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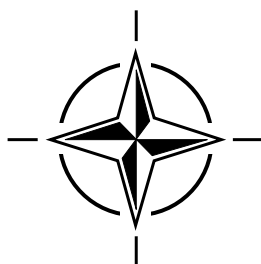
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RTO MEETING PROCEEDINGS 39

Approaches to the Implementation of Environment Pollution Prevention Technologies at Military Bases

(Approches de l'application des techniques de prévention de la
pollution sur les bases militaires)

*Papers presented at the Symposium of the RTO Studies, Analysis and Simulation Panel (SAS) held
in Budapest, Hungary, 5-7 May 1999.*



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Approaches to the Implementation of Environment Pollution Prevention Technologies at Military Bases

(RTO MP-39)

Executive Summary

A symposium was conducted in Budapest, Hungary, from 4-7 May, 1999 on the "Approaches to the Implementation of Environmental Pollution Prevention Technologies at Military Bases". Support for the Symposium was received from NATO (The Research and Technology Organization and the Committee on the Challenges to Modern Society (CCMS)) and from the United States Departments of Defense and Energy. The symposium was attended by 21 Nations from NATO and the Partnership for Peace. Some 35 Technical Papers and reports were presented.

The recently completed Long Term Scientific Study (LTSS/44): "Environmental Technologies for Application to NATO Military Assets and Bases" served as the foundation for this Symposium. That Study was conducted under the auspices of the previous Defence Research Group (DRG), Panel 1. The focus of that study was Pollution Prevention at NATO Bases and aboard NATO Ships. LTSS/44 was a US led study that included participation from Canada, France, Germany, Netherlands, Spain, and the United Kingdom.

Specific study areas included: Solvents and Volatile Organic Compounds (VOC); Petroleum, Oil and Lubricants (POL); Ozone Depleting Substances; Munitions; Organic and Inorganic Coatings; Pesticides and Ship Wastes.

LTSS/44 recommended specific technologies to reduce or eliminate some of the most common and troublesome contaminants at the source. That study also suggested several ways to facilitate and expedite technology transfer to the greatest extent possible and to reduce possible duplication of efforts across nations and generally expand international co-operation in such environmental efforts. The Symposium in Budapest served to expedite the dissemination of information regarding Pollution Prevention both inside and outside of the NATO framework.

The Symposium was Chaired by Dr. Joel E. Tumarkin, US, The Institute for Defense Analyses, who served earlier as Study Director for LTSS/44. Keynote addresses were presented by Dr. Keith Gardner, Deputy Assistant Secretary General for Science and Technology, NATO; Mr. Gary D. Vest, Principal Assistant Deputy Undersecretary of Defense for Environmental Security, US; Dr. Janos Borbely, Deputy State Secretary, Ministry of Environment, Hungary; Dr. Bela Hajos, Deputy Minister for Water, Ministry of Transport, Communication and Water Management, Hungary; and Lt. Col. Eva Matrai, Head, Section of Environment and Safety Techniques, Ministry of Defence, Hungary. A report was presented by Special Working Group 12 of the NATO Naval Armaments Group (NNAG) on the implementation of LTSS/44 recommendations into the Clean Ships program and on the current status of naval pollution prevention activities.

National reports were received from Estonia, Germany, Georgia, Latvia, and Lithuania which discussed the current status of environmental activity and pollution prevention activities in these countries. Germany presented materials related to the use of Environmental Impact Analysis for sound development techniques, and the US presented methods and ideas for the future use of Information Technologies to disseminate Pollution Prevention Technologies quickly and accurately. Papers were presented dealing with the ozone problem, aircraft emissions and the implementation of the Montreal and Kyoto Protocols (UK, Germany, and the US respectively). Several papers were presented dealing with munitions and unexploded ordnance (Germany, Latvia, Sweden, UK, and US). The Czech Republic, Kazakhstan, Moldova, and Poland, presented information on the implementation of pollution prevention programs in their nations. Norway presented a paper on the prevention of PCB contamination in sea sediments and several excellent papers from Germany, Norway, UK, and the US dealt with coatings and coating removal. Netherlands presented new information related to the storage and management of POLs and chemicals. The UK and the US brought new information on the management and elimination of VOCs in the military environment. Canada presented a paper on the integration of Pollution Prevention technologies in land management workshops and training. New sensor technologies were discussed by Germany and the US for the identification, tracking and isolation of contaminated wastes. The participants reaction to the symposium was excellent and the overall tenor and quality of information presented and received was deemed to be of outstanding value. There are no plans for a follow on activity at this time. It is suggested that the proceedings be forwarded to the NATO/NIAG working group on pollution prevention in the acquisition process.

Approches de l'application des techniques de prévention de la pollution sur les bases militaires

(RTO MP-39)

Synthèse

Un symposium consacré aux approches de l'application des techniques de prévention de la pollution sur les bases militaires s'est tenu à Budapest (Hongrie) du 4 au 7 mai 1999 avec le soutien de l'OTAN (Organisation pour la recherche et la technologie et Comité sur les défis de la société moderne (CDSM)) et des ministères de la défense et de l'énergie des Etats-Unis. Vingt et un pays alliés et partenaires ont participé à cette rencontre accueillie par les forces armées du pays hôte. Environ 35 rapports et communications techniques ont été présentés.

L'étude scientifique à long terme (LTSS/44) récemment achevée sur les techniques environnementales applicables aux moyens et bases militaires de l'OTAN a servi de point de départ à ce symposium. Elle a été menée sous les auspices de la Commission 1 de l'ancien Groupe sur la recherche pour la défense (GRD), rattaché à la Conférence des Directeurs nationaux des armements (CDNA). L'étude était consacrée à la prévention de la pollution sur les bases de l'OTAN et à bord des navires de l'OTAN. L'équipe chargée de l'étude, dirigée par les Etats-Unis, incluait des participants du Canada, de la France, de l'Allemagne, des Pays-Bas, de l'Espagne et du Royaume-Uni.

Les thèmes abordés ont été les suivants : solvants et composés organiques volatiles; produits pétroliers, huiles et lubrifiants (POL), substances appauvrissant la couche d'ozone; munitions; revêtements organiques et inorganiques; pesticides et déchets des navires.

La LTSS/44 a recommandé des techniques spécifiques visant à réduire ou éliminer à la source certains des contaminants les plus courants et les plus problématiques. Elle a aussi suggéré plusieurs moyens de faciliter et d'accélérer dans toute la mesure du possible le transfert de technologie et de réduire les éventuels doubles emplois entre pays ainsi que d'accroître de manière générale la coopération internationale en la matière. Le symposium de Budapest a permis de faire circuler plus rapidement les informations concernant la prévention de la pollution à la fois dans le cadre de l'OTAN et à l'extérieur.

Le symposium était présidé par M. Joel E. Tumarkin (Etats-Unis), de l'Institute for Defense Analyses, qui avait aussi dirigé la LTSS/44. Des exposés sur le thème principal ont été faits par M. Keith Gardner, Secrétaire général adjoint délégué de l'OTAN pour la science et la technologie, M. Gary D. Vest (Etats-Unis), Premier assistant au Sous-secrétaire adjoint à la défense, chargé de la sécurité liée à l'environnement, M. Janos Borbely, Vice-secrétaire d'Etat au Ministère hongrois de l'environnement, M. Bela Hajos, Vice-ministre pour les ressources en eau au Ministère hongrois des transports, de la communication et de la gestion de l'eau et le lieutenant-colonel Eva Matrai, Chef de la Section environnement et technologie de la sécurité au Ministère hongrois de la défense. Le Groupe de travail spécial n°12 du Groupe OTAN sur l'armement des forces navales (NNAG) a présenté un rapport sur la mise en oeuvre des recommandations de la LTSS/44 dans le cadre du programme relatif aux navires non polluants et sur les activités en cours dans le domaine de la prévention de la pollution par les navires.

L'Estonie, l'Allemagne, la Géorgie, la Lettonie et la Lituanie ont présenté des rapports nationaux faisant le point sur les activités relatives à l'environnement et à la prévention de la pollution dans ces pays. L'Allemagne a présenté des documents sur l'utilisation de l'étude d'impact sur l'environnement pour la mise en oeuvre de techniques de développement rationnel et les Etats-Unis ont exposé des méthodes et des idées concernant l'utilisation future des technologies de l'information pour la diffusion rapide et sans risque d'erreur des techniques de prévention de la pollution. Des communications ont été faites sur le problème de l'ozone, les émissions des aéronefs et l'application des protocoles de Montréal et de Kyoto (par le Royaume-Uni, l'Allemagne et les Etats-Unis respectivement), de même que sur les munitions et les munitions non explosées (l'Allemagne, la Lettonie, la Suède, le Royaume-Uni et les Etats-Unis). Des experts de la République tchèque, du Kazakhstan, de la Moldova et de la Pologne ont décrit la mise en oeuvre des programmes de prévention de la pollution dans leur pays. La Norvège a fait un exposé sur la prévention de la contamination des sédiments marins par les diphenyles polychlorés (PCB). Les revêtements et leur élimination ont fait l'objet d'excellentes communications de l'Allemagne, de la Norvège, du Royaume-Uni et des Etats-Unis. Les Pays-Bas ont fait part d'informations récentes concernant le stockage et la gestion des POL et des produits chimiques. Le Royaume-Uni et les Etats-Unis ont fait de même à propos de la gestion et de l'élimination des composés organiques volatiles dans l'environnement militaire. Le Canada a fait un exposé sur l'intégration des techniques de prévention de la pollution dans les stages et la formation à la gestion des terres. Les nouvelles techniques d'identification, de suivi et de confinement des déchets contaminés à l'aide de capteurs ont été présentées par l'Allemagne et les Etats-Unis. La réaction des participants au symposium a été enthousiaste et globalement, les informations présentées et reçues ont été jugées d'un intérêt et d'une qualité exceptionnels. Aucune activité de suivi n'est prévue pour l'instant. Il est suggéré de transmettre les actes du symposium au Groupe de travail du NIAG de l'OTAN sur la prévention de la pollution dans le processus d'acquisition.

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14. Abstract Military operations within the framework of Environmental Security are largely dependent on conformance with national and international laws or agreements to protect the air, water and ground resources. Pollution must be controlled, modified, or eliminated at the source. Society is paying a very high price today to restore and reclaim resources that have been subjected to wanton pollution for many years by both military and civilian users. Many NATO and Partnership for Peace operations and training exercises are now being constrained by national and international environmental laws. Military forces, air, land and sea, must be enabled to operate and train under a wide variety of conditions. Serious consideration must be given to compliance with the body of environmental law either in existence or now being written. Pollution Prevention activities will ensure the ability to continue operations without undue penalty or restriction.						



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