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Thore Backman
SWEDEC

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The Swedish EOD & Demining Centre

This article introduces the Swedish Explosive Ordnance Disposal (EOD) and Demining Centre (SWEDEC) and illustrates its role and principal activities within both military and mine action contexts.

by Thore Bäckman, SWEDEC

The Explosive Threat and Swedish National Policy

Of critical importance to the delivery of services in the mine action sector is the Swedish national policy relating to mine action (and associated activities). Within the Swedish "Total Defence" initiative, the mandate for the standardisation and coordination of EOD and related activities clearly falls with SWEDEC. As the national centre of excellence for EOD and mine action, SWEDEC coordinates and directly supports the National Police Board (RSP), the emergency services within the Swedish Rescue Service Agency (SRSA), the Defence Material Administration (FMV), the Defence Research Agency (FOI), the Swedish International Development Agency (SIDA), and all land-based military explosive ordnance clearance and related activities, both nationally and abroad.

Swedish EOD and Demining Centre

SWEDEC was formally established in 1996 to provide a consolidated and comprehensive institution for all military countermine and EOD training, EOD equipment and doctrine research and development (R&D), and the provision of technical advice in the development of national mine action policy.

Initially established around the nucleus of the Swedish EOD and Military Engineering Centre, SWEDEC's role was further expanded by the addition of the R&D Section and was granted responsibility for the coordination and maintenance of an international pool of qualified EOD and mine action personnel in support of rapid deployment initiatives. Most recently, the creation of a Mine Action Support Section (MASS) to provide additional support to national and international mine action interventions has further expanded the scope of SWEDEC's activities. As a result, it is one of the very few military establishments in the world capable of providing such a comprehensive approach to all explosive hazards within a single organisation. Additionally, it attained International for Standardization Organization (ISO) 9002:1994 accreditation for "Training, Information and Development concerning EOD and Mine Clearance" in January 2001.

Total Defence EOD School

To accommodate the ever-increasing range of explosive threats and associated operational requirements, the EOD School is continuously expanding the suite of courses being offered. To illustrate the current scope of training activities within the EOD School, the forecasted training for 2003 extends to 30 different courses, totalling 5,155 training days. This suite of courses currently includes all facets of EOD, from introductory conventional munition disposal (CMD) through advanced improvised explosive device disposal (IEDD).

To provide a comprehensive and multi-disciplinary approach to EOD training, the EOD School utilises instructors and support staff from all branches of the Swedish Armed Forces, the RSP and the SRSA. Courses are subsequently tailored to the specific needs of both military and civilian client groups.

To further enhance the delivery of courses, the EOD School is currently integrating competency-based assessment systems to assist in the recognition of practical experience gained by personnel.
while deployed on operational activities throughout the world and the development of a national qualifications framework for all EOD disciplines and related activities to enhance the management and inter-operability between respective national agencies. Current initiatives include the development of advanced elements in chemical, biological and radiological munition disposal (CBRMD).

R &D Section

As well as assisting in the review and development of all demining and EOD doctrine, the R&D Section is responsible for the test and evaluation of new equipment and the development of mine action procedures.

The trials for Mechanical Clearance Equipment to support both military and humanitarian operational requirements have recently concluded. The trials subsequently resulted in the Swedish Armed Forces purchase of a Croatian DOK-ING MV-4 and the fire of several Stankjack 3500 machines. The substantial test facilities and procedures for repeatable testing have been internationally recognized and have formed the core of subsequent related standards development within the European Union (EU).

Currently underway is a comprehensive review of mine detection dog (MDD) search techniques and procedures aimed at both consolidating and enhancing current capabilities in this field, and investigating the role of mechanical clearance machines and MDD interaction. Additional research is investigating the neutralisation of mines through the use of thermite torches. The test and evaluation capacity is currently under expansion and will shortly be offered to international clients on a commercial basis.

EOD Information System (EOD IS) Section

Due to the ever-increasing volume of explosive ordnance-related information and the need for the efficient management of this information, the Swedish Armed Forces expanded existing IT initiatives to address this issue. As a result, the EOD IS was created as a stand-alone software package capable of both database and geographic information system (GIS) functions.

Currently in its second version, work toward the interface between the EOD IS and the Information Management System for Mine Action (IMSMA) software is at an advanced stage. The EOD IS is currently in service with the Swedish Armed Forces, RSI/SRSA and the Finnish Armed Forces, and additionally, under evaluation by numerous international civil and military agencies.

Mine Action Support Section

Among the many activities allocated to the MASS is the development and management of a pool of EOD and mine action personnel to support rapid deployment initiatives. This pool currently comprises over 200 civil and military personnel trained in all EOD and mine action disciplines, including explosive detection dog (EED) handlers and mine risk education (MRE) specialists.

Central to the management of the international pool is the use of stringent psychometric testing of all candidates prior to acceptance, irrespective of civil or military backgrounds. This testing is conducted by the Swedish Armed Forces Recruitment Centre, based upon the Air Force pilot selection programme and refined to isolate those most suited to working in a cross-cultural context as well as to isolated and hazardous environments for prolonged periods of time. Personnel from the international pool have subsequently been employed in EOD and mine action programmes and projects in over 20 countries throughout the world.

The MASS is also responsible for conducting research into MRE and associated community liaison activities, which includes the development of doctrine and procedures to enhance national capabilities in this field. In addition to providing MRE training for military personnel, the MASS has developed a number of MRE training programmes for civil mine action staff, which has involved the participation of several prominent international mine action experts.

Additionally, the MASS is making a significant contribution to international standardisation initiatives in mine action including the secondment of staff to the International Test and Evaluation Programme for Humanitarian Demining (ITEP) and the provision of support to the development work of the European Committee for Standardisation (CEN) Working Group 126 (WG126) to complement the existing standardisation work undertaken by the Geneva International Centre for Humanitarian Demining (GICHD) in support of the International Mine Action Standards (IMAS). Within these activities, MASS is directly supporting two of the three CEN WG126 workshops aimed at developing test and evaluation methodologies and procedures for mechanical clearance equipment and the creation of competency standards for EOD.

SWEDEC Operational Activities

Although not mandated to directly participate in the implementation of EOD or mine action operations, SWEDEC has a long-established programme for the secondment of staff to the United Nations, non-governmental organisations (NGOs), and commercial and entity army mine action programmes and projects. Most recently, Sweden has provided a staff officer to the Multinational EOD Cell within the Headquarters of the International Security Assistance Force (ISAF) Brigade in Afghanistan. Additionally, Swedish staff are currently serving within UN and NGO programmes in Bosnia, Kosovo, Afghanistan, Sri Lanka and Eritrea.

Worthy of particular note is the MDD programme within the Cambodian Mine Action Centre (CMAC), developed in collaboration with SIDA. Established in 1996, the programme is unique in the world in that it is the only MDD project ever established in Cambodia. Although the initial training of dogs and their handlers took place in Sweden, responsibility for this activity was soon passed on to the national staff with the programme assets, including 50 dogs and a substantial training facility at Kampong Chhnang, which were subsequently transferred to CMAC authority in 2002.

Since its inception, the Cambodian MDD programme has attracted significant international interest due to the "Swedish" short-lead technique developed during this project. Once vegetation has been removed, this technique involves placing a length of rope at the border of a suspected mined area and having the dog search a 40-60 centimetre-wide lane immediately adjacent to the rope, with the handler remaining on the "safe" side of the rope. When a suspected mine or item of UXO is located, this item is dealt with by supporting EOD staff. The search process is repeated twice by different dogs and handlers, and when no items are located, the rope is placed a further lane-width into the contaminated area. Significant in this process is an informal element of quality assurance (QA) by virtue of two independent searches of each lane and subsequently by the handler, who is literally walking in the dog's footsteps as the search is undertaken.

The Cambodian MDD programme has subsequently expanded to a total of five operational teams, each comprising of six dogs and associated support staff. In 2002, the combined MDD teams exceeded the monthly forecast clearance estimates of 90,000 square metres with an average monthly clearance result of 120,000 square metres.

Conclusion

As the national Centre of Excellence in EOD and Demining, SWEDEC is the focal point for inter-agency collaboration between the Swedish Armed Forces and relevant civil agencies. SWEDEC welcomes the participation of international organisations and NGOs in all aspects of its work and subsequently extends an invitation to all interested parties to contact SWEDEC for further information on any of the activities mentioned. SWEDEC intends to provide future articles to the Landmine Monitor newsletter to provide more detailed insight into specific SWEDEC activities and projects.

*All photos courtesy of the author.

Contact Information

Thore Bäckman
SWEDEC
PO Box 1863
Eksjö
SE 557 528
Sweden
Tel: 46-381-18601
Fax: 46-381-17131
E-mail: thore.backman@swedec.mil.se
Website: www.swedec.mil.se