

DE-MINING DEBATE

ISSUE 1

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EDITORIAL

De-mining Debate is a bi-monthly electronic newsletter published by the South African Institute of International Affairs (SAIIA) in Johannesburg. I am Gareth Elliot, co-ordinator of the Landmines in Southern Africa project at the SAIIA. The SAIIA is an independent think-tank which aims to promote wider and more informed understanding of international issues among South and southern Africans.

This newsletter is a product of the re-established Landmines in Southern Africa project at the SAIIA. SAIIA thanks the **Finnish government** for their financial support in re-establishing the project after nine months of dormancy. The previous project, co-ordinated by Laurie Boulden, arrived at several conclusions, one of which was the need for increased communication between role players in the southern African mine clearance community. Thus this forum has been established to facilitate increased communication between all role players in the region.

De-mining Debate needs to more than just a summary of events, however, and more than just another talkshop. It needs to be a forum for constructive debate and diffusion of innovations. Opinions, ideas and issues pertinent to southern Africa need to be discussed and debated in this newsletter. This will be impossible unless you, the role players, raise the opinions, ideas and issues important to you. Let me know what you think of *De-mining Debate*; all comments, queries and criticism are welcome.

As this is the first *De-mining Debate*, I have purposefully avoided controversial issues. The inaugural *De-mining Debate* is aimed at the broader mine clearance community. To some many of the features will be common knowledge, but to others, some interesting new issues will be highlighted.

Each issue of *De-mining Debate* will follow a similar format. *Perspectives* allows role players in the region to introduce ideas or debate issues. Following this, *Country Report* focuses on mine action and clearing within a specific country in our region. The latest technological developments in mine clearance will be covered in *R&D*. *Regional Round-Up* and *World Briefs* cover regional and world events respectively.

In summing up, I would like to thank all the role players who took the time to meet with me or entered into email correspondence. Your advice and knowledge is greatly appreciated. I trust the co-operative working relationship we have established will develop further and lead to a more co-operative mine clearance working environment in southern Africa.

PERSPECTIVES

Richard Sherman: South African Campaign to Ban Landmines, Mines Action Southern Africa (MASA) initiative

The South African government and civil society have both played major roles in the international collaborative effort, referred to as the Ottawa Process, to achieve the global ban on anti-personnel mines (APM).

Increasingly stakeholders recognise the need to adopt a comprehensive, structured approach to deal with the tangible consequences of mine and unexploded ordinance (UXO) contamination. Within South Africa, it was felt that an approach was needed to transform the country's participation in Humanitarian Mine Action. The industry in South Africa currently has capacity in various areas such as mine awareness, management advocacy, surveying and de-mining.

In March 1998, a meeting of stakeholders in the South African de-mining industry was held. Stakeholders unanimously agreed that an institution should be created which would act as a clearing house, co-ordinating body and facilitator for South African mine action in the region and the rest of the world.

In a subsequent proposal submitted to the Department of Foreign Affairs (DFA), the South African Campaign to Ban Landmines (SACBL) suggested that a successful mine action committee would need to:

- Facilitate the multilateral interaction between relevant inter-governmental departments, defence related industries and civil society organisations involved in Mine Action activities by promoting co-operation and through networking; and
- Enhance the capacity of inter-government departments, the defence related industries and civil society organisations to participate and provide assistance to mine action, through implementation and logistical or technical support to mine clearance, victim assistance programmes, and community rehabilitation and development programmes.

Furthermore the SACBL submission recommend that, in consultation with its partners, the co-ordinating centre will establish priorities for:

- Government support for Humanitarian Mines Action;
- Establishing guidelines and standards for mine education and awareness, mapping, marking and surveying;
- Guidelines for facilitating the involvement of bilateral and multi-lateral donors in supporting mine action programmes in Southern Africa;
- Guidelines for mine clearance research, development and technology transfer;
- Monitoring and insuring the compliance with these standards and guidelines; and
- Preparing and advising South African positions at International Conferences and intergovernmental meetings.

In May 1999, during his speech to the First Meeting of State Parties, DFA Director General Jackie Selebi stated that the department was in the process of establishing a mine action centre as a joint venture between government and non-governmental groups active

against the further deployment of landmines. According to Selebi, the centre will monitor SA's compliance with the ban; identify and co-ordinate de-mining and other rehabilitation projects; and act as a clearinghouse for requests.

As civil society we should therefore welcome Selebi's announcement and actively participate in developing not only the Centre's activities but also its underlying philosophical working principles. The working principles should be based on a perspective that incorporates an African perspective of landmines as a development issue as well as the best practices of humanitarian mine-clearance agencies such as the Mines Advisory Group (MAG) and Norwegian People's Aid (NPA). The Centre has a unique opportunity to make real South Africa's contribution to building a more safe, secure and stable southern Africa.

COUNTRY PROFILE: MOZAMBIQUE

Mozambique is slowly becoming a success story of the southern African mine clearance industry, according to the overwhelming opinion of several role players in South Africa. This positive perception points to a departure from the chronic bureaucratic problems and general inefficiency which characterised early mine clearance in Mozambique.

However, bureaucracy still hinders most mine clearance operations in Mozambique in one way or another. The awarding of contracts still follows a protracted process and is fraught with bureaucratic delays, although an improvement is seen by mine clearance operators and NGOs alike. Another problem plaguing the *Comissão Nacional de Desminagem* (CND) is the lack of financial and human resources available. According to one deminer, basic functions cannot be conducted as there is not enough money to buy petrol for the vehicles.

Slowly, the CND has established national mine clearance guidelines and standards which are based on UN requirements. This is seen as a positive development by all role players. These standards and guidelines intend to regulate quality assurance, systems for reporting incidents and accidents, de-mining organisations operations and overall standards for humanitarian de-mining in Mozambique. Several role players have identified the national guidelines as an important mechanism to prevent 'fly-by-night' operators from operating in Mozambique.

Another positive development is the proposed effort to restructure the CND. The CND's Executive Director, Mr Severiano, says the restructuring is currently taking place and a name change is likely by the end of July. The proposed restructuring will give the CND greater autonomy in decision making and reduce direct political influence from the Mozambican Department of Foreign Affairs.

Moving beyond the CND, one South African de-miner noted that an indigenous capacity for de-mining exists in Mozambique. He believes sufficient numbers of Mozambicans have been trained by de-mining organisations over the last seven years. Several de-mining schools have been established in Mozambique by commercial and non-governmental de-mining operations, but to date no account could be found of how many Mozambicans

have been trained. A cursory analysis of Landmine Monitor 1999 provided the following figures:

- An estimated 1300 Mozambicans have been trained by the Accelerate De-mining Programme (ADP), Norwegian Peoples Aid (NPA) and Hazardous Area Life Support Operation (HALO) alone. Each have established de-mining schools in several parts of Mozambique, and some have also established dog training schools which export their dogs to Angola and Croatia; and
- Mine-Tech has also established a de-mining training centre, while Mechem has run several training programmes for the CND.

Nearly all de-mining operators have trained Mozambicans in managerial roles, with the aim of letting them run the operations in the near future. Mozambicans are increasingly assuming managerial and technical roles, while the numbers of expatriates who are involved in the industry are decreasing.

Surveying

The Canadian International De-mining Center, in conjunction with the Canadian International Development Agency, has initiated a National Level 1 survey. The survey will include a socio-economic impact assessment of landmines in Mozambique. All relevant actors will have access to the Canadian data, in the hope of creating a national mine action strategy. The survey is expected to begin in August 1999.

Mine clearance operations

Mine clearance is currently being conducted throughout Mozambique. The projects are donor and commercially driven. The profile below is a summary of mine clearance operations in Mozambique on a province by province basis. It should, however, be noted that the profile is **NOT** all inclusive. Several mine clearance operations such as the NPA could not be reached for information and therefore several other operations are likely to be underway currently.

The following profile was gathered from the Mozambican Mine Action Programme web page at www.map.org.mz, and information provided by CG-TVA, Mechem and Mine-Tech.

SOUTHERN PROVINCES

MAPUTO

Donor: UNDP Operator: Accelerated De-mining Programme Status: Current	With its headquarters in Maputo, the ADP only operates in the three southern provinces. ADP has ten de-mining platoons active throughout the provinces of Maputo, Gaza and Inhambane.
Operator: CG-TVA Status: Current	CG-TVA is currently undertaking two operations in the Maputo province. The first operation entails the de-bushing and

	<p>mine clearance of two cut-lines for new power lines from South Africa to Maputo, for the MOZAL Smelter project. The second is in the region of Resano Garcia and involves the clearing of a minefield.</p> <p>CG-TVA manages the projects and sub-contracts Special Clearance Services (Zimbabwe) to do the physical de-mining.</p>
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GAZA

<p>Donors: Japanese and United States Governments (US\$2 million)</p> <p>Operator: Mechem</p> <p>Status: Completed</p>	<p>The Massingir Dam and surrounding areas have been cleared, covering an area over 90 hectares. It took five months to clear the four kilometre radius around the dam. CG-TVA conducted the mandatory Quality Assurance.</p>
<p>Operator: ADP UNDP</p> <p>Status: Current</p>	<p>See Maputo province.</p>
<p>Operator: Mine-Tech</p> <p>Status: Current</p>	<p>Mine-Tech is currently clearing minefields along power line servitudes from Xai Xai to Inhambane. Mine-Tech has not published its results to date.</p>

INHAMBANE

<p>Operator: Mine-Tech</p> <p>Status: Current</p>	<p>Ongoing mine clearance project of cut-lines for new power lines.</p> <p>CG-TVA is conducting the mandatory Quality Assurance.</p>
<p>Operator: ADP UNDP</p> <p>Status: Current</p>	<p>See Maputo province</p>

CENTRAL PROVINCES

ZAMBEZIA

<p>Donor: UK Government, DfID</p> <p>Operator: HALO</p> <p>Status: Current</p>	<p>The HALO Trust has shifted its focus to district level mine problems, as provincial problems have been removed. Prioritisation of mine clearance is decided upon in conjunction with provincial authorities. This is known as the District De-mining Initiative (DDI). The final phase of the initiative is expected to end in April 2000</p>
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	and will be replaced by a Provincial De-mining Fire Brigade (PDFB). HALO hopes to leave the PDFB as a highly flexible mine clearance unit in the province, which will provide a basis for a truly sustainable capacity to respond to residual mine problems in Zambezia. HALO views this as a realistic exit strategy.
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SOFALA PROVINCE

Donor: UNDP Operator: Mine-Tech Status: Completed 1 st phase, awaiting tendering process for 2 nd phase	Mine-Tech conducted a Level 2 survey of 22 sites in the Sofala province, in which 39 APMs, 2 ATMs and 86 UXO were destroyed. Mine-Tech is still awaiting another public tender process (since September 1998) for the clearance of positively marked areas.
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MANICA PROVINCE

Operator: Mine-Tech Status: Current	Mine-Tech surveyed six villages, and found three mined localities for clearance. Two villages were cleared during the survey, yielding 21 APMs and 121 UXOs.
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NORTHERN PROVINCES

NIASSA PROVINCE

Donor: Government of Ireland, Department of Foreign Affairs Operator: HALO Status: Current	HALO has been involved in the province since October 1995. To date HALO reports a highly effective mine clearance project. Prioritisation of mine clearance is undertaken in conjunction with provincial authorities. The majority of provincial problem mines have been cleared and HALO is operating through its DDI.
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NAMPULA PROVINCE

Donors: World Vision International Netherlands Directorate General for International Co-operation Operator: HALO Status: Current	HALO has been involved in Nampula since January 1997 and is still addressing the provincial mine problems. The majority of provincial level mines are being addressed through the Provincial Prioritised Work Plan (PPWP). It is hoped the high priority mine clearance will be completed by 2000.
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	<p>Since April 1996 HALO began re-surveying all reported mined areas in Nampula on a district by district basis. This information will help refine the current PPWP and guide the subsequent developments of the DDI and PDFB phases.</p>
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CABO DELGADO PROVINCE

<p>Donor: Unknown Operator: Mine-Tech Status: Completed</p>	<p>Mine-Tech cleared 79.5km of road and 105365sqm of bridges, culverts, pits etc. The operations led to the destruction of 61 APMs and 26 UXO.</p>
<p>Donor: Swiss Development Corporation Operator: HALO Status: Current</p>	<p>Mine clearance began in January 1997 after a long delay. Operations are currently following a similar path to HALO's previous work. The HALO Trust is working through a PPWP and in April 1999 started re-surveying all reported mine areas. Once the provincial mine problems have been cleared, HALO expects to follow the DDI and PDFB phases.</p> <p>CG-TVA is conducting the mandatory Quality Assurance.</p>
<p>Operator: CG-TVA Status: Current</p>	<p>CG-TVA has been busy clearing 744km of national and rural roads to be rehabilitated by two international road building companies.</p> <p>CG-TVA manages the projects and sub-contracts Special Clearance Services (Zimbabwe) to do the physical de-mining.</p>
<p>Operator: TNT Mine Clearance Company (based in South Africa) Status: Proposed</p>	

R&D

SOUTH AFRICAN RESEARCH INSTITUTIONS

The search for the technological 'silver bullet' in landmine detection continues throughout the world. Three South African research institutions are currently conducting research into various aspects of landmine detection.

The University of Cape Town researchers are involved in the development of two prototype systems:

- Ground Penetrating Radar system specifically designed for mine detection; and
- Neutron Activation Explosive Detection system.

In addition, the University of Stellenbosch's electrical engineering department is looking at developing methods of modelling ground penetrating radar data.

The CSIR, South Africa's premier technological research institute, is investigating a multi-sensor approach to landmine detection. Sensor technologies investigated are Ground Penetrating Radar, infrared, metal detectors and various nuclear methods for landmine detection. Research work is being performed into multi-sensor data fusion, automatic target recognition algorithms and intelligent processing for use in de-mining. The multisensor approach is in line with de-mining research and development been undertaken world-wide.

The CSIR sees the setting up of a landmine detection test facility as an important step to aid in de-mining research.

A little help from nature?

Although a bit farfetched, American researchers are investigating the possibility of training bees to smell TNT. The research conducted by the University of Montana and Sandia National Laboratory in New Mexico hopes to attach micro tags no larger a grain of rice to the bees once they have been trained. The movements of the bees would be tracked (GPS) and areas identified where landmines possibly exist.

The concept of using bees to conduct a chemical survey test whether there is a minefield is based on two ideas. Firstly, bees have unique chemical sampling abilities and are sensitive to a range of chemicals in the environment. Secondly, nitro-aromatic compounds are easily absorbed into soil and water. The researchers assume plants will absorb the nitro-aromatic compounds and the bees will be attracted to the TNT-scented pollen or respired moisture.

Research is still in its early stages. No doubt many problems need to be overcome before nature's little helpers lend a hand in mine clearance.

REGIONAL ROUND-UP

ANGOLA

Angola's landmine problem continues to grow. Not only are landmines being laid by Angolan armed forces and Unita rebels in the latest hostilities, but donor funding for mine clearance is reported to be decreasing. The NPA reports several donors have reduced or halted funding. As a result trained personnel are being laid off and operations throughout the country are being shut down.

The Angolan government has provided the NPA with reports of where it has planted new landmines. The authenticity of the Angolan government's reports is highly questionable. In contrast to government 'co-operation', Unita has severed all links with mine clearance operations and continues to plant landmines.

IRIN reports that two types of booby traps have been found recently throughout Angola. The booby traps devices detonate the landmines when exposed to light, motion or metal detectors, and therefore pose serious threats to mine clearance operations.

Reports of new landmine locations include:

- Luena (800km southeast of Luanda), Malanje (350km east of Luanda) and Huambo and Kuito in the central highlands; and
- Road accesses to Bie. Since the beginning of June, six people have died and eighteen wounded by landmines in Bie.

DEMOCRATIC REPUBLIC OF CONGO

During the 11 month conflict in the Democratic Republic of Congo (DRC) several areas are known to have been heavily mined. Foremost is the area surrounding the Inga Dam hydroelectric facilities and the town of Mbuji-Mayi. Reports indicate that foreign forces are responsible for the laying of landmines in these areas. Rebels are reported to have herded cattle and other animals through suspected minefields in Mbuji-Mayi.

Unconfirmed reports suggest the airports and surrounding areas of Bukavu and Goma have also been mined. The strategic importance of the Kalenie airport to all parties suggests the possibility of newly laid defensive minefields surrounding the airport.

SOUTH AFRICA

SAMAC

At the recent first meeting of States Parties in Maputo (3-6 May 1999), South Africa announced the establishment of a South African Mine Action Centre. The proposed MAC is to be co-ordinated under the auspices of the South African Department of Foreign Affairs. Unfortunately no further progress has been achieved since the Maputo announcement.

IMEESA

The Institute for Military Engineering Excellence in Southern Africa (IMEESA) has failed to secure the funding necessary for their program to train de-miners and program managers. Bureaucratic delays in the allocation of donor funding have scuppered plans to train regional personnel in South Africa. IMEESA as a result is under considerable financial pressure and should funding not be secured by the end of July, certain financial measures will have to be undertaken.

CG-TVA

A good working relationship has developed between CG-TVA and Mozambique's CND. CG-TVA conducts most quality assurance tasks in Mozambique. The former United Nations Mine Action Service Deputy Chief (Operations) Colonel J.P Botha recently joined CG-TVA. He has been appointed as Director of Operations and Planning.

MECHEM

Mechem's attempts at establishing the Humanitarian De-mining Institute of Southern Africa (HUDISA) have been futile. An internal agreement with Mechem's holding company Denel (a South African government owned arms manufacturer) has allowed Mechem Demining to invest all profits made from mine clearance into the research and design of new de-mining technology.

According to Dr Vernon Joynt, Mechem Demining only generates income from mine clearance operations and de-mining equipment sales. Mechem Demining is no longer subsidised by Denel or Mechem operations.

Mechem Demining is reported to have been approached by several NATO members for the development of corridor bridging systems. The Kosovo crisis has apparently highlighted the need for efficient bridging systems.

RSD (A Division of Dorbyl Limited)

The Chubby road clearance system is continuing to attract international attention. Several countries have also expressed interest in purchasing the Chubby system in light of the Kosovo crisis and the need for an efficient corridor bridging system. RSD's orderbook looks healthy with several systems under construction for the United States Army and other countries.

RSD in conjunction with the United States Army is also working on developing future mine clearance technology.

To date RSD has delivered:

- 6 systems to the United States;
- 5 systems to France;
- 3 systems to the United Kingdom;
- Several systems to Uganda.

ZAMBIA

A World Bank official was killed and two others injured in a landmine explosion in southern Zambia near Lake Kariba on 31st May. Consultants and officials from the Bank were on their way to a development project in the Gwembe valley. The death of the World Bank official brought renewed media attention to Zambia's landmine problem.

This latest incident highlights a possible increase in the use of landmines in Zambia. Following the explosion, five more landmines were found and defused along the road in Sinazongwe. The Landmines Monitor also reports a number of landmines appear to have been planted in 1999 for political or criminal reasons. The most notable case was that of a shop owner laying mines around his business which caused the death of one youth and injury of another.

ZIMBABWE

The long awaited mine clearance operations in Zimbabwe are finally underway. A joint venture between Mine Safe (Zimbabwean) and KOCH (German) was awarded the European Union funded contract. Mine clearance operations are reportedly underway in Mukumbura.

Several unsuccessful attempts were made to contact the relevant role players in the Zimbabwean government concerning the ongoing mine clearance.

WORLD BRIEFS

BAD HONNEF: 2nd Expert Conference

NGO representatives active in mine action throughout the world met in June to review the Bad Honnef guidelines developed in 1997. The meeting, attended by the SACBL's Noel Stott, highlighted the need for an integrated approach guided by development-based principles. Delegates confirmed that mine action should include victim assistance.

In the discussions, Noel Stott writes, it became clear that there is still insufficient international support to meet the needs of people affected by landmines and that a dramatic increase in action is vitally needed. Participants welcomed the declaration of the First Meeting of States Parties to the Treaty, which further emphasised mine action and victim assistance.

However, it was felt that all initiatives in support of the elimination of landmines should include the following points which are in line with the Bad Honnef Guidelines:

- Strengthen and enhance the integration of all aspects of mine action (considering social and political coherence as well as the technical aspects of mine action);
- Take into account the knowledge, experiences and social aspirations of the mine-affected communities, ensuring that community participation takes precedence over bureaucracy, and institutionalised approaches; and
- Express solidarity through the creation of appropriate support for victims.

In conclusion, the delegates committed themselves to a transparent exchange of relevant information in order steadily to improve the quality and standards of mine action through shared experience. They also set in place a process to reissue the Guidelines, taking into account new situations, such as the Ottawa Treaty, research and development of alternatives to anti-personnel landmines and the vast experience gained by mine-action teams on the ground.

The next issue of *De-mining Debate* will look more closely at the modified Bad Honnef Guidelines.

KOSOVO

After months of fighting the Yugoslav Army and Kosovo Liberation Army (KLA) have littered Kosovo with landmines and UXOs (grenades, mortars and artillery shells). Added to this are the suspected tens of thousands of UXOs from the three month NATO bombing campaign.

Serbian forces have been laying mines along Yugoslavia's border with Macedonia and Albania since mid-1998. The onset of NATO airstrikes against Belgrade brought a new wave of mining, inside Kosovo itself. Mixed minefields have been laid along the Kosovo-Albania, and Kosovo-Macedonia border regions in anticipation of a NATO ground invasion. Reports suggest the Yugoslav Army has kept records of the minefield locations.

The NPA reports that mine clearance in Kosovo could possibly be complicated due to the Yugoslav Army's extensive expertise in the use of mines. A possibility exists of the use of sophisticated fuses which react to light or movement, and anti-personnel mines with no metal content.

The KLA on the other hand is thought to have laid mines in an irregular manner. KLA forces are reported to have mined Yugoslav Army supply routes and defensive rings around strategic areas.

NATO's bombing campaign made extensive use of cluster bombs in Serbia and Kosovo, in spite of most NATO members being States Parties to the Ottawa Treaty. The Pentagon estimates around 11,000 cluster bombs are scattered throughout Kosovo and Serbia. This estimate is based on the assumption that 5 percent of the cluster bombs do not explode, an estimate some claim to be too low. Some estimate as many as 66,000 cluster bombs alone, notwithstanding the tens of thousands of UXOs from the three month NATO air campaign, may litter the countryside.

The fledgling UN Mine Action Centre in Kosovo is tasked with alleviating the immediate landmine and UXO problems. Several mine clearance NGOs have also already started a co-ordinated response to the problem. Handicap International, Mines Advisory Group and Norwegian People's Aid have co-ordinated their response in terms of information sharing, project planning and support of the UN Mine Action Centre in Kosovo.

NEW PUBLICATIONS

- *The Politics of De-Mining : Mine Clearance in Southern Africa* is the product of the previous Landmines in Southern Africa project at the SAIIA. Co-authored by Laurie Boulden and Martin Edmonds and published by SAIIA, the publication assesses the state of mine clearance in southern Africa. The politics of de-mining in southern Africa is succinctly discussed, highlighting the obstacles facing southern African mine clearance. An essential publication for those unfamiliar with southern African mine clearance.

To order a copy contact: landmine@cosmos.wits.ac.za

- *Landmine Monitor Report 1999: Toward a Mine-Free World*. The ground breaking 1,100 page Landmine Monitor 1999 includes information on every country in the world with respect to landmine use, production, trade and stockpiling, humanitarian de-mining and mine victim assistance. Published by the International Campaign to Ban Landmines, this report marks the first time that NGOs are coming together in a co-ordinated, systematic and sustained way to monitor a humanitarian law or disarmament treaty.

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QUESTIONS AND COMMENTS

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