2015 September 24th.

Total direct costs in 2015: 312915 €

Prof. Yvan BAUDOIN is now working at the creation of a European Counter Explosive Hazards Center of Excellence (EC-EH COE). It shall focus on the exploitation of the toolboxes and initiatives developed in EC projects so far and on expanding their application to other explosive hazards threatening civil society.

**FORM E(a):** Steps taken by States which have ERW victims to implement the relevant provisions of Article 8(2): Victim Assistance

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Steps taken to implement the relevant provisions of Article 8(2):

NOT APPLICABLE

Other relevant information, guided by the Plan of Action on Victim Assistance:

NOT APPLICABLE



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**FORM F:** Steps taken to implement Article 9 of the Protocol: Generic preventive measures

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**Steps taken to implement the provisions of Article 9 and the Technical Annex:**

1. Munitions Manufacturing Management:
    - a. Munitions are no longer manufactured by Belgian Defense. However during the procurement process the administration requests (by means of indispensable specifications in the request for tender) that the manufacturers comply with production principles mentioned in article 9.
    - b. The National (Defense) QAR (or NATO homologues) personnel is controlling the production process and the quality plan of the manufacturer.
    - c. Safety & suitability for service is checked during evaluation (or proof is requested and evidence has to be provided in the offer). Once the contract is awarded, supplementary acceptance testing of pilot and serial lots are conducted following the specifications of the ammunition. Depending on the case those tests are conducted in the company and/or in Belgian Defense test facilities.
    - d. Ammunition is acquired only when not in conflict with international law & treaties signed/ratified by BELGIUM. The assessment of the legality of new ammunition with regard to international law, in accordance with article 36 of the first Additional Protocol to the Geneva Conventions is made notably through the Belgian Commission for the Legal Review of New Weapons, Means and Methods of Warfare.
    - e. Transfer of ammunition to another Nation will only be possible when sufficient evidence (through In Service Surveillance testing) is available concerning the safety and reliability of the ammunition.
  2. Muniton Management during the whole "Life Cycle":
    - a. "In Service Surveillance" is conducted in a pragmatic way.

Modular Structure:  
ISM - In Service Monitoring: Tech visual Inspections , user findings, findings during renovation/maintenance  
ISP - In Service Proof: Life Firing/functional testing  
CM - Condition Monitoring: Chemical Analyses of energetic material, Radiographic/radioscopic investigation, dimensional control,...  
PT - Predictive testing: pre-stress a test item before examination, in order to provide a prediction of residual life  
EDL - Environmental Data Logging: collecting data of endured Vibrations, Humidity, Temperature & Shocks.
    - b. Operational deployment:
      - Ammunition is suffering severe stress (temperature, humidity, vibrations) when deployed on a theatre of operations. When the degradation is detected (by the user or by Ammunition technical personnel) a Technical Degrading Report (TDR) is sent to the Material Manager who will decide what to do. In order to be able to detect degradation, the ammunition deployed on theatres of operations is accompanied with EDL (Environmental Data Loggers). The Data received is cross-checked with manufacturers data
- There are several options:
- \* Urgent demilitarization by EOD services when storage and/or transport safety is no longer guaranteed.
  - \* Use in priority for training on theatre.
  - \* Evacuation to Belgium where this part of the lot is isolated and considered as a "fleet leader" for further In Service

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Surveillance.

\* Possible demolition on theatre by Belgian EOD personnel or those from NATO partners when transport to Belgium is not economically justifiable.

c. Phasing out:

- Ammunition that is no longer used, because of unacceptable technical degradation or because the weapon system is no longer used, stays in inventory until demilitarized.

- Demilitarization: 3 options

\* Urgent demilitarization by EOD services when storage safety is no longer guaranteed.

\* Demilitarization in Belgian Demilitarization Installations

\* Outsourcing of demilitarization contracts through NSPA (NATO Support Agency)

- The storage safety (safe to handle) is guaranteed for as long the ammunition stays in inventory.

d. Best practices and operating procedures in the domain of storage, transport, field storage and safe handling.

Belgian Defense has ratified and implemented the following NATO AGREEMENTS and complies with the European legislation in the domain of Safe storage and transportation of ammunition and explosives:

STORAGE:

- AASTP-1 (ALLIED AMMUNITION STORAGE AND TRANSPORT PUBLICATION 1)  
(MANUAL OF NATO SAFETY PRINCIPLES FOR THE STORAGE OF MILITARY AMMUNITION AND EXPLOSIVES)
- AASTP-5 (Manual of NATO Safety Principles for the Operational Storage of Military Ammunition and Explosives)

TRANSPORT:

- AASTP-2 MANUAL OF NATO SAFETY PRINCIPLES FOR THE TRANSPORT OF MILITARY AMMUNITION AND EXPLOSIVES
- ADR, IMDG, IATA & RID for the transportation of dangerous goods

Any other relevant information:

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**FORM G:** Steps taken to implement Article 11 of the Protocol: Compliance

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**Steps taken to implement the provisions of Article 11:**

Officers assigned as “Advisers in the Law of Armed Conflict” are available in each unit (up to battalion or independent company level) to advise military commanders on the application of the Law of Armed Conflict. The education programme of these advisers includes a general information about the Protocol V obligations. Legal advisors with in depth knowledge of the Protocole V are available to advise Units and Commanders on any legal issue regarding explosive remnants of war.

**Any other relevant information:**

Information to the civilian population:  
Law on the ratification of the Protocol on Explosive Remnants of War annexed to the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to be Excessively Injurious or Have Indiscriminate Effects (Protocol V) is made known public through publication in the Belgian Official Journal.  
Defence Representative give lecture on regular basis to the IHL courses organised by the Belgian Red Cross and/or the International Committee of the Red Cross. General or specific education related to means and methods of warfare, including the issue of ERW, and in particular Protocol V, is included in those courses.

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**FORM H:** Other relevant matters

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Any other relevant information: