

Environmental Assessment in peacekeeping missions Challenges and opportunities

Birgitta Liljedahl, Senior scientist, Swedish Defence Research Agency FOI*
Annica Waleij, Scientist, Swedish Defence Research Agency FOI
Åsa Scott Andersson, Dr, Swedish Defence Research Agency FOI
Russ Doran, Chief, Policy and Strategy, Engineering Section,
United Nations Department of Peacekeeping Operations
Moha Bhatta, Environmental Officer, United Nations Department of Peacekeeping Operations
Svante Olsson, the Swedish Armed Forces
** contact Birgitta Liljedahl, FOI, Swedish Defence Research Agency,
S-901 82 Umeå, Sweden, +46 (0)90 106606, email:birgitta.liljedahl@foi.se*

Abstract

Military peacekeeping operations in post conflict regions face various challenges, one of which is the need for adjustment in mission planning to ensure that the operation will strengthen, not hamper, the often fragile environment in the host nation. In a cooperation between United Nations Department of Peacekeeping Operations (UNDPKO) and Sweden, operational tools for managing environmental issues in UN deployments have been suggested. The basis for the cooperation was the recently developed UN Environmental Policy and Environmental Guidelines.

Efforts to develop a generic template for a practicable 'Peacekeeping Environmental Assessment' have been made. To do so, the more traditional methodologies for Environmental Impact Assessment (EIA), Rapid Environmental Assessment (REA) and Strategic Environmental Assessment (SEA) were studied. In order to assess the possibility for implementation in the field, United Nations Mission in Sudan (UNMIS) was selected for a pilot study, which included a fact finding trip. A vital tool for presenting and communicating the results has been Geographical Information Systems (GIS). The overall results from this work will hopefully be implemented in UN future work in peacekeeping missions.

1. Introduction

Deploying UN forces to a conflict area has two mandates to fulfil: peacekeeping and peace building operations. These mandates to strengthen the likelihood of peace in a region will, in themselves, be the most important actions to ensure the development of an environmental sustainable society.

However, the last decades deployment of peacekeeping troops have also left an undesirable environmental legacy on the ground, when peacekeeping forces, including major infrastructure and logistics are deployed to fragile areas in short timeframes. Even under the constraints experienced during conflict and crisis, environmental considerations and actions can and should be taken. Sanitary issues, oil spills, the use of natural resources, production of waste and hazardous materials and employment of environmental key staff from the local society to the UN mission are example of recognized concerns which need to be addressed. Challenges to meet are the time constraints, the need for environmental integration mainstreamed in early planning, lack of infrastructure in conflict areas and the need for robust, practical solutions and environmental awareness ó all without hampering the fulfilment of the mission task.

Moreover; environmental protection may also play an important part in health protection and the recognition that environmental- and health protection represents 'two sides of the same

action between different functions such as engineering,

To meet these needs, the new DPKO Environmental Policy for UN Field Missions (DRAFT)¹ and Environmental Guidelines for UN Field Missions (DRAFT)² have been developed, and are under implementation in UN field missions. The guidelines are designed to assist military and civilian UN staff in addressing environmental issues that arise from their operations, and to enhance proactive actions to minimize UN impact on the environment in the host nations.

2. UNDPKO- Sweden’s collaboration on Environment and Health

Collaboration between UNDPKO and Sweden (the Swedish Defence Research Agency (FOI) and the Swedish Armed Forces) has developed models aiming to enhance environmental and health actions in different phases of peacekeeping missions (Fig 1). Focus has been set on *Environmental Protection* and the development of tools to facilitate the implementations of DPKO Environmental guidelines on the ground; *Health Hazard Assessments* including medical reporting system, and use of UNDPKO already well-developed *Geographical Information Systems (GIS)* as a tool in environmental and health protection. Also, *Environmental Sampling and Monitoring* is addressed in the collaboration.

A pilot mission, United Nations Mission In Sudan UNMIS, Sudan, was chosen for deeper study and to test models and tools, before future implementation in upcoming missions. Besides mission-specific knowledge gained from UNMIS, lessons identified from previous missions and networks are continuously integrated into the project, and will enhance suggested models. An important issue is to enhance involvement as much as possible of local authorities and stakeholders in the deployment, and to establish communication network³.

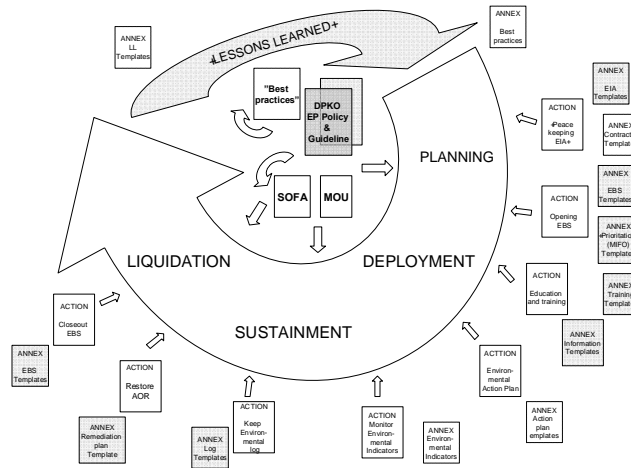


Fig 1. The UNDPKO – Swedish Defence Research Agency FOI, the Swedish Armed Forces collaboration aiming to develop robust tools to enhance the implementation of DPKO Environmental Guideline in different stages of an operation (Ill. Waleij et al 2006)

¹ DRAFT, Approved by JM. Guéhenno, USG/DPKO. Contact: Engineering Section, SSS/LSD

² DRAFT Approved by Director, Logistics Support Division, OMS/DPKO. Contact Engineering Section, SSS/LSD

³ Seminar “Operating in conflict and crisis areas Environmental and Health Hazards”, Stockholm 15-16 March 2007 (from the Eight Point Outcome)

to crisis areas increases the need for pre-deployment environmental assessments, where key concerns and mitigating actions are identified.

Peacekeeping missions are unlikely to allow assessment with a traditional EIA (Environmental Impact Assessment). The challenges are many;

- time constraints
- lack of environmental legislation in the area
- lack of institutional infrastructure in the area
- security and safety constraints
- possibilities for public participation
- alternatives

Within the collaboration, a generic template for a quick, initial 'Peacekeeping Environmental Assessment' are under development, as a tool to be used in the initial analysis and planning phase of a mission. As a base, the more traditional methodologies for Environmental Impact Assessment (EIA), Rapid Environmental Assessment (REA) and Strategic Environmental Assessment (SEA) are used to set structure and framework.

The purpose of the tool is to ensure that key environmental conflicts are identified in the initial phase of a mission planning process, and to facilitate the minimising of environmental impact on the ground. The Environmental Assessment will include a generic part, and a pilot application based on experiences of the deployment of UNMIS, Juba sector, Sudan.

The pilot peacekeeping Environmental Assessment, will include but is not limited to

Generic

1. Summary (Non technical / English and additional relevant languages)
2. Introduction (including EA inputs/outputs to the mission cycle)
3. Institutional aspects of Environmental Assessment in conflict areas
4. Method for Peacekeeping Environmental Assessment
5. Approaches to Impact prediction (criteria)
6. EA process and conditions for EA in war/conflict areas
7. Economic Analysis
8. Application of expert system
9. Environmental Monitoring Plan

Environmental Assessment UNMIS

1. Summary (Non technical / English and additional relevant languages)
2. Description UNMIS
3. Alternative locations/solutions
4. Local participation
5. Description current conditions Juba region, Sudan
6. Effects of UNMIS on Juba region
7. Summary of effects from UNMIS
8. Mitigating measures
9. Residual Impact & Environmental Monitoring Plan
10. UNDPKO environmental management process

...y not always allow fully satisfying mitigating actions due to i.e. security constraints (Fig 1). However, despite the fact that every mission will be unique, some environmental challenges (identified within UNMIS as well as other missions) can be expected in most peacekeeping missions. An environmental assessment may therefore also include alternatives for temporary/short term solutions for the early stage of a mission (Fig.2) addressing i.e.;

- Waste management (waste, sewage, petroleum products, construction material)
- Hazardous substances management
- Natural resources management, including water
- Pollution (soil, air, water, climate)
- Energy conservation
- Cultural and historical resources management



Fig 2. Oil pollution around generators – an everyday concern (photo S. Sundström FOI/the Swedish Armed Forces)

Environmental Intelligence and GIS

The need for reliable environmental information from conflict areas is large, including the need for data on i.e. protected areas, natural resources, natural environment (soil, water, air, climate), cultural and historical heritage, infrastructure, industries as well as socio-economic/human aspects (land use, logistics, poverty, gender, health, safety/accidents). Information must often be gathered during time constraints and with limited access to different sources. Also, environmental and medical information and knowledge gathered may be of interest for many stakeholders both within a mission, and also in other deployments.

For this purpose, Environmental Checklists (drafts) has been developed. The checklists mirror the information needed for an environmental assessment. The checklists are in paper form, but also integrated as templates in ArcPAD GIS, to facilitate integration to database solutions for fast information sharing (Fig.3, Fig 4).



Fig 3. Environmental checklists for fast gathering of Environmental data during fact finding have been developed, in paper format, and additionally as templates in ArcPAD GIS

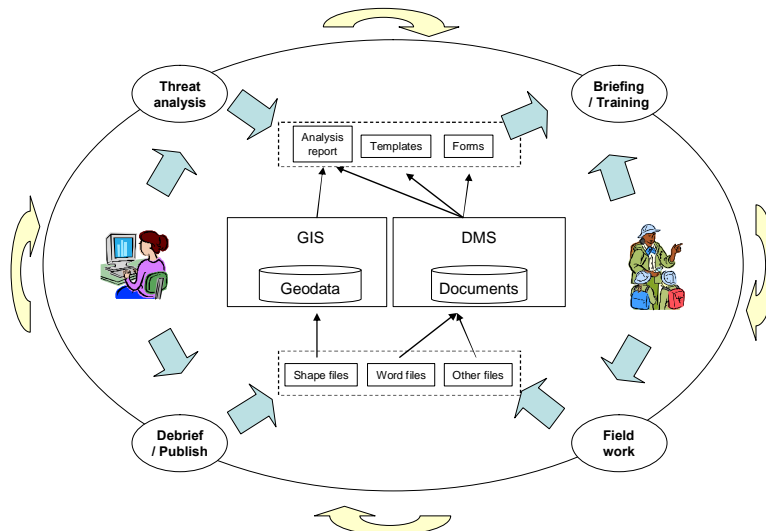


Fig 4. The flow of information (Environmental and Medical) needs to be facilitated within all stages of a mission cycle, as well as well as between missions as a part of lessons learned (FOI, METRIA, and the Swedish Armed Forces)

5. Discussion

After the visit to UNMIS, November 2006, a new contractor for POL (petroleum, oil, lubricant) has been hired, and work has commenced to identify and prioritize polluted sites for remediation. Such pollution may have been avoided or minimized, and resources saved by applying a pre-deployment environmental assessment. Furthermore, the need for environmental actions, environmental key spare parts, education, hiring requirements for contractors, the need for environmental actions/education for Troop Contributing Countries (TCCs), natural resources management and coordination of military and civilian environmental initiatives in a expanding region was a day to day concern in the mission.

peacekeeping mission may highlight such key concerns
process, and enhance environmental considerations in
decisions early in the mission cycle on i.e.

- Early environmental mainstreaming in mission, budget and resources requirements
- Technical solutions for short term/long term environmental solutions
- Establishment of environmental chain of command / mandates in the mission and possibilities of interaction with local stakeholders
- Contractor hiring requirements

The environmental checklist that was delivered to UNMIS was found useful, and has been distributed to all sectors for test and evaluation. Regarding information gathering and sharing, and use of GIS, key concerns to address are security, quality and update.

Several examples of successful environmental actions and best practices were identified within UNMIS ; i.e. co-location of new civilian/UN landfill location outside Juba hydrogeological catchments area, actions for enhanced sewage treatment and wastewater reduction, attempts to coordinate road construction activities with the local community, and early assignment of a temporary environmental officer. However, the efforts have been local initiatives under time pressure and limited funding, and should have benefited from a pre-deployment assessment and planning process. Such examples of best practice and lessons learned from different mission may be an important tool-box of alternative solutions, in pre-deployment environmental assessments for upcoming missions.

6. Conclusion and way ahead

A need for reduction of environmental impacts from peacekeeping missions has been identified during recent years. Regularly conducted Environmental Assessments in early the planning stages of missions will enhance early identification of key concerns and coordination of environmental efforts with local stakeholders. Environmental mainstreaming early in the planning process, decision making and resource allocation are all crucial for successful environmental actions on the ground. Considering the specific constraints during conflict and crisis, a modification of EIA, SEA and REA will need to be adopted. GIS will be a tool in this process. With the collaboration of UNDPKO, FOI and the Swedish Armed Forces, the development of tools and templates is expected to proceed until December 2007, followed by test and evaluation within UNMIS.

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