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STANDING COMMITTEE ON MINE CLEARANCE, MINE RISK EDUCATION AND MINE ACTION TECHNOLOGIES

Final Report* 2002-2003

I. Introduction

1. The Standing Committee on Mine Clearance, Mine Risk Education and Mine Action Technologies, established in accordance with the decisions and recommendations of Meetings of the States Parties, met in Geneva on 5 February 2003 and 14 May 2003. These meetings were convened by the Standing Committee's Co-Chairs, Ambassador Jean Lint of Belgium and Mr. Michael Oyugi of Kenya, with support from their Co-Rapporteurs, Ambassador Sam Sotha of Cambodia and Ambassador Kuniko Inoguchi of Japan.
2. Representatives of more than 90 States Parties, 30 States not Parties, the United Nations, the International Campaign to Ban Landmines (ICBL), the International Committee of the Red Cross (ICRC) and numerous other international and non-governmental organizations participated in the work of the Standing Committee. The meetings were held in Geneva with the support of the Geneva International Centre for Humanitarian Demining (GICHD). Interpretation was provided thanks to the support of the European Commission.
3. The Standing Committee focused its attention on the status of the implementation of the relevant elements of the Convention, received an in-depth overview of a country case study, was provided with updates on various thematic matters, and received updates from mine affected States Parties and donors on their specific situations and needs.

II. Overview of Status of Implementation

4. The Co-Chairs reported that 37 States Parties have reported mined areas and that an additional 8 States Parties, which have not submitted an Article 7 report as required or which have not yet had to submit such a report, likely suffer from the impact of mined areas. It was highlighted that Costa Rica had become the first of the mine-affected States Parties to indicate that it had completed the implementation of its Article 5 obligations. It was also noted that

* This report has been submitted by the Co-Chairs of the Standing Committee, Belgium and Kenya. This report is the Co-Chairs' summary of the breadth of work undertaken by the Standing Committee during the 2002-2003 Intersessional period. It remains the responsibility of the Co-Chairs and is not a negotiated document.

Honduras and Guatemala were on-track to complete implementation of Article 5 prior to the Review Conference and that Nicaragua would do the same soon after.

5. In order to effectively measure progress made and assess collective challenges remaining, the Co-Chairs encouraged relevant States Parties to present their specific situations and needs with regard to mine action following the “4P approach” addressing, where possible, Problems, Plans, Progress and Priorities. (See Appendix I to this report.) To assist the process of assessing the state of implementation of Article 5, the Co-Chairs presented to the second meeting of the Standing Committee a detailed compilation of information already furnished by the States Parties in accordance with the “4P approach.”

6. The ICBL also provided the Standing Committee with comprehensive global overviews of the status of implementation as far as it pertains to mine action. As part of these overviews, the ICBL called for more extensive and relevant reporting, including increased standardization and transparency in reporting.

7. In addressing needs identified by the ICBL, it was indicated that a standardized reporting feature for UN-supported mine action centres will be a feature of the Information Management System for Mine Action (IMSMA). It was noted that this feature could support Article 7 reporting and result in cost efficiencies, in part through the cost-benefit analysis.

III. Implementation plans and progress

8. The Co-Chairs provided opportunities for updates on implementation plans and progress by mine-affected States Parties. Twenty-four (24) States Parties took advantage of the opportunities presented by the Standing Committee to share information: Afghanistan, Albania, Bosnia and Herzegovina, Cambodia, Chad, Croatia, the Democratic Republic of the Congo, the Republic of the Congo, Cyprus, Ecuador, Guatemala, Honduras, Jordan, the Former Yugoslav Republic of Macedonia, Malawi, Mozambique, Nicaragua, Niger, Peru, Rwanda, Tajikistan, Thailand, Tunisia and Zambia. In addition, El Salvador highlighted that it had completed mine clearance prior to the establishment of the Convention.

9. Many States Parties indicated that problems faced include a lack of up-to-date equipment, data and funding. Progress was highlighted with respect to mine risk education (MRE) programming, the creation of mine action centres, completed surveys, and action plans for mine clearance. The need for assistance and coordination was noted by most States Parties as a priority in order to meet deadlines according to Article 5 of the Convention.

10. Four (4) States not Parties, Ethiopia, Libya, Sri Lanka and Turkey, provided updates on their status in relation to mine action and / or accession to the Convention, with Turkey indicating that it is due to deposit its instrument, together with Greece, in 2003. An update on Iraq was provided by the United Nations Mine Action Service (UNMAS).

11. In order to ensure that lessons could be shared between mine-affected countries, the Standing Committee reviewed a detailed case study of Cambodia. It was reported that the Cambodian Mine Action Authority (CMAA) was established in 2002, in response to the need for a national regulator. The CMAA has since: established a database centre, mine action standards and a strategic plan; conducted national workshops, field visits and a planning development process; and integrated mine action in the National Poverty Reduction Strategy. In addition, it

was noted that a National Mine Action Strategy, consisting of a Long Term Strategy and a Five Year Mine Action Plan (2003-2007), is soon to be approved. Various objectives of the programme were outlined, including: national co-ordination, improvement of socio-economic action, expanding upon mine action achievements, and the development of MRE and victim assistance. It was reported that Cambodia hosted a *Regional Seminar, Building a Co-operative Future for Mine Action in Cambodia*, 26-28 March 2003 in Phnom Penh.

IV. Assistance and Co-operation

12. The Co-Chairs provided opportunities for interested States Parties to give updates on assistance and co-operation. Several States Parties took advantage of these opportunities, including: Belgium, France, Germany, Italy, Japan, New Zealand, and the United Kingdom. In addition, the following organizations contributed to the discussions: the GICHD, Handicap International Belgium (HIB), the ICBL, James Madison University's Mine Action Information Centre, JASMAR, Landmine Action UK, the International Peace Research Institute of Oslo (PRIO), the Organization for Security and Cooperation in Europe (OSCE), the Sudan Landmine Information and Response Initiative (SLIRI), the Sudan Integrated Mine Action Service (SIMAS), and the United Nations system.

13. With respect to the United Nations' mine action efforts, it was reported that the UN continues to support 35 mine-affected countries and has piloted its mine action rapid response plan in Iraq. The importance of mine action integration and inter-agency co-operation, as well as the need for a humanitarian and disarmament hybrid of mine risk education and mine survey and surveillance activities was stressed. The contributions to the aims of the Convention of various elements of the UN system were highlighted, including the efforts of UNMAS, the United Nations Development Programme (UNDP), and UNICEF. Challenges for the future were identified as resource mobilisation, mine action integration into development agendas, strengthening national mine action centres, long term strategic planning and emergency response.

Cooperation and assistance between mine-affected States Parties

14. With the assistance of the UNDP, the topic of cooperation and assistance between mine affected States Parties was highlighted. It was reported that the UNDP's Mine Action Exchange Programme (MAX) matches experienced people with countries in need. It was noted that to date participants in this programme have included individuals from Afghanistan, Azerbaijan, Croatia and Mozambique, and that exchanges are planned for 2003 in Albania, Cambodia, Somalia and Yemen. The UNDP emphasised that, as a response to the increasing need for horizontal exchanges among developing countries (south-south co-operation), the UN had made the promotion of cooperation among mine-affected countries one of its highest priorities and had reflected this in its UN Five-Year Mine Action Strategy. Also participating in the discussion on this topic were Norway, Sudan and Yemen.

V. Matters of a thematic nature related to implementation

A. Mine risk education (MRE)

15. The growing number of new MRE programmes was highlighted by the ICBL, the quality of which has greatly improved as a result of needs assessments, external

evaluations, and the creation of international standards. However the urgent need for more MRE was also noted. The importance of including MRE needs in Article 7 reporting as well as the need to report on planning was also highlighted.

B. Technologies for Mine Action

16. A general overview of the status of developments in the area of mine action technologies was provided by Belgium. It was reported that the International Test and Evaluation Programme (ITEP), created as a response to the lack of international co-ordination and co-operation, international standards and inadequate dialogue, had elaborated a work plan of testing and evaluation. Results of brainstorming meetings on mine action technologies, held on 4 February and 13 May 2003, were also reported. (See Appendix II to this report.) South Africa, Sweden and Thailand also contributed to the Standing Committee's discussions on mine action technologies.

C. International Mine Action Standards (IMAS)

17. It was reported that the review board on IMAS met in January for a study on how these international standards have been adapted to national standards. It was highlighted that a total of 27 standards have been endorsed, with five new standards being prepared.

D. Information Management System for Mine Action (IMSMA)

18. It was noted that implementation of Version 3 of the IMSMA began this year, with upgrades and translations currently underway. It was highlighted that the IMSMA could be an effective tool to aid in the preparation of Article 7 reports as well as funding decisions by donor countries.

E. "Village" demining

19. HIB highlighted the issue of village demining by populations at risk in Cambodia, based on the book by Ruth Bottomley. The need to direct the focus of MRE on targeting the populations most at risk, in part through involving village deminers in MRE as key resource people, was emphasised. It was reported that a number of initiatives have been developed to this end, focussing on the greater involvement of communities.

F. Peace building

20. The relationship between mine action and peace building was outlined by PRIO. It was noted that mine action in donor policies is emphasised as a security issue with only marginal references to peace building. The opportunity for a more active role for the three phases of peace building – reconciliation, confidence building and conflict resolution – in mine action was illustrated. Possible drawbacks were outlined as increased risks, and focus and speed reduction. The need to strengthen conflict sensibility and for regular assessment of the impact of conflicts was highlighted.

VI. An assessment of needs that remain

21. The work of the Standing Committee in 2002-2003 placed a necessary emphasis on problems, plans, progress and priorities for assistance of the 40+ mine-affected States Parties which have an important obligation to fulfil in implementing Article 5. However, during the final Intersessional Work Programme prior to the Review Conference, it will be crucial that all relevant States Parties communicate their “4Ps” and best make use of the Standing Committee as means to highlight both progress and ongoing challenges. For their part, States Parties in a position to do so and other relevant actors should act with urgency to assist the mine-affected States Parties in overcoming their challenges. With these points in mind, the Co-Chairs propose that relevant actors consider the following recommendations:

- 21.1. The Co-Chairs recommend that those mine-affected States Parties that have not yet done so develop and communicate a comprehensive plan for implementing Article 5 in a manner that takes into consideration the Article’s 10-year time-frame for mine clearance.
- 21.2. The Co-Chairs recommend that the mine-affected States Parties use the 2003-2004 Standing Committee meetings to provide updates on their problems, plans, progress and priorities for assistance, making use of the suggested framework that has been developed to assist them in preparing presentations. (See Appendix I to this report.)
- 21.3. The Co-Chairs recommend that States Parties “in a position to do so” continue to make use of the Standing Committee in 2003-2004 to share information on their commitments to ensuring that resources are provided to support those States that need assistance.
- 21.4. The Co-Chairs recommend that States Parties pursue a variety of regional approaches to clearing mined areas and delivering mine risk education with a view to fulfilling the aims of the Convention.
- 21.5. The Co-Chairs recommend an ongoing experts dialogue on technologies for mine action, taking into consideration the need to monitor the application of the recommendations made by the experts group in 2002-2003.

Annex I

Suggested framework for preparing updates to meetings of the Standing Committee on Mine Clearance, Mine Risk Education and Mine Action Technologies

1. In order to assist mine affected States Parties in preparing written and oral presentations (maximum: 8 minutes) on the challenges they face and efforts that are being taken to overcome these challenges, the following framework has been developed. In addition to making a presentation in accordance with this framework, States Parties may wish to distribute more lengthy documents, such as national mine action plans.

I. Problems related to mined areas and the humanitarian impact of these areas

- I.1. In concrete terms, what is known – and not known – about the extent to which areas are mined and the impact of mined areas? What areas are affected? To what extent are communities and populations affected by mined areas? How many landmine casualties have there been in recent years?
- I.2. Of the affected areas, which are considered to be high, medium and low impact? What methodology was used to determine these priorities?
- I.3. If very little is known about the impact of mined areas, what steps are being taken or considered to obtain necessary information?

II. Plans to address the problem of mined areas

- II.1. Has a national mine action plan been established? What are the objectives of the plan and how do these objectives relate to the Convention's obligation to clear mined areas within a ten-year time-frame?
- II.2. To what extent has mine action been incorporated into national development and poverty reduction strategies? How are mine-affected communities' requests for clearance addressed?
- II.3. What is the use planned for mined land once it has been cleared?
- II.4. To what extent have domestic resources been applied to the problem of mined areas?
- II.5. Have organizational structures been developed to support mine action? What organizations and assets are being deployed and for which activities? How many individuals are involved in activities such as mine clearance, mine risk education, and coordination? What other core assets (e.g., mine detecting dogs, mechanical devices, etc.) are available?

III. Progress made in meeting the obligations of Article 5

- III.1. If a national mine action plan has been developed, does it note how progress in implementing the plan will be measured?
- III.2. On an annual basis, what area has been cleared and what area has been reduced (in square meters)? How many and what type of landmines and UXO have been cleared?
- III.3. To what extent have populations and communities directly and indirectly benefited from the reduction of suspected areas and from mine clearance? To what extent has progress in mine action resulted in progress in the implementation of national development and poverty reduction strategies?

- III.4. How many (by age and sex) individuals have benefited from mine risk education? To what extent have casualty rates declined?

IV. Priorities for assistance in implementing national plans

- IV.1. What are the priorities for outside assistance in implementing the national mine action plan or in obtaining necessary information regarding the impact of mined areas?

Annex II

Mine action technologies:

Analysis of problems and recommendations to donors, end-users and technologists

Background

1. This annex to the final report of the Standing Committee is the outcome of two experts discussions on mine action technologies, which took place at the GICHD on the margins of the meetings of the Standing Committee in February and May 2003. These discussions were convened and chaired by Marc Acheroy (Royal Military Academy, Belgium) and involved the participation of: A. Antanasiotis (European Commission), D. Barlow (James Madison University), S. Brigot (ICBL), B. Briot (Ministry of Defence, Belgium), J. Dirscherl (GICHD), R. Gasser (European Commission), D. Lewis (International Test and Evaluation Programme), A. McAslan (Cranfield University), A. Sieber (European Commission Joint Research Centre), S. Sekkenes (ICBL), R. Stuart (Canadian Centre for Mine Action Technologies), and C. Weickert (Canadian Centre for Mine Action Technologies).

Introduction

2. In 1997, at the Mine Action Forum that accompanied the Convention's signing ceremony in Ottawa, concern was expressed at the lack of international coordination and cooperation in mine action technology. It was noted that there were no universal standards for technology, no common view on where resources should be directed, and that inadequate dialogue and understanding existed within and between the research and development communities. While we must acknowledge that further steps are still necessary, since 1997, significant efforts have been undertaken in many of these areas. Some success stories include:

- 2.1. The manufacturing of detectors which combine metal detection with ground penetrating radar (GPR);
- 2.2. The development and use of mechanical devices;
- 2.3. The development of applications based on information technologies (e.g., the Information Management System for Mine Action or IMSMA);
- 2.4. The manufacturing of personal protective equipment and prosthetic feet;
- 2.5. The training of rodents to detect landmines; and,
- 2.6. The suitability and cost of personal protective equipment.

3. Thanks to the International Test and Evaluation Programme (ITEP), much work has been undertaken to test and evaluate equipment, systems and methods against agreed standards, including the CEN (Comité Européen de Normalisation) Workshop Agreement – CWA 14747:2003 "Humanitarian Mine Action - Test and Evaluation - Metal Detectors", published by CEN in July 2003. Nevertheless, further efforts must be carried out, especially to initiate and increase the coordination and the cooperation between users, donors and technologists in order to develop and bring to the field equipment and tools based on real needs and not assumed needs.

Mine action technologies: a very difficult problem

4. Several factors slow down real progress in the development and fielding of new technology, with the most significant of these factors related to the fact that mine action solutions are not simplistic and that no “silver bullet” is available. It can be said that finding all mines in the ground without a false alarm is a challenge comparable to sending a person to the moon but with much less money. Some of the significant challenging factors include:

- 4.1. A lack of a procurement path makes fielding a technology very difficult. Consequently, developers can face a dead-end when research and development as well as prototyping and test and evaluation / validation (if any) are achieved!
- 4.2. Mine action solutions are not universal but rather often country / region specific (e.g., related to specific soil type, climate, vegetation, socio-cultural environment, et cetera). A system approach needs to be used.
- 4.3. Mine action technologies are diverse (e.g. ITEP recognizes 6 different categories: survey, detection, mechanical assistance, manual tools, personnel protection and neutralisation.)
- 4.4. Requirements for technologies are not easily defined, nor satisfied.
- 4.5. Some major advances have not been well adequately recognized (e.g., the very significant improvements in metal detectors, personal protective equipment, information technology support tools).
- 4.6. It is now clear that the market for mine action equipment is not large enough by itself to support the cost of bringing products to market.
- 4.7. Both donors and demining organizations are naturally conservative – especially regarding safety.
- 4.8. Donors are reluctant to insist on new and more efficient technologies and deminers often do not change successful clearance methods (even if not efficient) as long as donors accept the status quo.
- 4.9. Some of the problems of new mine action technologies are not technical (e.g. computer staff in field offices leaving once they are trained).

Recommendations to donors

5. Clearly, donors have a key role to play, especially in supporting the introduction to the field of new technologies which offer potential long-term cost-savings (e.g., by supporting the introduction of new technologies on the condition that they will lead to faster operations, saving lives, and saving money). Specific recommendations for donors to consider are the following

- 5.1. Donors should invest now in new technologies in order to get future gains in efficiency (thus saving money).
- 5.2. Donors should insist on steady improvements in efficiency from demining organizations.
- 5.3. Donors should insist that clearance contracts, where appropriate, include participation by demining organizations in testing new technologies (with costs re-paid by the donors).
- 5.4. In order to solve the problem of the absence of large enough market for humanitarian demining equipment, donors should envisage dual use technologies,

including by leveraging military technologies and making incremental improvements to existing tools.

- 5.5. Donors should understand that the most likely vendors are existing manufacturers (e.g. metal detector manufacturers).
- 5.6. Donor should include in technology funding packages: a staff education package taking into account the social and cultural environment; and, a long-term training package for the maintenance and repair of equipment.
- 5.7. Donors must realise that clearing mined areas more quickly and efficiently may be seen as leading to unemployment for local deminers, who may therefore reject new technologies. Support for improved clearance technologies must be complemented by assistance to local deminers to help them reintegrate into the local productive economy when clearance is complete.
- 5.8. Donors should strive to understand users' real needs, in part through increased contact between donors and technologists. Donors should accept that appropriate technology must correspond to appropriate needs and that mine action funding should not be just a platform for to sell donor country's products.

Recommendations to end-users

- 5.9. Demining organisations and mine action centres should identify the best technologies for their geographic / social / cultural / mine – UXO situation with a view to addressing “bottlenecks” and leaving alone other areas where there are no problems.
- 5.10. End-users should make use of the opportunities offered by the members of the International Test & Evaluation Programme (ITEP) to ask specific questions on technology performances and to receive information about “tried and tested tools”.
- 5.11. End-users should help technologists understand the real needs of deminers (e.g., inviting them to go to the field to understand the working environment).

Recommendations to technologists

- 5.12. Technologists should visit the field to truly understand the real needs of end-users.
- 5.13. Technologies should understand that field users will only accept sophisticated technology if it is simple to use and affordable.
- 5.14. The ITEP should be wide-open to end-users' questions and play a key role in providing information about “tried and tested tools”, including information on where, why and when they are useful.
- 5.15. Technologists should increase their understanding of the fact that, in addition to technologies related to detection, technologies related to area reduction, strategic planning, programme management and other key areas of mine action are also important.

Conclusions

6. The Convention states that “each State Party undertakes to facilitate and shall have the right to participate in the fullest possible exchange of equipment, material and scientific and technological information concerning the implementation of (the) Convention.” This implies that such an exchange is an important underpinning to assisting States Parties in the fulfilment of their obligations. It is in the spirit of this provision of Convention that all actors are urged to apply the recommendations in this document. Donors need to understand that technologists need

their support to establish a sound procurement process for fielding new technologies in order to have a more cost-effective mine action. For their part, end-users need to be pro-active, understanding and open to the process of introducing new technologies in the field and to make use of existing tools. End users need to understand that new technologies could save human lives and increase mine action efficiency. Finally, technologists must accept that nothing is more important than understanding the working environment.

Examples of technology progress

- **6.1. Metal detectors:** In recent years, manufacturers and scientists have significantly enhanced the capabilities of current metal detectors (much better sensitivity and resolution, much better behaviour in magnetic soils, etc). Not all soils are suitable for metal detectors as there are dangerous cases where it is impossible to detect metal objects because of soil characteristics. In order to solve this safety problem, an analysis of the soil characteristics is to be undertaken under the umbrella of the International Test and Evaluation Programme (ITEP).
- **6.2. Hand-held, dual sensor mine detectors** (Metal detector + Ground Penetrating Radar): In 2002, mine detectors were tested successfully in Bosnia and in Lebanon. In 2003, operational tests will be performed with 24 mine detectors in 4 different mine-affected countries. Lessons will be collected and enhancements will be made if needed. The benefits include enhanced detection and a reduced false alarm rate.
- **6.3. Information technology:** The IMSMA is still evolving. It now includes standard reporting facilities (e.g, reporting obligation of Article 7) and can exchange information with Geographical Information Systems (GIS) which allows the use of digitised map and satellite images. Satellite images with appropriate information overlays can be used as maps. Management tools have been developed or are under development (e.g. to assist with planning demining campaigns, cost-benefit analysis regarding the introduction of specific equipment, the definition of a mine clearance strategy at country / region level, et cetera).
- **6.4. Personal Protective Equipment:** A test methodology has been developed based on in-depth analysis of the physics of mine blast damage mechanisms (CCMAT – US) and standards will be developed for personal protective equipment under the umbrella of the International Test and Evaluation Programme (ITEP).
- **6.5. Prosthetic feet** (CCMAT): These prosthetic feet provide greater comfort for wearer (energy storage and return), much longer lifetime, low maintenance costs and better cosmetic features.
- **6.6. Educated Rodents** (APOPO): In 2002, rats were tested successfully in Tanzania and proved to be reliable. In 2003, operational tests are foreseen in 6 different affected countries.
- **6.7. The International Test and Evaluation Programme (ITEP):** ITEP is an international programme favouring collaboration between the participating countries to avoid duplication of efforts, dedicated to the test and evaluation of all forms of

equipment, systems and methods for used in humanitarian demining. It can be dangerous to rely on data sheets distributed by manufacturers to select equipment and/or to assess their real performances. Therefore, test and evaluation against agreed standards are very important for safety and operational effectiveness as it can be dangerous to rely entirely on manufacturers' data for equipment selection and assessment. For these reasons, the two main activities of ITEP are test and evaluation and the development of standards (which is an ongoing process). Agreed standards for metal detector testing were published at the beginning of July 2003. The process of developing standards for ground penetrating radar (GPR) was launched in 2002. ITEP has also elaborated a work-plan for test and evaluation activities including six technical programmes: survey, detection, mechanical assistance, manual tools, personal protection and neutralisation.
