



Measured Steps

1999-2000 Report on the
Canadian Landmine Fund



Department of Foreign Affairs
and International Trade

Ministère des Affaires étrangères
et du Commerce international

Canada



(Cover) Women walk along a flood-damaged road near mined areas in Inhambane province, Mozambique. Canada supports mine clearance, victim assistance and mine awareness programs in the surrounding communities. Photo by Nicolas Drouin/CIDA



Measured Steps: 1999-2000 Report on the Canadian Landmine Fund

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Canada's leadership is making a difference



It gives me great pleasure to report to Parliament and the people of Canada on the activities undertaken during the second year of the Canadian Landmine Fund – in fiscal year 1999. *Measured Steps: 1999-2000 Report on the Canadian Landmine Fund* documents the Government of Canada's ongoing efforts to help address the humanitarian terror caused by landmines.

Canada provided important international leadership in achieving the Ottawa Convention banning anti-personnel mines. I am proud that we are continuing to demonstrate leadership in our work to universalize the Convention, to implement its terms and to ensure full compliance with it. While the Convention is a unique Canadian success story, its true significance lies in the manner in which it provides a comprehensive framework for addressing the global landmine problem. I remain personally committed to ensuring the success of the Convention because I am convinced that it is making a significant difference in the lives of countless individuals and communities around the world.

In fiscal year 1999, Canada continued to support every aspect of mine action to address the global landmine problem. Through disbursements of approximately \$22 million, Canada contributed to mine clearance, stockpile destruction, victim assistance, mine awareness and integrated mine action in more than 20 countries. We have supported important advances in mine action information and coordination, helped sustain the role of civil society mine action advocacy in Canada and abroad and made substantial advances in the development of appropriate technologies.

As the title suggests, this report tells of the measured steps that are being made in ensuring the effectiveness of the Convention. It is heartening that progress is being made in clearing mined land, reducing casualties and providing assistance to victims. And it is encouraging that support for the Convention continues to grow through states' formal acceptance of it and their increased contributions to mine action.

Canada's efforts are making a difference and I look forward to sharing reports of the ongoing success of the Convention in the years ahead.

John Manley
Minister of Foreign Affairs

As this report demonstrates, Canadians are making a difference for individuals and communities in mine affected developing countries. We know that these weapons have a devastating effect. Landmines kill and maim indiscriminately. Often, the victims are the most vulnerable in society: children playing in a field, women in search of water or fuel. Moreover, the fear they instill derails development efforts and limits opportunities.

CIDA is investing strategically in the future of affected countries by helping them to acquire knowledge and tools, building their capacity to clear mined land. Canada also assists individuals and communities suffering from the effects of landmines by strengthening health systems so they can better respond to these needs. Our support for non-governmental and international organizations helps them reintegrate and rehabilitate victims and deliver mine awareness education.

The challenge before us is substantial. Yet, two years after the launch of the Canadian Landmine Fund, we are seeing positive results. As this report shows, the number of new victims of landmines is falling. Also, high-priority areas such as schools, roads and farmland are gradually being cleared.

For me, this is major progress, and it fits into a much broader programme. Protecting children from landmines is an important step. Educating children and youth so they recognize the danger around them is one more step. And this can only happen through focussed investments in social development programs in such areas as health, education and child protection.

Maria Minna

Minister for International Cooperation

The Ottawa Convention, signed in December 1997, marked the first step in eliminating anti-personnel mines.

We have taken many other steps since that time to help rid the world of minefields and help countries destroy their mines before they are laid. The Government of Canada is truly committed to this effort.

The Department of National Defence, through its Centre for Mine Action Technologies in Suffield, Alberta, has made impressive breakthroughs in the development of technology for anti-personnel mine detection. The focus is on low-cost equipment that can be easily used in mine affected countries. Great progress has also been made in the development of protective clothing for deminers. The Centre has become world-renowned for its technological innovations and its testing facilities.



Canadian Forces personnel were actively involved in humanitarian mine clearance operations well before the Ottawa Convention was signed. In Kuwait, Somalia, Rwanda, Cambodia, Bosnia-Herzegovina and Kosovo, members of the Canadian Forces have cleared mines, taught local people how to conduct safe demining operations and set up mine awareness programs, which are especially important for the protection of children. Canadian Forces experts have also provided advice to countless military personnel in all parts of the world on ways of destroying their stocks of mines.

The Canadian Landmine Fund has made it possible to move beyond statements of good intention and to take concrete action toward the eradication of anti-personnel mines. I am very proud of the significant contribution made by the men and women of the Canadian Forces and the Department of National Defence.

Art Eggleton

Minister of National Defence



As Minister of Industry, I am pleased our department is helping support the Government of Canada's important contribution to address the challenge of eliminating landmines and providing assistance to landmine victims.

Through Technology Partnerships Canada, Industry Canada is working with the private sector and the Canadian Centre for Mine Action Technologies to develop and commercialize technologies and equipment that will allow people to return safely to abandoned farm fields and villages in war-torn areas around the world.

An example of this commitment can be seen in Industry Canada's investment, through the Canadian Landmine Fund, with PRO MAC Manufacturing of Duncan, British Columbia. This investment will lead to the commercialization of the Brusher/Deminer Machine, which is designed to clear foliage so demining operations can proceed. This technology will reduce the risk to demining personnel and help accelerate the elimination of landmines.

Industry Canada's activity in support of combatting landmines clearly shows how innovation can help improve the worldwide quality of life. It also underscores the important role that the Government of Canada plays in ensuring that innovative products become a reality.

This is one of the ways that Industry Canada is helping make a difference – not only for Canadians, but also for people around the world.

Brian Tobin

Minister of Industry

INTRODUCTION

Measured Steps: Progress in implementing the Ottawa Convention

While anti-personnel mines continue to be a source of human suffering in countries around the world, we now know that the unprecedented global response to this issue is making a difference. Canada's efforts, along with those of other states and non-governmental and international organizations, are resulting in measurable progress. The Ottawa Convention has provided the world with a comprehensive framework for addressing the global landmine problem and Canada, through the Canadian Landmine Fund, and with other resources, is making a sizeable contribution to implementing this framework for action.



John Rodsted

The problem

Anti-personnel mines are weapons placed in or on the ground, which wound or kill when activated by the pressure of a foot-step. These hidden, indiscriminate killers cause insidious injuries, often involving extreme blood loss, loss of limbs and extensive harm to the human body. Most of the people killed or injured by anti-personnel mines are civilians, many of them

women and children, living in countries ill-equipped to provide the medical care and rehabilitation services they require. Many mine incidents go unreported – many victims die before ever reaching a hospital.

Entire communities are haunted by the psychological terror created by a fear of mines in their fields, on their roads and near their homes. The fear of mines



Frank Lytko

Anti-personnel mines, like the POM-Z 2M fragmentation stake mine (above) and the PRB M409 blast mine (left) continue to injure and kill indiscriminately years after they are laid.

The dramatic humanitarian impact of AP mines far outweighs their marginal military utility.

prevents the safe and productive use of land, roads and other infrastructure, impeding development and the ability of communities to prosper.

The dramatic humanitarian impact of these silent sentinels far outweighs their marginal military utility. Anti-personnel mines have been proven to be of little use to militaries, yet they are a long-term arsenal against civilians and an obstacle to sustainable development, the safe return of refugees to their homes and post-conflict reconstruction.

The movement for change

In the early 1990s, non-governmental organizations (NGOs) involved in development work and humanitarian assistance sounded

the alarm about AP mines. The human suffering caused by mines and the weapons' impediment to productive land use hindered reconstruction and sustainable development promoted by NGOs and local communities.

Thus began the global movement to ban anti-personnel mines, clear mined land and assist victims. This movement was later joined by states, such as Canada. This state-civil society partnership, combined with a unique form of fast-track diplomacy initiated by Canada, became known as the Ottawa Process. The result was the successful negotiation in 1997 of the *Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction* – the Ottawa Convention.

The Ottawa Convention: A framework for action

For its efforts leading to the realization of the Convention, the International Campaign to Ban Landmines (ICBL) and its coordinator, Jody Williams, won the Nobel Peace Prize in 1997. Both the NGO community and countries like Canada, however, knew that achieving the Convention was just the beginning. The real work began in implementing its terms.

The Ottawa Convention is unique in that it sets out both a comprehensive ban on a weapon that has been in common use for generations and a set of steps that must be undertaken to address the human suffering it causes.

During the period when the Convention was open for signature, 133 states signed, signalling their intention to adhere formally to the Convention at a later date, and, under international law, accepting that they must not do anything that undermines the Convention's object and purpose. On March 1, 1999 – with unprecedented speed – the Convention had been ratified by enough states to allow for its entry into force.

The call to ban AP mines originated from civil society organizations angered by the human suffering these weapons cause.



John Rodsted

Support for the Convention has continued to grow and, as of December 31, 2000, 109 states had formally accepted its terms through ratification or accession.

Canada's commitment

Canada takes its Convention obligations seriously. Just a month before 122 states gathered in Ottawa to sign the Convention in December 1997, Canada completed the destruction of its stockpile of anti-personnel mines. Canada became the first country to ratify the Convention and has passed legislation making it a criminal offence for any Canadian to produce, use, transfer, or possess anti-personnel mines.

Canada provided financial support for the goals of the Ottawa Convention in December 1997 when Prime Minister Jean Chrétien announced the establishment of the five-year, \$100 million Canadian Landmine Fund to continue work on universalizing the ban and achieving its objectives. This fund is governed by an innovative collaboration among four government departments: the Department of Foreign Affairs and International Trade (DFAIT), the Canadian International Development Agency (CIDA), Industry Canada (IC) and the Department of National Defence (DND).

To coordinate this effort, and to signal the priority it places on these efforts, Canada appointed a special ambassador

States that agree to be bound by the Convention commit themselves to:

- immediately end the use, production and transfer of anti-personnel mines;
- destroy existing stockpiles of AP mines within four years;
- clear mined land within 10 years;
- provide assistance for the care and rehabilitation of mine victims; and
- cooperate to ensure full compliance with the Convention.



DFAIT

to serve as Canada's international focal point on all matters pertaining to the implementation of the Convention. In 1999, Daniel Livermore was named Ambassador for Mine Action, replacing Jill Sinclair who first served in the position. In addition, Canada established a special unit in DFAIT dedicated to the landmines issue and the implementation of the Convention.

Among the departments, DFAIT takes the lead on initiatives involving Convention universalization, small-scale mine action initiatives designed to build and reinforce support for the Convention, international coordination and policy leadership, monitoring compliance with the Convention and outreach to Canadians on the landmines issue. DFAIT also works with DND in a program designed to assist other states in destroying their stockpiles of anti-personnel mines.

Prime Minister Jean Chrétien addresses the 1997 Ottawa Convention signing conference.



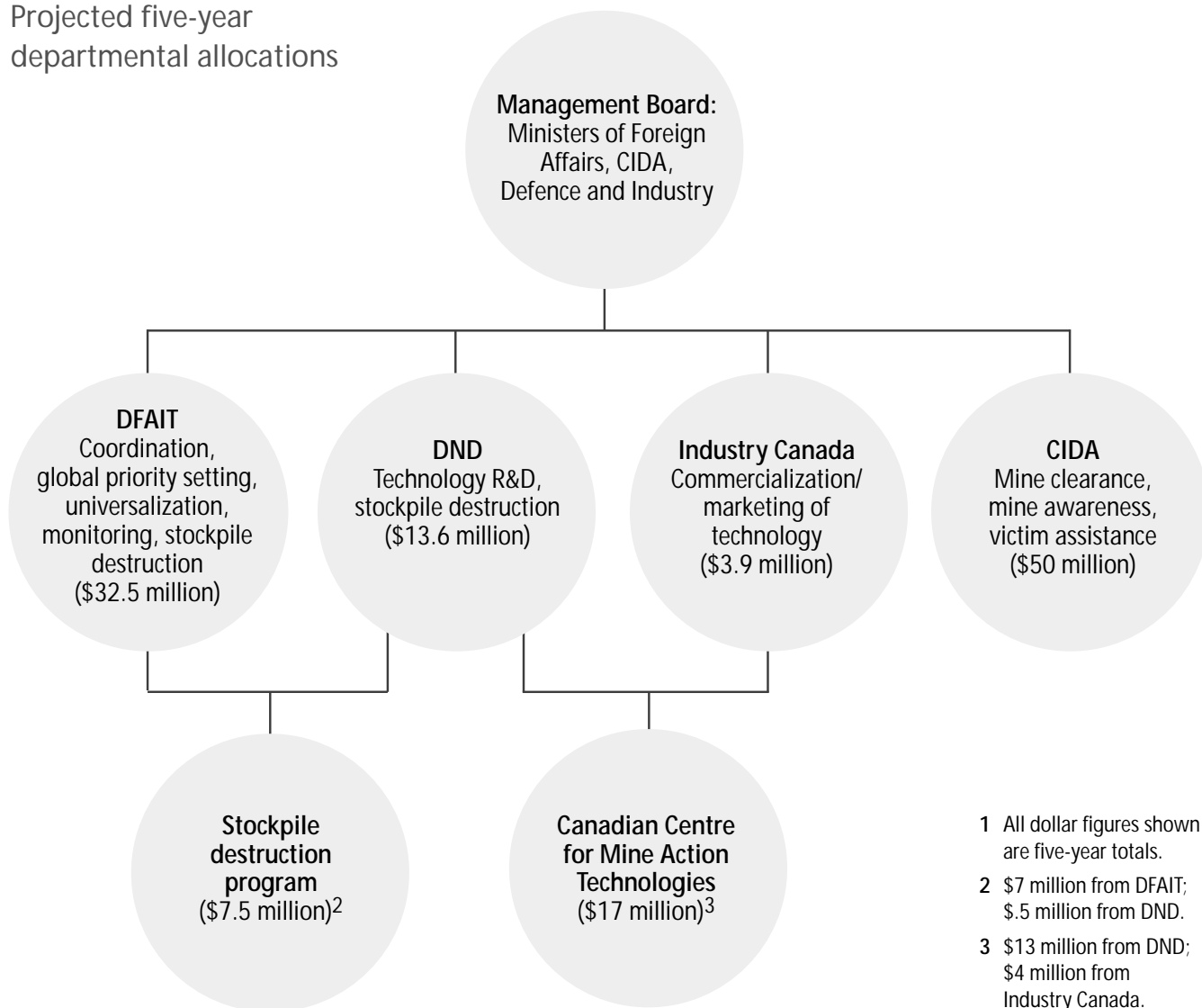
Mary O'Neill

Canada's Ambassador for Mine Action Daniel Livermore

The Canadian Landmine Fund

Budget: \$100 million¹

Projected five-year
departmental allocations



1 All dollar figures shown are five-year totals.

2 \$7 million from DFAIT; \$5 million from DND.

3 \$13 million from DND; \$4 million from Industry Canada.

CIDA leads in the areas of mine clearance, mine awareness and victim assistance. CIDA's mine action support helps to advance reconciliation and reconstruction in countries seriously affected by landmines and assist in resuming sustainable development in the wake of serious conflicts. CIDA's approach is to strengthen the capacity of key institutions, working through Canadian NGOs, the private sector and multilateral organizations, including United Nations agencies, the International

Committee of the Red Cross (ICRC) and the World Health Organization (WHO). CIDA also supports mine action in a number of countries through its ongoing development assistance program.

DND has joined Industry Canada to establish the Canadian Centre for Mine Action Technologies (CCMAT). The CCMAT's mission is to carry out research and development of low cost, sustainable technologies for mine detection, mine neutralization, personnel protection and victim

assistance and to investigate alternatives to anti-personnel mine capabilities. The Centre also evaluates technologies developed through on-site research as well as those produced by Canadian industry. This is done using the facilities available through the Centre's association with Defence Research Establishment Suffield (DRES). Industry Canada has the lead in commercializing and marketing technologies which show the most promise. DND also contributes to mine action by providing technical advisors to mine action centres in affected regions.

Measured Steps: Progress in implementing the Convention

Steady progress is being made in entrenching the new international norm established by the Convention. In July 2000, a historic milestone was reached when the Islamic Republic of Mauritania became the 100th state to ratify the Convention. Support for the Convention continues to grow, as does the commitment to make positive change by states that have not yet accepted the terms of this important humanitarian instrument.

Impressive progress is being made in clearing mined land. In the most mine affected states in the world, more land is being returned to communities. While too many men, women and children still lose lives and limbs as a result of AP mines, casualty rates are declining rapidly – due in part to mine awareness education. Landmine survivors and their communities are receiving more and better services and support. More and better information is leading to effective priority setting and a clearer understanding of the scope of the problem. And increased efforts are being undertaken to ensure the sustainability of our mine action efforts.

This report has been structured to inform the Parliament of Canada and Canadian citizens about the progress being made in

these areas and to provide a review of how Canada's efforts have contributed to this progress. At the end of the second fiscal year of the five-year Canadian Landmine Fund, we have moved further toward our goal of ending the terror of landmines. Much work still remains, but we are on track to ensuring the Ottawa Convention lives up to its promise as a framework for addressing the global landmine problem.



Robert Semanluk

Too many men, women and children still lose lives and limbs as a result of AP mines.

Ending the use, production, export and stockpiling of AP mines

The Ottawa Convention provides a framework for addressing the global landmine problem, both by insisting on an unambiguous ban on AP mines and by obligating states in a position to do so to assist in mine clearance, victim assistance and other elements of mine action. While the world celebrated the Convention's entry into force in March of 1999, the real work continues to ensure that the Convention will live up to its promise.

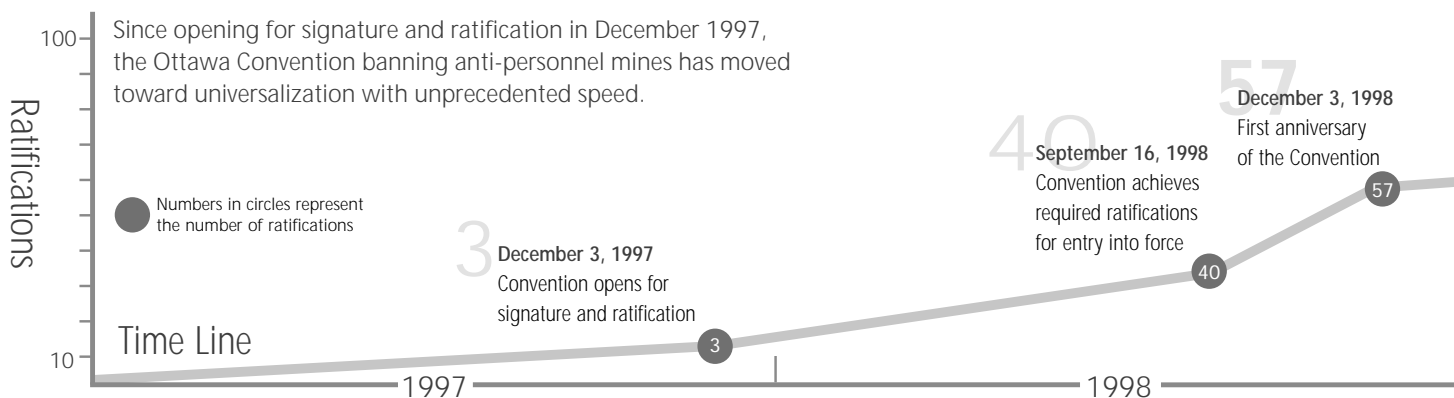
In every aspect of the general status and operation of the Convention, it is possible to report progress. During the period when the Convention was open for signature, 133 states signed, thereby signalling their general support and intention to accept the Convention's provisions at a later date. By December 31, 2000, 109 states had formally agreed to the obligations of the Convention, by ratifying or acceding to it.

The global norm against anti-personnel mines has also influenced countries that have not yet signed the Convention. A number of non-signatory states have taken significant steps toward banning these weapons, by enacting moratoria on their

use, production and export and by pledging to accede to the Convention in the coming years.

According to the International Campaign to Ban Landmines' *Landmine Monitor Report*, the number of anti-personnel mine producers has dropped sharply in recent years, from 54 to 16. Today, of the 34 nations known to have exported anti-personnel mines in the past, all but one of those nations has made a formal statement that they have ceased to export. More than 22 million landmines have been destroyed in recent years by more than 50 nations. And, for the first time in several decades, mines are being removed from the ground faster than they are being planted.

Universalization of the Ottawa Convention



Working in partnership

The sustained partnership between states and civil society organizations provides continuing momentum to ensure the implementation of, and compliance with, the terms of the Convention. Canada recognizes the important role of organizations like the International Campaign to Ban Landmines (ICBL), the International Committee of the Red Cross (ICRC) and Mines Action Canada (MAC) in maintaining a sense of urgency to continue to make the Convention a success. To reinforce the efforts of these organizations, Canada – through DFAIT’s Mine Action Partnership Program – provides financial support for work that supports its objective of universalizing and implementing the Ottawa Convention.

In fiscal year 1999, approximately \$713,000 was disbursed to support civil society organizations through the Mine Action Partnership Program. Canada’s mine action NGO coalition, Mines Action Canada, received \$316,000 to support its domestic and international advocacy work. Of this total, \$40,000 was directed towards support for a pioneering conference, ‘Engaging Non-State Actors in a Landmine Ban,’ which was co-sponsored by MAC and the ICBL Working Group on Non-State Actors.

The Nobel prize-winning ICBL received \$200,000 in core funding to support its international advocacy work. Canada’s contribution supported the work of the ICBL coordinator, government relations and resource centre staff, allowing them to participate in the Ottawa Convention’s



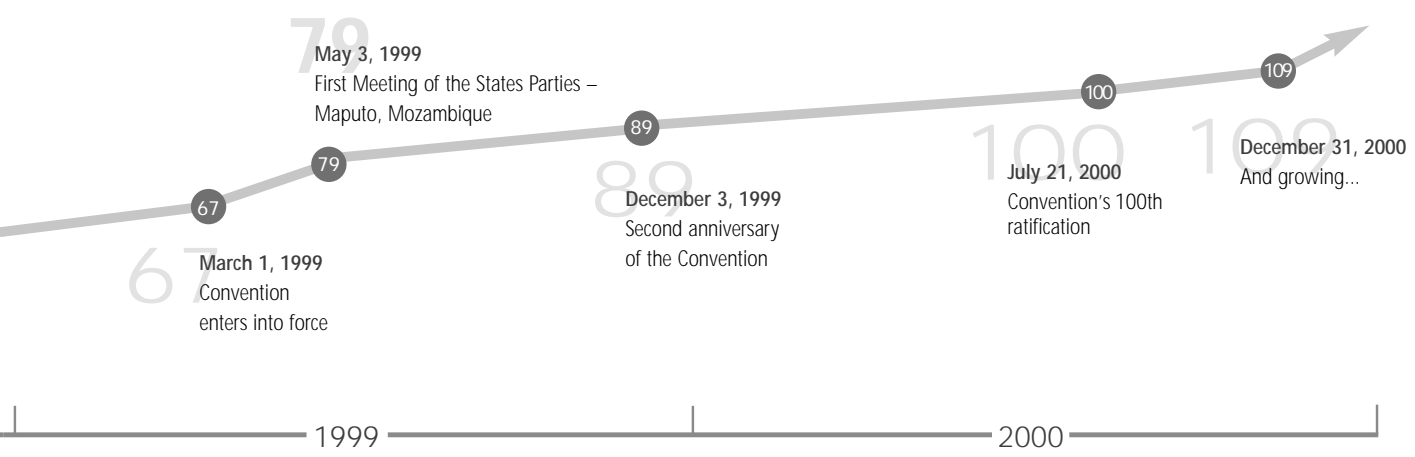
MAC

Intersessional Work Program, regional conferences and international grassroots activities.

International Physicians for the Prevention of Nuclear War (IPPNW) received \$100,000 for its universalization work in the former Soviet Union. With the help of Canada’s funding, IPPNW gathered information, monitored media discourse on mines and continued to build coalitions among ban-friendly organizations in this strategically important region that has yet to solidly back the Convention.

In addition, the not-for-profit, Sydney, Nova Scotia-based Canadian International Demining Corps (CIDC) received approximately \$100,000 to help build its capacity

Canada supports NGO coalition Mines Action Canada (MAC) in its work with Canadian cultural communities concerned about landmines. Here, MAC’s Mary Foster and international mine ban campaigner Rae McGrath join Somali-Canadian community leaders at a meeting to discuss the issue.





DND

to train and field mine detection dog teams. CIDC is working to establish itself as a centre of excellence in this important aspect of mine action.

Canada also supports country and regional efforts to maintain and build support for the Ottawa Convention. Through DFAIT's Mine Ban Initiatives Program, Canada provided \$70,000 for conferences in India, Nigeria, Croatia and Georgia focussing on the universalization and / or implementation of the Convention. The model of regional conferences that proved so successful in the lead-up to the negotiation

of the Convention continues to play a significant role in galvanizing support and increasing awareness.

Other country-specific initiatives supported by Canada through the Mine Ban Initiatives Program included: a contribution of approximately \$60,000 to support a study by Rebuild International on the decommissioning of a Bosnian weapons factory; a contribution of \$10,000 to the Landmine Survivors Network to support the visit of its high-profile patron, Her Majesty Queen Noor of Jordan, to Vietnam and Cambodia in support of the Ottawa Convention and the rights of landmine survivors; a contribution of \$34,000 to support the work of a Boston-based 'Mine Action Scholar-in-Residence' to integrate mine action courses and lectures into the



Mary Wareham/CBI

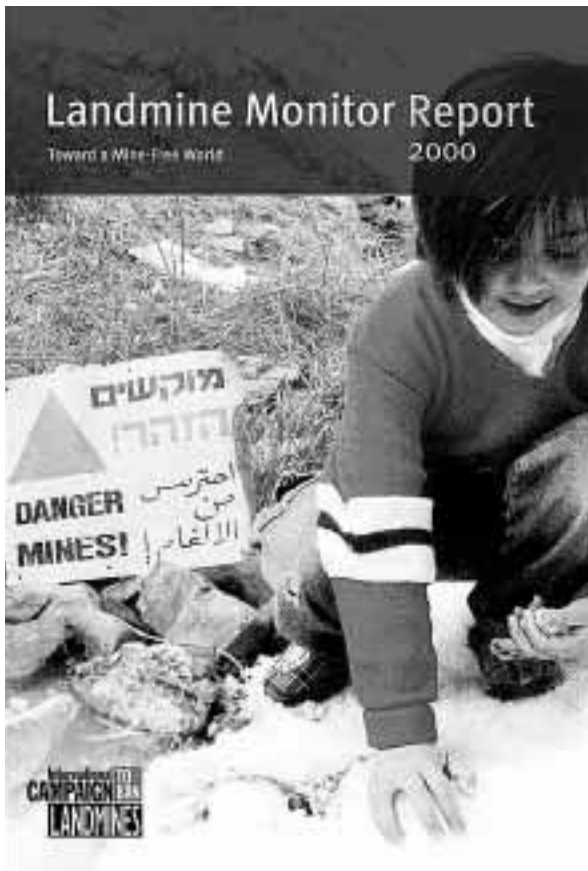


Indian Campaign to Ban Landmines

(Top left) Former commander of the Canadian Army, Lieutenant General (Ret) Gordon Reay, engaged foreign military officials in dialogue on the questionable military utility of anti-personnel mines.

(Above) The Indian Campaign to Ban Landmines conference brought landmine survivors together to advocate on their behalf.

(Left) The Zagreb Regional Conference on Mine Action opened with the destruction of 3434 anti-personnel mines.



The second annual *Landmine Monitor Report*, launched at the Second Meeting of the States Parties to the Ottawa Convention, September 2000.

program of American universities; and disbursements totalling \$45,000 to support a series of Concerts for a Landmine Free World in California, featuring music stars Sheryl Crow, Emmy Lou Harris and Steve Earle.

Another important element in building support for the Convention has been military-to-military dialogue. In fiscal year 1999, Canada supported the deployment of former commander of the Canadian Army, Lieutenant General (Ret) Gordon Reay, to Bangladesh, Kenya, Sri Lanka and Georgia to enter into these dialogues. By engaging in discussions with foreign militaries, Canada is outlining the questionable military utility of anti-personnel mines and explaining how military operations can be adapted to eliminate their use.

Monitoring compliance

Unlike traditional arms control agreements, the Ottawa Convention does not contain a formal verification mechanism or monitoring system. For this reason, Canada believes it is essential that there are independent sources of information on the implementation of, and compliance with, the Convention's obligations.

To assist in this effort, DFAIT's Mine Monitoring Program provided \$200,000 in fiscal year 1999 to the ICBL for its Landmine Monitor initiative. Landmine Monitor involves a global network of non-governmental researchers who contribute to a 1000+ page annual report on states' efforts to implement the Ottawa Convention and their policies and behaviour with respect to anti-personnel mines. The first annual *Landmine Monitor Report* was released in May of 1999. The second was released

in September 2000 at the Second Meeting of the States Parties to the Convention. Canada was the first state to support the Landmine Monitor initiative, providing \$450,000 for the project in 1998-99.

A PP MI-SR II bounding mine before and after destruction.

Destroying stockpiles

The Ottawa Convention requires that states destroy stockpiled anti-personnel mines within four years of the Convention's entry into force. It also obliges states in a position to do so to assist others



L. Col. Normand Levert/DND



L. Col. Normand Levert/DND

One of six blasts destroying a total of 10,000 anti-personnel mines at Condega, Nicaragua, February 2000.

in the destruction of their stockpiled mines. While Canada destroyed the last of its stockpiled mines even before the Convention opened for signature, it is committed to ensuring that other states also comply with their obligations.

As part of the Stockpile Destruction Program, Canada sent two military technical advisors and a civilian advisor to Nicaragua and Honduras in fiscal year 1999 to provide assistance in the open detonation of these countries' anti-personnel mine stocks. Canada also

provided approximately \$2,650 to support an experts conference on stockpile destruction in Minsk, Belarus. Discussions are ongoing with Ukraine regarding the provision of financial and technical assistance to destroy that country's estimated 10 million mines.

Ensuring the effective operation of the Convention

The Ottawa Convention requires that its member states meet annually in the lead-up to a Review Conference which will be held in 2004. The First Meeting of the States Parties (FMSP) to the Convention was held in Maputo, Mozambique, May 3 to 7, 1999. Canada supported the Maputo conference,



(Above) An ICBL advocacy postcard distributed at the First Meeting of the States Parties in Maputo, Mozambique, May 1999.

(Below) Heads of delegations to the meeting.

providing approximately \$22,000 to the Government of Mozambique to assist it in its role as host of this landmark event. Additionally, Canada contributed approximately \$75,000 to support the participation of conference delegates from mine affected developing countries.

At the FMSP, States Parties agreed to a strongly-worded declaration expressing their views on the continued use of AP mines by some states and the need to reinforce efforts to clear mined land and assist landmine victims. In addition, States Parties established an Intersessional Work Program as a mechanism to facilitate the implementation of the Convention between Meetings of the States Parties. As part of this program, Canada assumed responsibility as Co-Chair of the Standing Committee on the General Status and Operation of the Convention.

The Second Meeting of the States Parties to the Ottawa Convention was held in Geneva, Switzerland, September 11 to 15, 2000. While this meeting took place in fiscal year 2000, Canada provided its contribution to this meeting – approximately \$27,000 – to the United Nations in fiscal year 1999.

States Parties established an Intersessional Work Program to facilitate the Convention's implementation.



Reducing mine casualties and delivering mine awareness education

In the mid-1990s, rough estimates suggested anti-personnel mines claimed 500 new victims a week – or 26,000 new victims a year. These estimates, while only educated guesses, indicated that anti-personnel mines were a dramatic source of human suffering.

Since then, the Ottawa Convention has established a new international norm which is already making a difference in preventing new use of AP mines. The Convention obliges states to clear mined land and ensure that mines in the ground do not claim lives or limbs. In recent years, dramatic progress has been made in identifying and marking minefields and clearing mined land.

The international community's response to reducing mine casualties also involves mine awareness education which attempts to reduce high risk behaviour in mine affected areas by increasing knowledge of the dangers of landmines.

The mine action community's understanding of the impact of mine awareness education has evolved in recent years to display more creativity and sensitivity to community needs and context. New mine awareness programs use participatory approaches and educational materials that aim to be simple, clear, relevant and in appropriate local languages.

Promoting best practices in the delivery of mine awareness education has been greatly aided by UNICEF's development of *International Guidelines for Landmine and Unexploded Ordnance Awareness Education*. The Standing Committee on Victim Assistance, Socio-Economic Reintegration and Mine Awareness, which was established by States Parties to the Ottawa Convention in May 1999, has devoted a great deal of attention to

promoting these guidelines and ensuring that their principal elements are considered in program planning.

While changes in behaviour brought on by mine awareness education are difficult to measure, it is encouraging to see some level of mine awareness activity is being undertaken in most mine affected countries and comprehensive programs are in place in almost all of the world's most seriously affected states. It is also difficult to draw a causal link between mine awareness education and its effect on casualty rates. However, we do know that in every case where mine awareness education is delivered in a comprehensive manner, casualty rates are declining.

Some of the most significant examples of the decline in casualty rates include:

(Right) As part of CIETcanada's evaluation of mine awareness education in Angola, interviewers administer a pictorial questionnaire to children in Huila province.

- In Afghanistan, the casualty rate in 1999 was less than half the 1993 rate.
- In Bosnia and Herzegovina, there has been a steady decline in the number of new mine victims, from a high of 625 in 1996 to 94 in 1999.
- In Cambodia, there were one-third as many new mine victims in 1999 as there were in 1996.
- In Mozambique, 60 new casualties were recorded in 1999 – down from 133 in 1998.
- In Croatia, 50 new landmine victims were recorded in 1999, a reduction of 36% compared to 1998.

In spite of the progress that has been made, the ongoing human suffering caused by AP mines compels Canada to continue to support efforts that will further reduce landmine casualty rates. To this end, Canada supports mine awareness educa-

tion programs in a number of countries, as well as initiatives to evaluate mine awareness programming to ensure its effectiveness.

Angola

Through CIDA's Tapping Canadian Creativity Program, Canada contributed \$250,000 in fiscal year 1999 to UNICEF Canada for mine awareness education in Angola. Canada's support to date for this program now totals \$500,000 as part of a \$750,000, three-year commitment. Working with four local NGOs, UNICEF delivered mine awareness messages at the community level using theatre, puppet shows, posters, wooden mine dummies, traditional songs and dances. The project targeted primary and secondary school-aged children in four provincial capitals and aimed to improve capacity within Angola to disseminate appropriate information on the dangers of landmines.

In every case where comprehensive mine awareness education is being delivered, casualty rates are declining.



A. Swaminathan/CICanada



Melanie Régimbart/DFAIT

Scouts of Colombia participate in role playing and games that teach about the effects of landmine use.

Canada also provided approximately \$60,000 through DFAIT's Research and Policy Development Program to CIETcanada for the evaluation of mine awareness programming in Angola. The evaluation focussed on children's knowledge about landmines and risk-taking behaviour around mines.

Conducted in Huila and Uige provinces, the evaluation found that mine awareness materials and messages transmitted information about the danger of mines and standard mine markings and signs, but did not encourage 'mine smart' behaviour among children. It also found that educational

materials were often difficult to understand for anyone without formal education and recommended ways that awareness programs could be fine-tuned to suit the needs of children and decrease risk. As a result, UNICEF Angola is reviewing its approach to mine awareness education strategies.

Bosnia and Herzegovina

CIDA has made a \$580,000, four-year commitment to a World Bank implemented mine awareness project in Bosnia and Herzegovina from sources other than the Canadian Landmine Fund. This funding has supported the delivery of 560 mine awareness education sessions, and the distribution of mine awareness posters and handbooks in 118 municipalities.

Colombia

DFAIT's Mine Ban Initiatives Program disbursed \$100,000 to UNICEF Colombia for a mine awareness program implemented in cooperation with the Scouts of Colombia, the Kiwanis Foundation and the Colombian Red Cross. Using role playing and games, the program raised awareness among children and youth about the dramatic effects of the use of landmines.

Mozambique

When unprecedented flooding ravaged Mozambique in early 2000, Canada responded with a contribution of \$500,000 in emergency mine action assistance. Part of this contribution was designed to support mine awareness activities to prevent an increase in the number of landmine accidents when displaced populations returned to their communities after the flooding.

As part of a multi-year, \$1.25 million commitment, Canada disbursed \$333,000 in fiscal year 1999 to an innovative project in Mozambique. With the Canadian Auto Workers (CAW) matching Canada's contribution, the Canadian NGO Cooperation Canada-Mozambique has been able to carry out an integrated mine action program that includes a mine awareness component.

Nicaragua

Canada has supported mine awareness workshops in northern Nicaragua as an element of the New Brunswick-based NGO, the Falls Brook Centre's victim assistance project. \$100,000 from CIDA's Tapping Canadian Creativity Program was disbursed for this project in fiscal year 1999. A total of \$206,000 has been provided to this program over two years.

International Committee of the Red Cross

CIDA's Multilateral Institutions Program provided \$300,000 for the International Committee of the Red Cross (ICRC) Mine Action Appeal 1998-2003 for Victim Assistance and Mine Awareness. The

funding will cover the cost of mine awareness and victim assistance as part of the ICRC's integrated effort to both reduce the number of landmine victims and provide assistance to those injured.

United Nations

Canada provided \$60,000 to the United Nations Mine Action Service (UNMAS) to help disseminate information on how to minimize risk in mine affected areas. The funding supported development of a handbook and training program to increase awareness of the Ottawa Convention among UN and other aid workers and provide them with information enabling them to operate safely in mine affected environments.

Canada supported the delivery of emergency mine awareness education in Mozambique after the flooding of early 2000.



COCCANO

Clearing mined land

When the non-governmental community brought the issue of landmines to the world's attention in the early 1990s, the magnitude of the problem seemed insurmountable. Rough estimates were made of tens of millions of landmines planted in over 70 countries in every region of the world.

Over the past few years, the mine action community has come to understand that the sheer number of mines in the ground does not effectively explain the nature of the problem. A more accurate measure is the number of people directly and indirectly affected by the threat of mines. This has led to improved priority-setting in mine clearance.

In addition, the Ottawa Convention obliges states to clear mined areas within a 10-year time-frame. This combination of factors has led to the belief that we will overcome the challenges of the most severe and terrorizing cases of mined land in years, not decades.

While clearing mined land continues to be a frustratingly slow, expensive and dangerous exercise, the international community is making measurable strides toward returning more and more once-mined land to safe and productive use. Mine clearance in some form is taking place in 71 mine affected countries or areas.

In some of the most mine affected countries and areas, significant progress has been made over the past year to clear mines and unexploded ordnance (UXO) and to return cleared land to productive use:

- Afghanistan: In 1999, 110 square kilometres were declared safe. A total of 465 square kilometres have been declared safe since 1993.
- Bosnia-Herzegovina: In 1999, 3.7 square kilometres were cleared.
- Cambodia: In 1999, 11.9 square kilometres were cleared. Between 1993-99, 155 square kilometres were cleared.
- Croatia: In 1999, 23.6 square kilometres were cleared.
- Kosovo: In 1999, 8 square kilometres were cleared.

More and more once-mined land is being returned to safe and productive use.



Nicolas Drouin/CIDA



Lisanne Garceau-Beckner/CIDA

- Laos: In 1999, 6.2 square kilometres were cleared.
- Mozambique: In 1999, 5 square kilometres were cleared, bringing the total area cleared to 194 square kilometres.

International progress in mine clearance is being aided by increased resources and coordination, more and better information, the development of best practices and new demining equipment and techniques. In 1999, 13 donors contributed over US\$75 million to mine clearance activities. Millions more were invested in developing new and improved technologies for detecting and removing landmines.

The Standing Committee on Mine Clearance, established by States Parties to the Ottawa Convention in May of 1999, spent a great deal of effort reviewing progress in the revision of international standards for humanitarian mine clearance. Work on these standards is continuing with a view to providing the necessary guidance to undertake mine clearance in a safer and more effective manner.

Canada's contributions to clearing priority

land cover a range of activities including support for mine action centres, Level One Socio-Economic Impact Surveys and database development; provision of technical expertise and protective equipment; fielding of clearance teams; and development of new technologies and approaches.

Afghanistan

Afghanistan remains one of the most heavily mined countries in the world. With as many as 3,000 new injuries from landmines and unexploded ordnance in 1999, it is still essential to reduce risk to civilians from mines and UXO. Canada provided \$1 million in mine action funding in fiscal year 1999 to the United Nations Coordination Office for Humanitarian Assistance in Afghanistan (UNOCHA) from sources other than the Canadian Landmine Fund. Programming was implemented largely by Afghan NGOs. Since 1993-94 CIDA has provided a total amount of \$6.75 million for demining activities and mine awareness in Afghanistan through its international humanitarian assistance program.

The Canadian International Demining Corps training mine detection dogs in Bosnia.

Canada provided valuable technical and financial support to Bosnian Mine Action Centres.

Bosnia and Herzegovina

Conflict in the former Yugoslavia has left Bosnia and Herzegovina with a legacy of anti-personnel mines that still inhibits the safe return of refugees and the productive use of the country's land and infrastructure.

CIDA has committed \$10 million over five years to an integrated country program in Bosnia and Herzegovina, of which approximately \$3.1 million was disbursed in fiscal year 1999. To date, this program has seen approximately \$5.6 million disbursed for institutional support, mine clearance and victim assistance. In addition, DFAIT's Mine Ban Initiatives Program disbursed \$475,000 in fiscal year 1999 to support mine clearance and related activities in Bosnia and Herzegovina.

Canada's program in Bosnia and Herzegovina places a heavy emphasis on projects that support mine clearance by Bosnian deminers, particularly those projects implemented by the Canadian International Demining Corps, the Stabilization Force (SFOR), Handicap International and Norwegian People's Aid. Canada has also supported the Bosnia and Herzegovina Mine Action Centre (BHMIC) as the central policy-making and coordinating body for all mine action in the country.

Canada has sought to stimulate an integrated and coordinated approach to the problem, working in partnership with other

donors. A large number of Canadian technical experts has been assigned to positions with mine action centres, SFOR and a Board of Donors, where they are working to build consensus around sustainable and coordinated approaches to demining.

Canada's 1999-2000 contributions to mine clearance in Bosnia-Herzegovina included:

- \$930,000 in institutional support for the Bosnian Mine Action Centres (MACs). These funds were disbursed to the United Nations Development Programme (UNDP) to support the core functions of the BHMIC and Entity MACs, plus the secondment of DND experts to serve at these centres. From February to June 1999, four Canadian Forces personnel were assigned to the MACs. Participation was reduced to two in June 1999 and deployment completed in February 2000.
- \$150,000 to the UNDP for a Task Manager in Demining. A Canadian expert was seconded to fill the role for one year.
- \$630,000 to the SFOR Entity Army Demining Program through which 550 Entity Army deminers were deployed, five ambulances were purchased, three Bozena mini-flails were purchased and three operators were trained in their use. Support from Norway and Canada for SFOR mine clearance has increased the available pool of Bosnian manual deminers in the country by 70%.

A deminer from Bosnian NGO Akcija Protiv Mina at work.



Lisiane Carreau-Bednarz/CIDA

- \$790,000 to support Bosnian demining NGO Akcija Protiv Mina, implemented by the French/Belgian NGO Handicap International (HI). Through HI, Canada has been a principal donor of Akcija Protiv Mina, the first fully indigenous, Bosnian demining organization that has BHMAC certification. This project is now recognized by other organizations as the best-run and most productive demining operation in the field.
- \$250,000 to the Sarajevo Canton Mine Clearance Program. This project was implemented by the NGO Norwegian People's Aid. Funds were used to train and deploy 27 Bosnian deminers and to operate a mini-flail.
- \$350,000 for the training and deployment of 10 mine detection dogs and their Bosnian handlers by the Sydney, Nova Scotia-based NGO Canadian International Demining Corps.
- \$2.6 million of the above listed funding was channelled through Slovenia's International Trust Fund for Demining and Victim Assistance. These funds were matched with a contribution from the United States.

Cambodia

Canada has contributed \$4.3 million to the UNDP Trust Fund for Mine Action in Cambodia since 1993. CIDA's Multilateral Branch disbursed \$146,000 in fiscal year 1999 for a total of \$746,000 disbursed since 1998 from the Canadian Landmine Fund. These funds covered the cost of seven members of the Canadian Forces serving as technical advisors to the Cambodia Mine Action Centre (CMAC). The personnel returned to Canada in July 2000 having provided key technical assistance and strong leadership to CMAC. In addition, CIDA's Multilateral Institutions Program provided \$400,000 to the UNDP for the CMAC.

As Cambodia moves to take greater responsibility for its own governance, Canada is supporting a bilateral mine action program with the country's governmental authorities and non-governmental organizations. A multi-year \$5 million



Lisiane Garceau-Bednar/CIDA

integrated country program has been designed to return land to economic use, reduce casualty rates, build institutional capacity, undertake a national Level One Socio-Economic Impact Survey and provide victim assistance.

Canada has signed a Memorandum of Understanding with the Royal Government of Cambodia to undertake the Level One Survey. Geospatial International, a geomatics company based in Burlington Ontario, will provide technical and management expertise, working in collaboration with the CMAC. The survey is expected to be completed by September 2001.

Canada funded the operation of this mini-flail (brush cutter) by a Norwegian People's Aid mine clearance program in the Sarajevo area.

Chad

CIDA's Multilateral Institutions Program provided \$150,000 in core funding to the UNDP for the Chad Mine Action Centre, bringing Canada's total two-year contribution to \$250,000. Funds assisted the Chad MAC in carrying out its main activities including a Level One Socio-Economic Impact Survey and mine clearance.

Croatia

DFAIT's Mine Ban Initiatives Program provided \$200,000 to the United Nations Mine Action Assistance Program for the Croatia Mine Action Centre. This contribution helped cover the cost of retaining mine detection dogs in Croatia over the winter months to maximize their working time and effectiveness in the field.

Georgia

The British demining NGO HALO Trust received \$215,000 from DFAIT's Mine Ban Initiatives Program for mine clearance and the production of a Level One Socio-Economic Survey in the former Soviet Republic of Georgia's region of Abkhazia.

Jordan

DFAIT's Mine Ban Initiatives Program contributed approximately \$500,000 to the Canadian International Demining Corps for mine clearance support in the Jordan Valley. The funds provided training, and demining and protective equipment for Jordan's Royal Corps of Engineers as part of Phase 2 of a joint project sponsored by Canada, Norway, Jordan and Israel.

Kosovo

Following the conflict in Kosovo, landmines and UXO impeded the safe return of refugees, the delivery of humanitarian aid, peace-building and reconstruction assistance in the region. Canada responded to this humanitarian crisis by committing approximately \$2.9 million in fiscal year 1999, largely from sources outside the Canadian Landmine Fund, to support mine clearance programs in Kosovo. Over two years, a total of \$5 million of CIDA program funds from outside the Canadian Landmine Fund have been committed to support mine clearance in Kosovo.

(Above left) Demining a former football pitch near the Gumista river in Abkhazia. 400 anti-personnel mines were cleared from this field.

(Left) Responding to Jordan's request, Canada contributed a Caterpillar loader to aid mine clearance operations in the Jordan Valley. Left to right: Brig. Gen. Zakariya Ja'afra, Brig. Gen. Nassar Al-Majali, Brig. Gen. Youcoub Haddadjali, Senator Sheila Finestone, Canada's former Ambassador to Jordan, Michael Molloy and Radio Canada reporter, Leila Deeb.



HALO Trust



Canadian Embassy, Amman, Jordan

The following mine clearance activities were carried out in fiscal 1999:

- \$75,000 from CIDA for a mine action assessment mission to Kosovo and institutional support for the United Nations Mine Action Coordination Centre (UNMACC). Canada worked with Belgium to sponsor an assessment mission to evaluate the extent of the landmine problem in Kosovo and lay the groundwork for the UNMACC. Canada also jointly funded the UNMACC program manager for six months.
- \$138,000 from DFAIT and \$65,000 from CIDA for the six month secondment of a Canadian Forces officer to Kosovo to act as a liaison between the NATO force KFOR and the UNMACC. Three other DND staff members were seconded to

work in Pristina to produce maps and databases that identify the locations of landmines and UXO in Kosovo.

- \$500,000 over two years from CIDA to support operations of the UNMACC, allowing it to carry out surveys to determine the extent of remaining landmines and conduct quality assurance of demined areas.
- \$300,000 from CIDA for an emergency shelter and related demining project
- \$328,000 from CIDA and \$200,000 from DFAIT to the Canadian mine clearance organizations the Canadian International Demining Corps and Wolf's Flat Ordnance Disposal, and approximately \$1.3 million to the International Demining Alliance of Canada, both for rapid response demining.

Lenny Grogan and Dave Bruce of Wolf's Flat Ordnance Disposal check for mines at a pig farm near Pristina, Kosovo.



Mark O'Neill/Toronto Sun

Canadian assistance will provide Mozambique with a sound basis for planning national demining.

Laos

CIDA contributed \$150,000 to the UNDP Trust Fund for UXO Lao to help promote the Ottawa Convention in Laos and assist with landmine and UXO clearance. This brings Canada's total two-year contribution to \$355,000. The funding was used to develop national capacity to manage a mine action program, to reduce the number of civilian UXO casualties and to increase the amount of land available for food production and other development activities.



Mark Yarnoshuk/DND

Moldova

Moldova, which ratified the Convention in mid-2000, received a contribution of \$120,000 from Canada through CIDA's Multilateral Institutions Program. Ten mine clearance personal protection suits and helmets manufactured by Med-Eng Systems of Ottawa were given to the Republic of Moldova's army engineers. Representatives of DND and Med-Eng travelled to Moldova to provide training on the use of the suits and their impact on mine clearance drills.

Mozambique

Canada has committed \$10 million to support mine action in Mozambique over a five year period. Canadian assistance will provide the country with a sound basis for planning national demining and setting priorities for economic recovery, and will assist victims and promote mine awareness.

In fiscal year 1999, approximately \$1.7 million was disbursed to support surveys, mapping and database development, including:

- Conducting a national Level One Socio-Economic Impact Survey: This initiative began in March 1998, with the Canadian International Demining Corps serving as the implementing agency. Progress in fiscal year 1999 included commencing field surveying, improving the quality of minefield surveying and reporting, and training surveyors in the use of global positioning system (GPS) equipment.
- Producing maps to facilitate mine action: The integration of geographic information system (GIS) hardware and software has allowed minefield locations to be presented in more sophisticated map formats.

Canadian Forces Master Warrant Officer Luc Lorrain demonstrates GPS survey equipment in the field in Mozambique.



OAS

- Enhancing the national demining institute's landmines database: Hardware and software has been installed to support the cutting-edge Information Management System for Mine Action, developed by the Geneva International Centre for Humanitarian Demining.
- Providing Canadian technical expertise: Canadian Forces mine action specialists were deployed to serve with the UNDP's Accelerated Demining Programme (ADP) in Mozambique in April 1999. This deployment consisted of three people for one year. After the flooding in Mozambique, two members of the Canadian Forces were extended for an additional three months until July 2000.

CIDA's Tapping Canadian Creativity Program disbursed \$333,000 to the Canadian Auto Workers (CAW) and Co-operation Canada-Mozambique for their mine action program in Mozambique as part of a multi-year, \$1.25 million commitment. This project includes proximity demining and post-clearance community development activities. CIDA's financial assistance is matched by the CAW.

Nicaragua

Through CIDA's integrated country program for the Americas, Canada disbursed \$1 million to the Organization of American States' Unit for the Promotion Of Democracy (OAS/UPD) Demining Program in Nicaragua. Canada and Norway are funding this two-year program to strengthen mine clearance efforts on Nicaragua's northern border, along what is known as Operational Front #4. Canada's funding covered field expenses including protective clothing, food for the deminers, vehicle maintenance, insurance and administrative costs for field offices in rural areas.

Soldiers from the Army of Nicaragua complete an OAS/ Inter-American Defence Board mine clearance course.

Peru-Ecuador

Canada disbursed \$400,000 through CIDA to allow the OAS/UPD to coordinate and execute Phase II of its demining operations on the Peru-Ecuador border. Canada's contribution financed detection, protection and clearance equipment and logistical support for the demining of the Tiwinza region. A \$300,000 Canadian contribution to the OAS/UPD in 1998 facilitated the creation of the OAS Voluntary Fund for Mine Action in Peru/Ecuador.

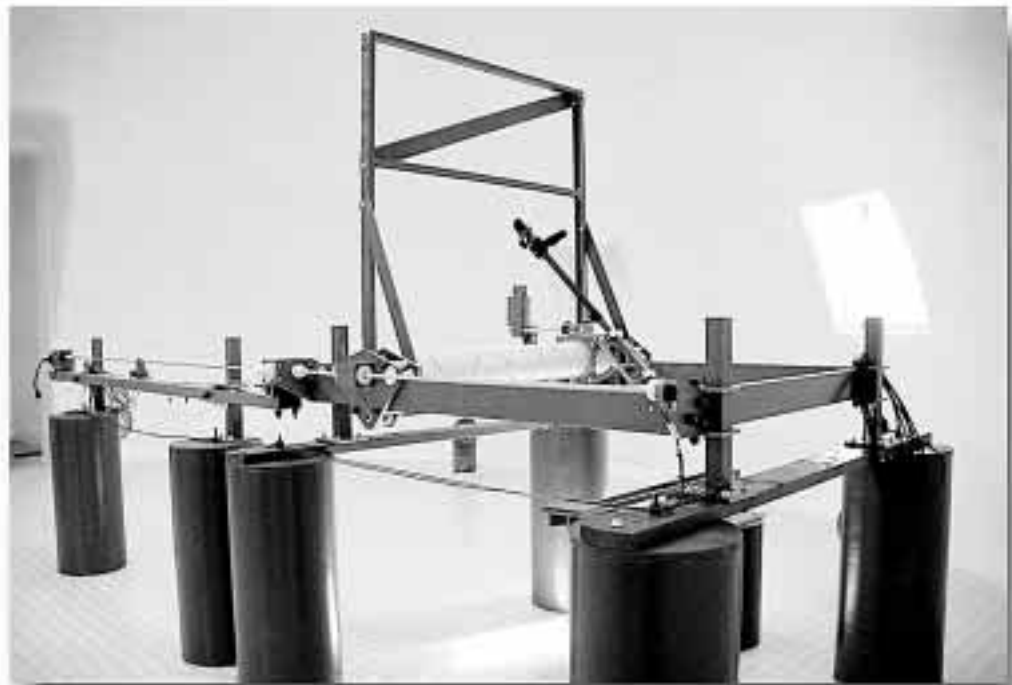


The Canadian Centre for Mine Action Technologies

The Canadian Centre for Mine Action Technologies (CCMAT) was established in 1998 to expand research and development (R&D) of low cost, sustainable mine action technologies. The CCMAT acts as Canada's focal point for demining technologies, working on fundamental R&D, the development of a database on demining technology and the adaptation of applicable military technology for humanitarian use. The CCMAT serves as an assessment agency to ensure that only the most effective and appropriate technologies are deployed to the field. Through Industry Canada, the Centre encourages and funds industrial participation in the development and commercialization of promising new technologies.

Fiscal year 1999 was the CCMAT's first full year of operations. Through its association with the Defence Research Establishment Suffield (DRES), the Centre has a comprehensive R&D program underway and is already producing technology for development by industry and subsequent deployment to the field.

The CCMAT is a key player in international collaboration and has established a good working relationship with the demining community. Total spending in fiscal year 1999 from the Canadian Landmine Fund for the CCMAT's operations was approximately \$2.8 million. The following are some specific achievements:



A non-metal test rig used to evaluate metal detectors.

DRES Photo Instrumentation Group

Research and development

The CCMAT's R&D program focuses on developing improved technology for detection and neutralization of anti-personnel mines, protection for the deminer, and enabling technologies, such as robotics. The program is carried out in-house and through contracts with Canadian companies who use CCMAT test facilities for field trials. In detection, the strategy is to investigate a large number of promising technologies and choose the best of these for advanced development and eventual deployment. Projects underway include an investigation of the potential of hyperspectral imaging for aerial mapping of mine affected areas. In protection, a better understanding of the physics of mine blast and the mechanism of injury has made an important contribution to the development of a new humanitarian demining ensemble.



June 2000 validated the surrogate mines as a tool for evaluating mechanical demining equipment. Several countries have shown strong interest in the surrogate mines and a Canadian company is negotiating a licence to manufacture and market them. Through the multinational International Test and Evaluation Program (ITEP)

it is hoped these surrogate mines will become an international standard for test and evaluation of neutralization equipment.

Another example of sophisticated technology is the Frangible Surrogate Leg, which was developed in Australia and



Assessment of new products

Over the past year, facilities and procedures for test and evaluation have been enhanced by the latest technology, developed in-house or under contract to the CCMAT or acquired through the Centre's contacts with the international defence research community. For example, to assess the effectiveness of mechanical equipment proposed for demining and to reduce the risk to the evaluation team and equipment, surrogate mines were developed that react like real mines but without the explosive content. The surrogate mines were developed for the CCMAT by two Canadian companies and will be used in a state-of-the-art test site to evaluate mine clearance equipment. A trial in

(Above) A Hi-fidelity Reproduction PMA-2 Mine and the real thing.

(Right) A military surgeon inspects the Frangible Surrogate Leg to determine the extent of blast injury.





acquired by the CCMAT. The Frangible Surrogate Leg is a precise reproduction of the human leg, composed of materials that react to blast in a manner similar to human tissue. It is being used to evaluate and improve new designs for protective equipment. As a result of this work the CCMAT is participating in the development of international standards for protective equipment.

International collaboration

The CCMAT has been a key player in international collaboration, in the International Test and Evaluation Program (ITEP) and the Demining Technology Information Forum. The mandate of the ITEP is to

2000 and the first product of this international collaboration, a “consumer report” on metal detectors, is now available to the demining community.

Test and evaluation

As part of the ITEP, CCMAT has carried out in-theatre trials of metal detectors in Cambodia, Bosnia and Herzegovina, Afghanistan and Croatia. These trials supplement and extend the information gained from in-house trials. Equally important, they expose Canadian technology to the demining community and provide feedback from users so that the developer can make product improvements.

Technical support to Canadian companies

The CCMAT provides technical support to Canadian companies developing products for demining. This support, which includes access to R&D information and field trials, decreases development time and helps with marketing. Examples are the development by Kingston, Ontario’s MREL Specialty Explosive Products of a new explosive – FIXOR – to neutralize landmines and unexploded ordnance. Trials of FIXOR at the CCMAT were followed by a successful demonstration of the product to an international group of deminers in Kosovo in October 1999. FIXOR has proven to be a safe, inexpensive alternative to C-4 and TNT explosives for humanitarian demining and clearance of unexploded ordnance. It can be transported worldwide by road and on passenger or cargo aircraft. Through funding provided by DFAIT, the Thailand Mine Action Centre will receive a supply of the new explosive and training for its use.

As a result of substantial protective equipment research in CCMAT and DRES a new foot protection system, called the Spider Boot, and a Humanitarian Demining Ensemble were developed by Med-Eng Systems of Ottawa. Since Canada and the US have a common requirement for a Humanitarian Demining Ensemble, they have worked together to develop a test



DRES Photo Instrumentation Group

Preparing the new explosive FIXOR for a demonstration in Kosovo.

develop universally accepted standards for test and evaluation, to use these to establish performance criteria for demining equipment and to conduct international testing of equipment. The program’s participating countries are currently involved in an exhaustive trial of all available metal detectors. The Demining Technology Information Forum will serve as a vehicle for the exchange and publication of technical information, such as that produced by the ITEP. The Memorandum of Understanding for ITEP was signed in July

methodology. This test methodology was used in US trials of five ensembles produced by different companies, including Med-Eng, and will be an important part of a joint US/Canada contribution to UN standards for personal protective equipment.

The Spider Boot, the Humanitarian Demining Ensemble and FIXOR are now available for sale and were exhibited at the *Ban Landmines 99* public mine action exhibition.

Investigating alternatives to anti-personnel mine capabilities

Objections by some states to accepting the Ottawa Convention on the grounds that they perceive anti-personnel mines to be a useful and cost-effective military option remains one of the most serious obstacles to universalizing the Convention. It is hoped that the CCMAT's work on investigating alternatives to anti-personnel mines will help Canada make progress in overcoming this argument. In fiscal year 1999, a study was undertaken by the Directorate Land Strategic Concepts in DND, reviewing the historical use of anti-personnel landmines and their impact on land force operations. The report was completed in January 2000. CCMAT is assessing the results of other countries' studies on alternative capabilities and the results should be available in early 2001.

Dissemination of information

to the user and to industry

The CCMAT maintains a web site at www.ccmat.gc.ca and has produced a series of brochures and news briefs which it distributes to a wide audience in Canada and abroad. The Centre also supports DFAIT outreach initiatives, such as the *Ban Landmines 99* exhibition and the Youth Mine Action Ambassador Program.



Commercialization

Canadian companies that want to contribute to the mine action effort, particularly those that have relevant technology, can do so through the CCMAT. To help Canadian companies identify and take advantage of opportunities in mine clearance, Industry Canada maintains a web site, www.ic.gc.ca, which provides the necessary information. Industry Canada also assists companies that wish to attend trade shows where they can display their demining equipment or services.

After the detonation of an AP mine, equivalent to 97 grams of TNT, the protective Spider Boot's two front legs are broken but the rest of its parts remain undamaged.



Assisting landmine survivors and their communities

NGOs have estimated that there are anywhere between 300,000 and 600,000 landmine survivors worldwide. In addition there are tens of thousands of family members of these landmine survivors and their communities affected by the terror of these weapons.

The Ottawa Convention requires that states in a position to do so provide assistance for the care, rehabilitation and social and economic reintegration of mine victims. This is a daunting task, given that most landmine victims live in some of the world's poorest countries. Estimates suggest only 10 percent of landmine survivors have access to proper medical care and rehabilitation services.



Robert Semanuk



Ian Carrick/COPE

The Guardians Institute of Orthopaedics in Kandahar, Afghanistan provides comprehensive services for landmine survivors, many of whom sustain multiple amputations.

Over the past year, a number of important advances have been made in the effort to provide more and better assistance to landmine victims. Aided by the work of the Standing Committee on Victim Assistance, Socio-Economic Reintegration and Mine Awareness established by States Parties to the Ottawa Convention in May 1999, important advances have been made to develop best practices to meet the needs of landmine victims. Initiatives like the ICBL *Guidelines for the Care and Rehabilitation of Survivors* and the Physicians for Human Rights *Measuring Landmine Incidents and Injuries and the Capacity to Provide Care* have provided the tools to deliver better services to victims.

It is now understood that victim assis-

(Left) This Mozambican child will need her prosthesis replaced many times as she grows.

tance includes a broad continuum of care involving pre-hospital care, hospital care, physical and psychological rehabilitation, social and economic reintegration, disability policy and practice, and health and social welfare data collection and research. This entails a wide range of programming implemented by a wide range of actors. It is these principles that guide Canada's support for assistance to landmine survivors and their communities.

Afghanistan

Afghanistan is one of the world's most seriously mine affected countries. While its casualty rate continues to decline, thousands of landmine victims still live in need of services. Through CIDA's Multilateral Institutions Program, Canada disbursed \$300,000 in fiscal year 1999 to the UNDP's Comprehensive Disabled Afghan Program to build indigenous capacity to provide services to persons with disabilities.

CIDA's Tapping Canadian Creativity



Philip Maher/World Vision

World Vision Canada provides community-based agriculture training and small loans to landmine survivors in Cambodia.

Program provided \$153,000 to the Guardians Institute of Orthopaedics, an NGO based in Kandahar. The contribution helped provide comprehensive rehabilitation services for landmine survivors, including orthopaedics, physiotherapy, counseling, self-care and problem-solving skills.

Another \$10,000 was provided to the Royal Ottawa Hospital Rehabilitation Centre to undertake skills analysis and training in prosthetics and orthotics for the staff of the Guardians Institute Kandahar clinic.

Bosnia and Herzegovina

CIDA's five-year, \$10 million mine action program in Bosnia and Herzegovina involves a \$500,000 victim assistance component. CIDA is also supporting a \$2.5 million, four-year, joint health/landmine survivor assistance project through sources other than the Canadian Landmine Fund. This project, implemented by Queen's University, will equip and train health workers in community-based rehabilitation centres. CIDA provided an additional \$300,000 in fiscal year 1999 to sup-

port peer counselling for the disabled and landmine victims, a project also implemented by Queen's University.

Cambodia

Canada is supporting a multi-year victim assistance program in Cambodia through CIDA's Tapping Canadian Creativity Program. This project, implemented by World Vision Canada, is assisting the reintegration of persons with disabilities in Battambang, Pursat, Banteay Meanchey and Pailin provinces. More than 100 disabled survivors are receiving technical skills training and job placement services in engine, radio and TV repair and typing skills each year. Community-based agriculture training and loans are being provided to women with disabilities. Canada disbursed \$250,000 to World Vision Canada for this project, as part of a three-year, \$750,000 commitment.

CIDA is continuing to support a victim rehabilitation program managed jointly by Oxfam-Quebec and the Cambodian War Amputees Rehabilitation Society (CWARS) based in Calgary. This project has been operating in Pursat province since 1994 and has offered rehabilitation and reintegration services to landmine victims and other disabled citizens. To date more than 500 individuals have received training that allows them to earn a livelihood, and contribute to the reconstruction of Cambodia.

Central America

CIDA's integrated country program for the Americas disbursed \$750,000 to the Pan American Health Organization (PAHO) in fiscal year 1999 as part of a five-year, \$3.5 million victim assistance initiative in Nicaragua, Honduras and El Salvador. This tripartite project, involving PAHO, Canada (through Queen's University International Centre for Community Based Rehabilitation) and Mexico, consists of developing rural rehabilitation services, long-term sustainable community-based rehabilitation programs, regional prosthetic and orthotic development and the socio-economic reintegration of landmine victims.

This year the program completed a national feasibility study for prosthetics and orthotics in Honduras and delivered five community-based rehabilitation workshops and three disability information system workshops. It also supported a planning mission of the economic reintegration team to El Salvador and Honduras and coordinated the development of a health information system.

Canada and Israel continued their support for a two-year victim assistance project in Guatemala. A total of \$200,000 was disbursed to Queen's University's International Centre for Community Based Rehabilitation to educate community members and health professionals on the principles and strategies of community based rehabilitation. In parallel, the Development Study Centre of Israel is providing training on social and economic rehabilitation of survivors.

Canada also supported victim assistance initiatives being implemented in Central America by two Canadian NGOs. The New Brunswick NGO Falls Brook Centre

received \$100,000 from CIDA's Tapping Canadian Creativity Program to support a project in northern Nicaragua. This project provides landmine victims with prostheses and training in solar electrification to enable them to distribute, install and maintain village-level solar energy systems. Canada has contributed \$206,000 to this project.

The Sierra Club of British Columbia received \$125,000 through CIDA's Tapping Creativity Program for a victim assistance initiative in El Salvador. This initiative trains landmine victims in the development of environmentally friendly technologies. Canada has contributed \$325,000 to this project since 1998.

KOSOVO

From sources other than the Canadian Landmine Fund, CIDA contributed \$500,000 to a victim assistance project in Kosovo implemented by Queen's University. The project initially provided emergency assistance in

Mozambican landmine survivors at a rehabilitation transit centre supported by CIDA, COCAMO and the Canadian Auto Workers.



Nicolas Drouin/CIDA



VVAI

Mozambique as part of a multi-year \$1.25 million commitment. In fiscal year 1999, the project contributed to the improvement of an orthopaedic centre in Nampula province, supported transit centres used by victims during rehabilitation, assisted transport of victims to centres and provided training in job creation and victim rehabilitation.

Sierra Leone

DFAIT's Mine Ban Initiatives Program disbursed approximately \$30,000 to the American NGO Vietnam Veterans of America Foundation to deploy a prosthetics trainer to Sierra Leone.



ADRA Canada

Yemen

CIDA's Tapping Canadian Creativity Program contributed \$150,000 to ADRA Canada's victim assistance project in Yemen. The project provided community-based rehabilitation services and vocational assistance to landmine victims and their families in three districts. It has also supported discussions with the Government of Yemen on the development of national legislation aiding the social integration of disabled persons. To date, \$300,000 has been provided for this project.

International Committee of the Red Cross

CIDA's Multilateral Institutions Program disbursed \$300,000 to the International Committee of the Red Cross (ICRC) Mine Action Appeal 1998-2003, Victim Assistance and Mine Awareness. The funding will cover the cost of mine awareness and victim assistance, including surgical, medical and hospital care as well as physical rehabilitation in communities most affected by landmines.

(Top) A Sierra Leone prosthetics workshop. Canada supported the deployment of a prosthetics trainer to this conflict-ridden country.

(Above) Volunteers at a community-based rehabilitation clinic in Sanaa, Yemen.

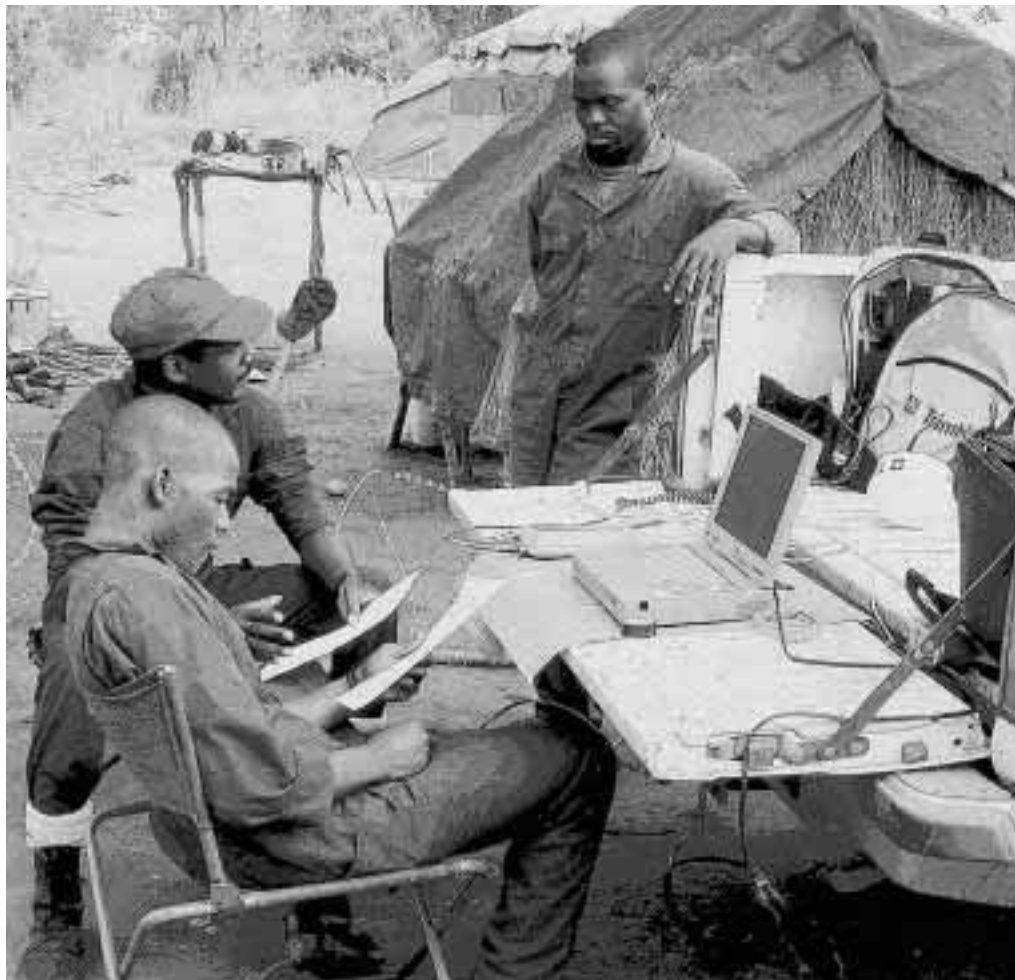
refugee camps with a special emphasis on the disabled and landmine victims and later provided support to community-based centres, including training health care workers and Kosovar physiotherapists.

Mozambique

Canada disbursed \$333,000 to the CAW and Cooperation Canada-Mozambique integrated mine action project in

Improving mine action information and coordination

Acquiring more and better information on the global landmine problem is essential to developing a better understanding of the magnitude of the problem and developing coherent priorities for deploying resources. Until recently, the landmine problem was defined according to a rough estimate of the number of mines in the ground around the world. We know now that such a measure is relatively meaningless as it tells us little about the social and economic impact of the threat of mines. Vast approximations of the number of landmine victims worldwide provide little guidance on where the areas of greatest need may be, the nature of the particular needs of landmine victims and the level of services available to meet their needs.



Mark Yarnoshuk/DND

Using data collected with GPS equipment, Mozambican surveyors complete a minefield survey report back at camp.

Work by the United Nations Development Programme (UNDP) and the Geneva International Centre for Humanitarian Demining (GICHD) in recent years has advanced our knowledge on how socio-economic indicators can be used to both understand the impact of the landmine problem and progress that is being made. Initiatives such as those undertaken by the Oslo Peace Research Institute (PRIO) and Canada's International Development Research Centre (IDRC) have promoted a greater understanding of how mine action relates to broader development planning and programming.

Progress is also being made in obtaining the data and information needed to gain a better understanding of the global landmine problem. The Global Landmine Survey initiative was launched in 1998 to produce high quality data on the socio-economic impact of landmines. Under the direction of a working group that includes the United Nations, the GICHD, the

Vietnam Veterans of America Foundation and other NGOs, Level One Socio-Economic Impact Surveys are being done or planned in several mine affected countries and areas.

With the support of Canada and other states, survey activities are taking place in Angola, Cambodia, Chad, Kosovo, Lebanon, Mozambique and Yemen. The first Level One Survey was completed in Yemen in mid-2000 with the assistance of \$1.5 million provided by Canada. Its results were delivered to the Government of Yemen in September 2000.

Obtaining information on the general nature and scope of a country's landmine problem is another important element in setting priorities and ensuring effective coordination. By the end of 2000, the United Nations will have completed more than 10 inter-agency assessment missions designed to acquire this information. Assessment missions have been conducted in Azerbaijan, Belarus, Ecuador, Egypt, Honduras, Peru, Lebanon, Namibia, Sierra

A Level One Socio-Economic Impact Survey community interview at O'Our, Yemen.



Survey Action Center / MOPA



Leone, Zambia and Zimbabwe.

Managing information acquired from the field has become more systematic and sophisticated through the development by the GICHD of the Information Management System for Mine Action (IMSMA). This information management tool provides both the United Nations and mine action centres located in individual states with improved capabilities for decision-making and reporting.

Canada understands that mine action information initiatives are important components in our global efforts to address the landmine problem. To this end, Canada supported a variety of projects in fiscal year 1999.

Socio-Economic indicators

CIDA contributed \$100,000 to the United Nations Mine Action Service (UNMAS) for socio-economic study of mine-contaminated countries. UNMAS, in conjunction with the UNDP and the GICHD, examined three case studies – Kosovo, Laos and Mozambique – in an effort to better understand and measure the socio-economic impact of landmines and the progress of mine action efforts.

Level One Socio-Economic Impact Surveys

Canada was a major contributor to the recently completed Level One Socio-Economic Impact Survey in Yemen.

In addition, Canada's integrated country program in Mozambique includes a Level One Survey begun in 1998 and Canada is supporting the Level One Survey currently underway in Cambodia. Disbursements by the Canadian Landmine Fund for the three surveys will total approximately \$8 million over five years.

Victim assistance information

DFAIT's Research and Policy Development Program provided approximately \$65,000 to Physicians for Human Rights for pilot testing of landmine survivor surveys in Azerbaijan and the printing and distribution

A Ugandan team translates an injury surveillance database developed with the Canadian Network for International Surgery.



Canada supported the production of this Physicians for Human Rights landmine survivor survey manual.

Canada supported the UN Mine Action Service – the focal point for mine related matters within the UN system.

of a manual containing the survey instruments and detailed instructions on their use. The publication, entitled *Measuring Landmine Incidents and Injuries and the Capacity to Provide Care: A Guide to Assist Governments and Non-Governmental Organizations in Collecting Data about Landmine Victims, Hospitals and Orthopaedic Centers*, was distributed at Ottawa Convention Standing Committee meetings and mailed to campaigners, humanitarian agencies and governmental institutions worldwide.

CIDA's Multilateral Institutions Program also provided \$250,000 as part of a two-year \$500,000 commitment to the World Health Organization (WHO) for landmine injury surveillance initiatives in Africa. The WHO's efforts involve developing, testing and disseminating data collection instruments in 10 African countries. This contribution has enabled the WHO to develop a model for data collection on injuries which has been adopted as part of the IMSMA database. The project will improve assessment of the effects of anti-personnel mine injuries on health and strengthen the capacity of governments, UN agencies and NGOs to plan and manage rehabilitation services.

CIDA's Tapping Canadian Creativity Program provided \$75,000 to the Canadian Network for International Surgery (CNIS) for injury surveillance in Uganda. The CNIS, in collaboration with local partners, has contributed to the development of an information database, focussing on the health consequences of landmines at the hospital and community level. This project will assist in program planning and resource allocation and will improve the skills of health workers in emergency care hospitals. Funding to date for this project now totals \$200,000

Support for mine action centres

In order to support the important role of mine action centres in national coordination of efforts to address landmine problems, CIDA provided \$778,000 over two years for assessment and institutional support for the United Nations Mine Action Coordination Centre in Kosovo; around

\$1.1 million in institutional support for the Bosnian Mine Action Centres, \$400,000 for the Cambodia Mine Action Centre, \$150,000 in core funding for the Chad Mine Action Centre and \$150,000 in core funding for UXO Lao. The majority of these funds were channeled through the United Nations Development Programme (UNDP).

In addition, approximately \$95,000 was disbursed through the DFAIT Mine Ban Initiatives Program to the UNDP Mine Action Centre in Azerbaijan. Canada also provided approximately \$30,000 for an assessment mission to provide strategic direction for the Thailand Mine Action Centre.

Global coordination

Through CIDA's Multilateral Institutions Program, Canada provided \$150,000 in core funding to the UN Mine Action Service (UNMAS) to support its role as the focal point for mine related matters within the United Nations system. An additional \$500,000 was provided in unearmarked funding to enable UNMAS to carry out a program of activities in support of its mandate.



Policy research

DFAIT's Research and Policy Development Program provided approximately \$47,000 to York University's Centre for International and Security Studies to support a Mine Action Research Program. This initiative involved a directed research project and student research essay competition aimed at developing the capacity of the Canadian academic community and producing policy-relevant mine action research.

Sustaining the effort

While the media's interest in the Ottawa Convention peaked with the signing of the Convention in 1997, the real work to clear mined land, destroy stockpiles, assist victims and deliver mine awareness education continues. It is important that Canadians and individuals in other countries understand that our efforts must be sustained if we are truly going to overcome the threat of landmines in years, not decades.

Canada promotes public awareness of the global landmine problem through DFAIT's Outreach and Sustainability Program. This program disbursed approximately \$1.4 million in fiscal year 1999 to support a variety of initiatives.

These include the production of the annual report to Parliament of the Canadian Landmine Fund and a twice-yearly newsletter entitled *SafeLane: Canada's Landmine Ban Report*.

Award-winning audio-visual products, including a documentary video and CD-ROM produced in 1998, continue to be

distributed to individuals and groups around the world. The Outreach and Sustainability Program also manages *SafeLane*, the Government of Canada's web site on the landmines issue, at www.mines.gc.ca. Web-based educational materials produced in fiscal year 1999 include the *Mine Action Workbook*. A web-based curriculum guide is currently being developed for launch in 2001.

Through the Outreach and Sustainability Program, Canada communicated to its citizens what their government is doing to address the global landmine problem.



Mélanie Gagnon/YMAAP

Youth Mine Action Ambassador Violaine Des Rosiers and Jill Olscamp of the Fredericton YMCA speak to the public about landmines at the 1999 Francophonie Summit in Moncton.



(Above) In 1999-2000, Canada supported the Canadian Red Cross *Survive the Peace* landmine outreach campaign.

(Below) Youth Mine Action Ambassador Darryl Toews leads Morden, Manitoba students on a mine awareness hike.

A range of exhibits including a large interactive multi-media display, a simulated mined village and smaller tabletop exhibits were prominently featured at schools, universities and public buildings across the country and at major events such as the Francophonie Summit in Moncton and the Pan Am Games in Winnipeg.

Canada works with national and community organizations to promote the sustainability of mine action efforts. One of Canada's unique and innovative outreach efforts is the Youth Mine Action Ambassador Program, undertaken in cooperation with Mines Action Canada and the Canadian Red Cross and supported by DFAIT's Youth International Internship Program. During 1999-2000 – the second year of this initiative – eight recent university graduates, hosted by NGOs in Vancouver, Calgary, Winnipeg, Toronto, Ottawa, Montreal, Quebec City and Halifax, were given the mandate of promoting awareness of the landmines issue and the Ottawa Convention with local media, schools

and community groups.

Canada also provided approximately \$100,000 to the Canadian Red Cross to support a two-day, public showcase of mine action marking the second anniversary of the Ottawa Convention signing ceremony. Held at Ottawa's Lansdowne Park, *Ban Landmines 99* featured tours of a simulated mined village, high-profile guest speakers including Her Majesty Queen Noor of Jordan, a mine action cyber-centre and mini-film festival.

Other cooperative initiatives to raise awareness on the landmines issue included \$30,000 disbursed to Cineflix Productions to cover part of the production of *Chris Giannou: On the Border of the Abyss*, a documentary film on Canadian field surgeon Chris Giannou, his work with landmine survivors and his involvement in banning landmines. The Canadian Red Cross was given approximately \$8,700 to support its *Survive the Peace* landmine outreach campaign.

Canada also supported the development of sustainable private-sector funding for mine action. A total of \$1 million was provided jointly by CIDA and DFAIT to



Darryl Toews/YMAAP



(Above) Ottawa-area students check out a demining expo at Ban Landmines 99.

(Right) Governor General Adrienne Clarkson, Her Majesty Queen Noor of Jordan, Prime Minister Jean Chrétien, John Ralston Saul, and Madam Aline Chrétien celebrate the Canadian Landmine Foundation's first gala fundraising dinner, Rideau Hall, December 1999.



the Canadian Landmine Foundation, a private charity established to raise funds for mine action and promote the long-term sustainability of mine action programming. The Foundation's opening gala in December 1999 was attended by Her Majesty Queen Noor of Jordan, Governor General Adrienne Clarkson and Prime Minister Jean Chrétien. The Foundation has supported two field programs in Central America and launched its Adopt-A-Mine Field program and the fund-raising web site www.clearlandmines.com.

Canadian citizens have demonstrated their commitment to the landmines issue through contributions to the Canadian Landmine Action Fund (CLAF), a special purpose account established by DFAIT and Mines Action Canada to receive donations for mine action projects. In fiscal year

1999, the CLAF's first grant to a mine action program was made to the not-for-profit demining organization, the Canadian International Demining Corps. CIDC was given \$30,000 for the purchase and first-phase training of two mine detection dogs. Funds raised include proceeds from Youth Mine Action Ambassador Program activities such as *Dance Without Fear*, fundraising activities at the Pan Am Games in Winnipeg 1999 and contributions from individual donors.

1999-2000

Canadian Landmine Fund Spending Summaries



Departmental expenditures by program

TABLE 1 Department /program	Spent fiscal year 1999-2000
DFAIT	
Mine Action Partnership	\$ 713,500
Mine Ban Initiatives	\$ 2,655,891
Mine Monitoring	\$ 200,000
Mine Action Research and Policy Development	\$ 324,055
Outreach and Sustainability	\$ 1,396,664
Stockpile Destruction	\$ 325,582
Policy Support Unit	\$ 902,012
Total DFAIT	\$ 6,517,704
CIDA	
Integrated Country Program – Mozambique	\$ 1,716,000
Integrated Country Program – Bosnia and Herzegovina	\$ 3,095,000
Tapping Canadian Creativity	\$ 2,033,000
Country Initiatives – Asia	\$ 309,000
Integrated Country Program – Americas	\$ 2,155,000
Multilateral Institutions Program	\$ 3,020,000
Support Unit	\$ 285,000
Total CIDA	\$ 12,613,000
DND	
Canadian Centre for Mine Action Technologies	\$ 2,751,000
Total DND	\$ 2,751,000
Industry Canada	
Technology Partnerships	\$ 75,275
Total Industry Canada	\$ 75,275
TOTAL	\$ 21,956,979

Investments in banning landmines

TABLE 2	
This table details 1999-2000 Canadian Landmine Fund expenditures in support of universalization of the global ban on anti-personnel mines, monitoring compliance with the ban, and the destruction of stockpiled mines.	
A Investments in support of international advocacy and prevention	Total spending fiscal 1999-2000
North America	\$ 79,050
Former Soviet Union	\$ 145,685
South East Europe	\$ 59,640
South East Asia	\$ 10,000
B Investments in support of global efforts to ban landmines	
International Campaign to Ban Landmines	\$ 200,000
Mines Action Canada	\$ 316,000
C Investments in support of Convention implementation and universalization conferences	
India	\$ 30,000
Nigeria	\$ 10,000
Croatia	\$ 10,000
Georgia	\$ 20,000
D Investments in support of monitoring compliance	
Landmine Monitor 2000	\$ 200,000
E Investments in stockpile destruction	\$ 325,582
Total investments in banning landmines	\$ 1,405,957

1999-2000 Investments by thematic area of mine action

Banning Landmines refers to investments in promoting the universalization and effective implementation of the global ban on anti-personnel mines, including stockpile destruction.

Mine Action Information refers to investments in more and better information on the landmine problem for the purpose of more effectively targeting other mine action efforts. Mine action information includes assessment missions, surveys, information tools, and research into building capacity and developing best practices.

Research and Development refers to investments in scientific research and subsequent development into new or improved technologies and processes for addressing the landmine problem.

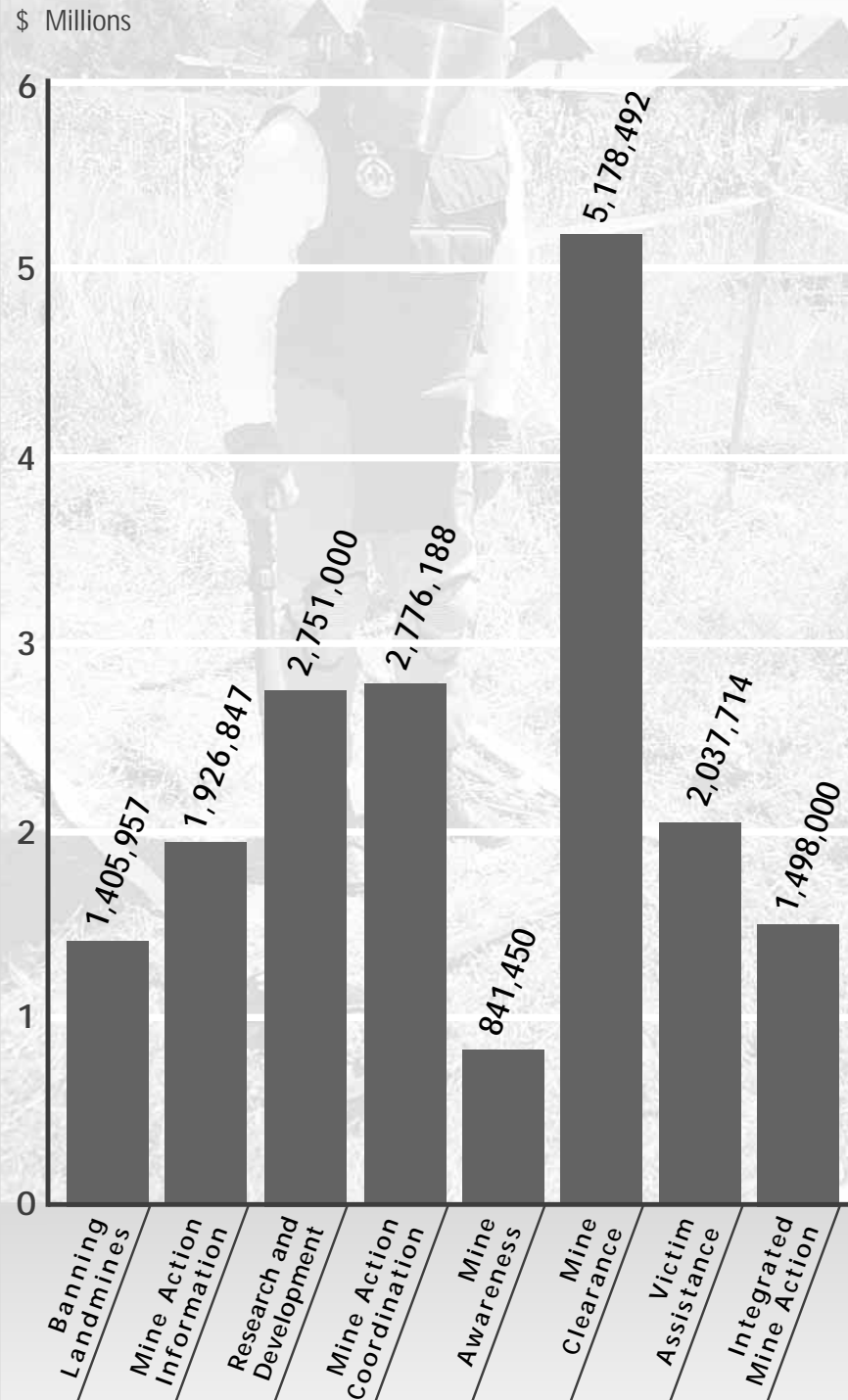
Mine Action Coordination refers to investments in structures and organizations that will support greater coherence in, and progress towards, addressing the landmine problem.

Mine Awareness refers to investments in education and training programs that will reduce high risk, mine-related activities and therefore prevent casualties.

Mine Clearance refers to investments in the full spectrum of activities related to clearing mined land, including mapping and marking minefields, training, supporting mine dog detection teams, providing equipment and protective clothing, demining and quality assurance.

Victim Assistance refers to investments in providing services to victims of mine incidents, including medical services; prosthetics, orthotics and other aids; and physical, vocational, social and psychological rehabilitation.

Integrated Mine Action refers to investments in programs that incorporate more than one core mine action activity into a single program.



1999-2000

Mine action spending by country

This map shows 1999-2000 Canadian Landmine Fund country-specific total expenditures on mine action information, mine awareness, mine clearance, victim assistance and integrated programming.

