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Landmine Contamination: A Development Imperative

More than 80 countries are affected by landmine contamination, of which approximately 35 are seriously contaminated, most of them developing countries. It has become clear that addressing the problem of landmine contamination is not only a humanitarian imperative, but is also a precondition for sustainable development and the restoration of livelihoods in many mine-affected states. The Bank can assist to reduce landmine contamination where there is country demand, and in line with its mandate and operational guidelines for financing landmine clearance.

Not Just a Humanitarian Problem. It is estimated that since 1975, there have been more than one million direct landmine casualties worldwide. By far the majority of victims have been innocent civilians, killed or maimed in post-conflict settings. Today, more than 80 countries are mine-affected. About 35 countries are seriously contaminated, most of them developing countries. There are no precise figures on the total number of landmines in the ground, but the number is less important than the impact—it only takes a couple of mines or the mere suspicion of their presence to render a land area unusable.¹

Landmines and other Explosive Remnants of War (ERW) destroy not just lives, but livelihoods.² Even after armed conflict has stopped, landmines obstruct emergency assistance, and hamper economic and social development. The removal of landmines is often essential to restart development and rebuild shattered communities, and the lingering threat to physical and human capital makes their removal a priority for humanitarian and development agencies alike. In addition to directly killing and maiming 15,000–20,000 people annually, mostly civilians, the presence of landmines inhibits rehabilitation and reconstruction, agricultural development, access to education and health services, rehabilitation and expansion of infrastructure, and the revival of trade and investment. Women and children, given

their important role in agriculture and as fuel gatherers, are particularly vulnerable to landmines. It has become clear that Mine Action is not only a humanitarian imperative, but is also a precondition for sustainable development, ongoing efforts to ensure peace and security in many mine-affected countries, and, if not addressed, a serious obstacle to the achievement of the Millennium Development Goals (MDGs) for many post-conflict countries.³

Mine Action and the Treaty to Ban Anti-personnel Landmines. Mine Action is the generic term used to describe the activities that aim to reduce the human, social, economic and environmental impact of anti-personnel landmines. It is a broad concept that includes demining, mine risk education, victim assistance, stockpile destruction and advocacy in support of all elements of mine action and the international legal framework supporting it. Typically, many organizations collaborate with mine affected states in Mine Action programs: the UN and other international agencies, bilateral donors and local and international NGOs. When the Bank participates in such programs, it generally concentrates on demining, although it can also contribute to capacity building, mine risk education and mine victim assistance.

The Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction, popularly known as the Ottawa Treaty or Convention, is part of the international legal framework governing landmines. It is comprehensive in scope, dealing with everything from mine use, production and trade, to victim assistance, demining and stockpile destruction. The Convention was opened for signature in Ottawa on December 3, 1997 and entered into force under international law on March 1, 1999.

The Convention requires countries never to use, develop, produce, stockpile or transfer antipersonnel mines. In addition, each State party undertakes to ensure the destruction of all stockpiled antipersonnel mines within four years, and to clear anti-personnel landmines from its territory within 10 years of ratifying or acceding to the Convention. The depository of the Convention is the UN Secretary General.

As of October, 2004, 152 countries had signed and 143 countries had ratified or acceded to it, including 137 members of the World Bank. Major Bank members that have not signed the Convention include China, India, Indonesia, Pakistan, Russia, Saudi Arabia, South Korea, the United States, and Vietnam. Many non-State parties, however, accept the norms embodied in the Convention, including the adoption of moratoria on the production and transfer of landmines introduced by 14 non-State parties. Many non-State actors have also embraced the norms established by the Convention and have signed a *Deed of Commitment for Adherence to a Total Ban on Anti Personnel Mines and for Cooperation on Mine Action*, which imposes the same obligations as the Convention.

Progress and Challenges. Since 1997, new use of landmines has declined. In 2003, there was evidence of new use by only six countries. The production of anti-personnel mines has decreased from more than 50 States to less than 10, and the global trade in mines has effectively ceased. More than 37 million mines have been destroyed and thousands of hectares of land have been cleared for productive use. The number of new victims has fallen significantly and more of those

who have survived are receiving assistance. Despite this progress considerable challenges remain—many countries continue to need assistance reclaiming productive land, and the devastating human toll persists as these weapons continue to claim thousands of lives each year and affect the livelihoods and development prospects of thousands of communities around the world.

A Few Landmine Facts

- The most common landmines are priced from \$3 to \$40;
- A typical 10-person manual clearance team can demine no more than 500 square meters a day;
- For every hour spent laying mines, up to 100 hours are required to locate and remove them;
- The use of demining dogs improves productivity dramatically under certain conditions, but the cost of a trained dog can reach \$25,000;
- Demining itself can provide significant income for deminers and their families;
- In Bosnia, over 1996-00, the average cost for landmine clearance per square meter was \$1.80; and
- In Croatia, Bank-financed landmine clearance initially cost about \$3 per square meter in 1997, but after competitive bidding, the price dropped to \$1.80 in 2002 (Bure and Pont 2003).

The World Bank and the Convention. Treaties and Conventions govern the actions of member states and the Bank has no direct role in them, but the Bank stands ready to support implementation of obligations imposed under the Treaty by any member country that requests it. Bank staff are required to follow Bank operational guidelines when a request is made for the financing of activities related to mine clearance. Although the Bank does not refer specifically to the Ottawa Convention in its guidelines, it stresses that any legal agreement for a project involving landmine clearance must include a covenant under which the government undertakes not to lay new mines anywhere in the country that would undermine the execution or development objectives of the project. It also stipulates that staff must indicate to the Board whether and to what extent the country has renounced the use of landmines.

Thus, although the guidelines do not refer to the Treaty, they represent an important tool in its implementation.

The World Bank's conflict and development agenda supports financing landmine clearance to make available land and infrastructure for a development activity agreed with a borrower. In February 1997, the Bank issued the *Demining: Operational Guidelines for Financing Landmine Clearance* to clarify to task managers and other operational staff the circumstances under which the Bank can finance the removal of landmines. Since this is a highly specialized area, and most Bank task teams have no experience in managing landmine clearance programs, in 2003 the CPR Unit in the Bank issued a Task Manager's Guide to assist task teams in the preparation and implementation of landmine clearance projects.

World Bank Guidelines. Among the provisions of the Bank's guidelines for the financing of landmine clearance are the following:

- Landmine clearance must be an integral part of a development project or program to be adopted by the borrower. The Bank seeks to support development activities rather than demining per se.
- The financing of landmine clearance should be justified on economic grounds, taking into account the availability of resources.
- Implementation must be carried out under the control of civilian institutions, although this requirement does not preclude collaboration with the military (e.g., on maps, surveys, demining) and the employment of former military personnel.
- The legal agreements for the project include a covenant under which the borrowing country undertakes not to lay new landmines anywhere in the country that would in any way undermine the execution or development objectives of the project.

In addition, the guidelines stipulate that the borrower is responsible for evaluating alternative landmine removal methods, making a choice among them, and implementing the chosen method.

World Bank Mine Action Activities. To date the Bank has approved landmine clearance activities in four projects—Bosnia-Herzegovina (1996), Cambodia (1999), Croatia (1998) and Ethiopia (2000)—for total lending of \$91.5 million. In addition the Post-Conflict Fund has disbursed \$1.2 million in grants for landmine activities, including a general study, a study on Afghanistan (as part of a Bank Watching Brief prior to the fall of the Taliban regime) and \$1 million to support mine awareness and capacity building in Sri Lanka.

Studies by the World Bank and other agencies suggest that demining activities can generate high social and economic rates of return. A Bank cost-benefit study estimated that clearing 34 square kilometers of agricultural land in Afghanistan in 1999 would reduce the direct annual death toll by 340, generate a stream of annual benefits of \$740,000 per year and renew access to land and structures valued at \$38 million. The net benefits of the Mine Action program for 1999 were estimated at \$40 million, with a benefit-cost ratio of 1.5.

The Bank's study found that clearance of irrigation works in the most productive agricultural region delivers approximately 25 times the benefits obtained from clearing grazing land, and clearing agricultural land in the same agricultural region delivers almost 10 times the benefits as grazing land. The average rate of return on mine action projects was estimated at 34% in 1999. However, internal rates of return were found to exceed 160% for irrigated land, over 120% for residential areas and roads (using dogs) and just over 100% for agricultural land (using dogs)—considerably exceeding average rates of return in other sectors. Different areas and economic activities also affect the cost-benefit calculations. Although results will vary country by country, and region by region, they suggest that economic and social returns to landmine clearance can be substantial.

The Role of Technology. Although the problem of landmine contamination may appear daunting, technological and methodological improvements continue to reduce costs and thus further improve cost-benefit ratios. Although there are a number

of promising new technologies, improvement to existing technologies has been much more successful in improving demining methods. Despite known limitations, manual mine clearance, mine dog detection and mechanical mine clearance are the preferred techniques today. A promising new approach in vapor detection involves the use of pouch rats which may be more cost-effective, resilient and easier to transport than dogs.

Mine Action as Reconciliation. Mine Action can also have less tangible effects in post-conflict reconciliation. The UNDP Mine Action Team point out that by eliminating some of the most tangible signs of war, demining often provides concrete evidence to communities that trust is being restored. Demining can act as a confidence-building measure in war-torn societies, as it is frequently one of the first issues upon which disputing parties can agree, one that requires cooperation among the former warring parties, and one of the first service areas (mine risk awareness and education, victim assistance and the actual removal of landmines) to reach vulnerable groups and to impact the potential to restore their livelihoods. The Team points out that:

- In Sudan, Mine Action was among the first areas of agreement between the Government and SPLM/A—both sides have stated that it has contributed a great deal to confidence building;
- In Bosnia-Herzegovina, Mine Action was the first activity to be administered by a Joint State Commission, now operating as a single national center; and
- In Afghanistan, Mine Action teams comprised of members from opposing sides were among the first groups to work ‘cross-lines’.

In addition, in most cases, it is possible to recruit demining personnel from the military and fighting forces, and where demobilization is underway, demining can provide employment to ex-combatants.

Integrating Mine Action in Development Planning. To the extent that a country’s landmine contamination affects the prospects for post-conflict reconstruction, the extent of the problem

should be assessed and documented in the needs assessments that are usually carried out at an early stage when conflict has ceased. More broadly, where landmine contamination represents an obstacle to poverty reduction efforts and the attainment of the MDGs, its development impact should be reflected in country PRSPs and the Bank’s assistance strategies, especially in conflict-affected settings. The development impact of landmines should also be discussed in Consultative Group Meetings or other donor coordination efforts.

References:

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¹ Some of the more contaminated countries include: Afghanistan, Angola, Bosnia-Herzegovina, Cambodia, Colombia, Iraq, Nepal and Sri Lanka.

² Neutralizing ERWs (previously referred to as unexploded ordnance or UXOs) demands different techniques than those used for landmine clearance, although most categories of infantry and artillery munitions can usually be handled by staff attached to demining programs.

³ In its adoption of the MDGs, Cambodia added a Goal 9: Move toward zero victims and a country without mines, with the following targets: Moving toward zero impact from landmines and ERWs by 2012; and eliminate the negative humanitarian and socio-economic impacts of landmines and ERWs by 2025.

This note was prepared by Ian Bannon (CPR) with the collaboration of Earl Turcotte of the UNDP Mine Action Team. This Note was also published as Social Development Note No. 98 and is part of a series intending to disseminate good practice and key findings on conflict prevention and reconstruction. This series is edited by the CPR Unit in the Social Development Department of the Environmentally and Socially Sustainable Development Network of the World Bank. CPR Dissemination Notes are distributed widely to Bank staff and are available on the CPR website <http://www.worldbank.org/conflict> and can also be requested via e-mail at cpr@worldbank.org