



**NDRF Summer Conference  
27 - 29 AUG, 2008 in Skövde, Sweden,  
in Co-operation with the  
University of Skövde**



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30 OCT, 2008

**Proceedings of  
NDRF Summer Conference 2008**

The conference was organized by Nordic Demining Research Forum (NDRF) and University of Skövde, Sweden. It took place at the University of Skövde from 27<sup>th</sup> to 29<sup>th</sup> of August, 2008.

This document includes the actual conference programme and the list of participants.

The document does not include papers of the presentations given at the conference. The papers which have been made available for NDRF can be found in the database associated to the [NDRF HomePage](#). Links to each of the papers are included in the programme tables of this document. A total list of documents including this one can also be downloaded via the "Document" entry on the HomePage using Keyword "SS08".

The documents are in PDF-format. Therefore, presentations which contained animations do not include these in the up-loaded version.

For detailed questions to each of the papers, please refer directly to the author or the person who gave the presentation in question. Addresses, phone numbers and e-mail addresses are included in the participants' list.



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## Background:

Each year NDRF organizes a number of MiniSeminars and one Summer Conference which are held at various places in the Nordic countries. The participants are invited to present on-going work and activities related to mine clearance or with a bearing on development and improvement of mine clearing. In this way, NDRF wishes to stimulate research and development through qualified exchange of information. The seminars and conferences include a number of presentations which each lasts for 15 to 25 minutes. The aim of the presentations is to stimulate discussions and networking among colleagues each being professional in his or her own field.

NDRF's activities, including the annual summer conference, have mainly focused on land mines including UXO as they are remains of war. Similar technologies, techniques, and to some extent organisations may also be used under other circumstances such as removal of and protection against IED (Improvised Explosive Device) and the clearing of military training areas prior to their transfer to civilian use. This becomes even more evident as the actual operations slowly shift from being conducted as aid to contractual operations.

This summer conference had focus on four major issues:

- Operations
- Detections and Techniques
- Education, Training and Awareness
- IED (Improvised Explosive Device) – Deleted from the programme

## Topics:

### 1. Operations

Military, non-military, and non-governmental organisations in the Nordic countries are permanently engaged abroad and at home in EOD activities. Experience is gained each day regarding organisation, equipment, and targets. The aim of this session was to exchange experience between operators and to make those searching for new technical and operational methods aware of the conditions in the field.

### 2. Detections

Today a very limited range of technologies is used for detection of mines and UXO. These methods include but are not limited to the use of dogs, prodding, and mechanical machinery. These methods undergo continuous development. Regarding the dogs, experience from the police, customs, and from EOD use may inspire each other. – What is the dog actually detecting?

Parallel with the use of the traditional technology, substantial economic and intellectual efforts are invested in developing “new technology” in the classical detection of remnant of war and also for use in the protection against terror activities.

### 3. Education, Training and Awareness

Sending personnel abroad on international missions, be it mine clearance, combats, or aid requires as much prior know-how about threats, countermeasures, and work methods as possible. The aim of this session was to present training and education programmes and equipment to support the training.

### 4. IED (Improvised Explosive Devices)

IED are an increasing threat to combat troops and NGO abroad. What is the threat? – What kind of countermeasures and protection can be used in different situations? - and how efficient and prepared are we in order to cope with the situation after the incident? – These are questions daily asked by personnel abroad, but also being present in our “peaceful” Nordic countries.

**Due to lack of access to information this session was deleted from the programme.**

## Programme:

27<sup>th</sup> August, 2008:

<b>Registration</b>	
<b>Welcome and Administrative Information</b>	<b>Bjarne Haugstad</b> <b>Chairman of NDRF</b> <b>Leif Larsson</b> <b>Rektor of HIS</b> <b>Ole Nymann</b> <b>Secretary of NDRF</b>
<b>Introduction to session:</b> <b>Operations</b>	<b>Chairman:</b> <b>Bjarne Haugstad, FFI</b>
<a href="#">SRSA Mine Action Section</a> and Rapid Response	Matts Good Swedish Rescue Service Agency
<a href="#">Humanitarian relief and capacity building</a> operations	Matts Good Swedish Rescue Service Agency
<a href="#">Scanjack missions in Bosnia and Sudan</a>	Magnus Broström Scanjack AB
<a href="#">Impact of Train Incidents</a> , - a matter of construction and procedures. (Rebecca Forsberg, KcKM, Umeå)	Åke Sellström Umeå Universitet
<b>Operations in the Nordic Countries</b>	<b>Chairman: Jan Larsen,</b> <b>DTU</b>
<a href="#">The Hjerkin Firing Range</a> – Clearance and Reclamation for Public Use	Ole Petter Gundersen Forsvarsbygg (NO)
<a href="#">Clearing of training and shooting fields</a> Security and environmental problems	Jan Sjöström Näringsliv och Samhälle Umeå Universitet
<a href="#">Environmental and Health Hazards</a> in International Operations	Jeffrey Lewis FOI, Umeå
<b>Operations Abroad</b>	<b>Chairman:</b> <b>Bjarne Haugstad, FFI</b>
<a href="#">Impact assessment</a>	Roger Fasth, DDG
<a href="#">A Value Management Model</a> for Humanitarian Demining Projects	Farshad Amin Sharif University of Technology Iran
<a href="#">A new Paradigm</a> in Humanitarian Mine Clearance	Per Breivik NPA
<a href="#">Work Smarter</a>	Erik Tollefsen, GICHD

28<sup>th</sup> August, 2008:

<b>Introduction to session: Cluster Weapon</b>	<b>Chairman: Bjarne Haugstad, FFI</b>
<a href="#">The Oslo process</a> on a convention on cluster munition	Ove Dullum FFI, Kjeller (NO)
<a href="#">The clearance of cluster munition</a>	Ove Dullum FFI, Kjeller (NO)
<b>Introduction to session: Detection and Clearance Technique</b>	<b>Chairman: Bjarne Haugstad, FFI</b>
Challenges in the Implementation of <a href="#">IED Awareness in MRE in Afghanistan</a>	Mathias Hagstrøm International Development Studies, RUC (DK)
<a href="#">Mine clearing in shallow waters</a>	Gert Daugaard A/S Hydrema (DK)
<b>Introduction to session: Detection and Clearance Technique</b>	<b>Chairman: Ole Nymann, NDRF</b>
<a href="#">Recent Advances in Detection</a> of explosives using NQR	Andreas Jakobsson Depart. of Mathematical Statistics Lunds Universitet
<a href="#">DeFuse Project</a> . – Data processing framework for decision making	Jan Larsen Intelligent Signal Processing Group Department of Informatics and Mathematical Modelling Technical University of Denmark
<a href="#">XSense</a> - Miniaturized Sensors for Explosives Detection in Air	Jan Larsen Intelligent Signal Processing Group Department of Informatics and Mathematical Modelling Technical University of Denmark
<a href="#">XSense</a> : Mechanical Sensing for Explosive Detection	Jesper Kenneth Olsen DTU Nanotech Department of Micro- and Nanotechnology, DTU
<a href="#">Operational Testing of MDDs and EDDs</a>	Conny Åkerblom, GICHD
<a href="#">The complexity of the odour</a> signature from a landmine	Rose-Marie Karlsson FOI, Grindsjön
<a href="#">Chemical constituents</a> of landmine traces at ground surface	Eril Holmgren FOI, Grindsjön
<a href="#">Detection Dog Reliability</a> - Application of Behaviour Analyses	Rune Fjellanger Fjellanger Dog Training Academy AS
<b>Discussion</b>	
<b><a href="#">D-MINE practice system</a> Presentation and Demonstration</b>	<b>Hans L. Johnsson Arne Nordströms Mekaniska AB</b>

29<sup>th</sup> August, 2008:

<b>Introduction to session: Education and Training</b>	<b>Chairman: Ole Nymann, NDRF</b>
<a href="#">Management of Crises</a> and Conflicts: Managers for Aid to Disaster and Development. (Dzenan Sahovics)	Åke Sellström Umeå University
<a href="#">CBRNE Centre in Umeå, Sweden</a>	Åke Sellström Umeå University
<a href="#">Development Assistant Engineer</a> Education at the University of Skövde.	Klas Hedenberg Engineering Science, University of Skövde
<b>Closing the 11<sup>th</sup> NDRF Summer Conference</b>	<b>Bjarne Haugstad Chairman of NDRF</b>

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**List of Abbreviations:**

AAU	Ålborg Universitet (DK)
AU	Århus Universitet (DK)
AAUE	Ålborg Universitet, Esbjerg (DK)
DANDEC	Danish Demining Centre (DK)
DCA	Danish Church Aid / Folkekirkens Nødhjælp (DK)
DDG	Danish Demining Group (DK)
DDRE	Danish Defence Research Establishment (DK)
DTU	Danmarks Tekniske Universitet (DK)
FFI	Forsvarets forskningsinstitut (NO)
FOFT	Forsvarets Forskningstjeneste (DK)
FOI	Totalförsvarets Forskningsinstitut (SE)
GICHD	Geneva International Center for Humanitarian De-mining (CH)
HIAS	Hærens Ingeniør og ABC Skole, Danmark (DK)
HIS	Högskolan i Skövde, - University of Skövde
IMM-DTU	Informatik og Matematisk Modellering – DTU (DK)
JRC	Joint Research Centre, Ispra (I)
MAIC	Mine Action Information Center (USA)
NDRF	Nordic Demining Research Forum
NOKSH	Norsk Kompetansesenter for Specialsøkshun - NOKSH A/S (NO)
NPA	Norwegian Peoples Aid / Norsk Folkehjelp (NO)
NTNU	Norges Teknisk-Naturvidenskabelige Universitet, Trondheim, Norge (NO)
RMA	Royal Military Academy (BE)
RUC	Roskilde Universitets Center (DK)
SDU	Syd Dansk Universitet (DK)
SRV	Räddningsverket (SE)
SWEDEC	Totalförsvarets ammunitions- och minröjningscentrum Swedish EOD and Demining Centre (SE)