

Enhancing Use of Mine Action Information by Development Organizations

Phase 1 Report:

Mapping Clients for Mine Action Information

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**Enhancing Use of Mine Action Information:
Phase 1 – Mapping Potential Development Organization Client**

Preface

1. This report summarizes the results of the first phase of the SAC project “Enhancing the use of mine action information by non-mine action actors,” funded by a grant from the US Department of State, PM/WRA. The project will increase the use of mine action information in support of socio-economic development in mine-affected countries by increasing the capacity of mine action organizations to proactively reach out to development organizations to provide appropriate information in the most useful format. Phase 1 was designed to produce a map of development organizations for which use of mine action information could be important to the success of their own activities. In Phase 2 the project will work with three national programs to increase the extent to which development organizations use mine action information to improve their own success and to strengthen the effective planning of mine action activities.
2. The map of development organizations which could benefit from the use of mine action information is based on responses to project questionnaires from mine action program directors, advisors and other knowledgeable individuals; the questionnaires sought information on practical experience, rather than formal policy. Announcements were emailed to a total of over 800 contacts drawn from: a mailing list containing national directors and senior advisors to 33 mine action programs as well as international mine action NGOs (305 contacts), a professional network on the topic of Linking Mine Action and Development (207 contacts), the SAC newsletter circulation list (254 contacts) and 47 participants at a regional workshop on development in countries with weapons contamination. There was considerable but unavoidable overlap in these lists. Acknowledgements were received from 20 mine action programs, with completed questionnaires regarding the experience of 11 of them, as well as 4 mine action NGOs, two UN agencies and several key individuals. (See Annex 1 for the Project Announcement, Annex 2 for the Questionnaire to National Programs and Annex 3 for the list of organizations contacted and responses received.)

Introduction

3. The development impact of mine action depends on the actions of others. If land is cleared for a community to install a new school, for a farmer to increase the area cultivated, for an irrigation system to be rehabilitated or for a power pylon to be installed, and the corresponding resources are in place and promptly follow, then mine action contributes well to development; if those resources do not follow promptly, the results are much less. Similarly, if a development project is underway and encounters an unexpected landmine/ERW obstacle but does not have demining resources readily available, the project will face delays, higher costs and risks due to the lack of coordination and planning for demining. Thus the ability of mine action to have a greater positive impact on development depends on its success at facilitating the actions or anticipating the needs of development actors.
4. Considerable effort has been made by virtually all mine action programs to coordinate with other actors, to seek priorities for clearance and to make information about the landmine problem widely available. Nonetheless mine action programs are often perceived as not very responsive to the needs of development organizations. The humanitarian role of mine action is becoming less central – due to the great reduction in rates of new accidents and victims in most countries – and support to development is already the main role of demining in many countries. For mine action to successfully support development it must understand the specific needs of development organizations. This requires effective and continuing outreach to potential clients to help them identify planned activities

which may require mine action support. Nearly all respondents affirmed the importance of enhancing the use of mine action information by development actors. This should be underpinned by an attitude that mine action seeks to provide a service to development actors to reduce the obstacles they face and enable them to be more successful.

5. This Phase 1 Report provides a generic mapping of potential development clients for mine action services, based on experience gained by mine action programs around the world. Although it does not correspond to the experience of any single country, it provides a reference for any interested mine action program to strengthen its own outreach to create an inventory of organizations and projects that require mine action support and to include them in operational planning for mine action resources.

Mine Action Database information of potential use for development organizations

6. The typical Mine Action Database contains a substantial amount of information that could be very useful to development organizations planning their activities. The information is all geo-referenced and can be readily presented in various formats, including maps, tables, graphs and reports. While specific information may vary from country to country, as a rule the variables include the categories listed below (see Annex 4 for more complete list):

- Community identification (province, district, municipality)
- Community location (coordinates)
- Suspect hazard area (SHA) location and size
- Presence and type of mines/UXO
- Socio-economic activities blocked by SHAs
- Impact “score” and impact ranking of each community
- Number of landmine/UXO victims in preceding two years and over all
- Age, sex and activity of victims at time of accident
- Population of community
- Economic base of community
- Community facilities available
- Other variables
- Records of clearance completed or land released

7. This information could be useful to development organization planning in a number of ways (see Annex 5 for examples of socio-economic implications of landmine/UXO contamination):

- For community or area development programs:
 - Identify mine affected communities to ensure that landmine issues are considered in planning for any of those specific communities
 - Identify high and medium impact communities for possible development project targeting
 - Identify blockages and their approximate locations in relation to vulnerabilities and alternatives for specific communities
- For sector development programs (health, education, irrigation, markets):
 - identify whether facility in a specific community has landmine blockages
 - Identify list of all communities with specific type of facility blockage
- For infrastructure development programs (roads, electric power transmission):
 - Identify specific suspect areas to be crossed by project trajectory
 - Estimate total suspect area to be resolved or avoid by project

8. In most programs the information is readily available in the form of tables, graphs, reports or maps, which can be promptly prepared for large or small areas upon request. The data itself is geo-referenced and can be linked to other data the development organization may have. The information provides an early notice that the project will or will not face landmine problems (latter is the most frequent case), and an approximate indication of the nature, location, extent and impact of the problem where it exists. The development organization can use this early warning that it will face landmine problems in certain communities as advice to follow up both with the mine action authority and locally for more precise and up-to-date information. In turn, this allows the mine action authority to consider the possible needs of the development organization in its own planning for MRE, survey and clearance, in order to remove obstacles before they become bottlenecks.
9. Community development organizations may find that their operational strategy should be altered to take into consideration the landmine threat in the community. Landmines are in many cases one more source of vulnerability and exclusion for communities and groups and the presence of landmines may limit the options available to communities for water, food security, travel to markets, etc.
10. Development organizations may be able to use the mine action information to increase their overall success by:
 - Including presence and effect of landmines in the program design
 - Considering how the community and its livelihoods are affected by landmines/UXO
 - Adapting the details of the project, selection of beneficiaries, order of interventions, precise trajectory, etc
 - Ensuring safety of its own staff in the field
 - Ensuring necessary resources available for mine action support
 - Including previously contaminated communities that have been or are about to be cleared
 - Coordinating with mine action organization for timely provision of needed support

Categories of non-mine action organizations which may use mine action information

11. In addition to mine action organizations dealing directly with demining, MRE and Victim Assistance, the project survey confirms a wide range of non-mine action organizations using mine action information. While the next section provides greater detail, the main categories are listed below:
 - Central Government strategy and planning: Presidency, Council of Ministers, Inter-ministerial Mine Action Coordination, Ministries of Planning and Finance
 - Central Government sector ministries
 - Provincial and Local Government, priority setting and coordination
 - Communities and local organizations
 - Media
 - Embassies and Bilateral Donors
 - World Bank and regional development banks
 - UN and Multilateral Organizations
 - International Development and Relief NGOs
 - National NGOs
 - Commercial companies
12. All of these organizations should be kept well informed by the national mine action authority. Mine action authorities generally have established mechanisms to provide information to central government, the media and donors, in order to keep all parties informed about the general level of the

mine action problem and the strategy to face it. However, they are often not as effective with development organizations nor are the mine action information products tailored to their needs. This will only be improved by systematically identifying specific development organizations, the information they need to determine whether their plans involve mine affected areas, and then identifying and coordinating the support necessary to ensure their success.

13. While several respondents stated that the landmine problem is widely known by all actors, others indicated that although there is general awareness of the problem by those working in the mine-affected regions, this does not necessarily mean that they are aware of or consider the specific hazard problems in the areas where they are planning to work, nor that their headquarters units are well informed. Even when they are reasonably well informed of the problems, they often are not aware of the time required to survey and remove the respective hazards. On the other hand, those organizations often include individual staff members who work in mine-affected areas, socialize with mine action personnel and have learned to consider the problem and the possible responses. This is very relevant since organizations are inconsistent and the problems are not so widespread.

14. As one national authority expressed it: “Any organization involved with safety, socio-economic development or environment would benefit from use of mine action information, whether governmental, non-governmental, humanitarian or private. This will accelerate development of economy, tourism, agriculture, sports, and culture generally, to the benefit of the entire national community.” In short, all non-mine action organizations whose projects are impacted by landmines should care about it, should want to know where the threats are located, how they may interfere with the work planned and how long it will take to resolve the problem.

15. This begs the question of which organizations regularly use mine action information and which ones make less use of it? We are particularly interested in those organizations that are responsible to design and/or implement projects in the field, including investments in infrastructure (schools, factories, markets, roads, power lines, irrigation and others) and provision of services to the local population (health, education, elections, other). While actual situations vary among countries, organizations, and over time, several responses provided more nuanced observations about which types of organizations make more use of mine action information in planning and implementing their activities:
 - International donors and mine action NGOs often give initial priority for humanitarian mine clearance to communities identified with “high” or “medium” impact in the LIS.
 - Organizations with offices in mine-affected districts seem to be more aware of the nature of the problem and to seek information about the specific areas where they are working. They seek information about whether their areas are safe and what areas should be avoided. They may seek MRE for their own project staff, or offer to organize sessions in the communities where they work.
 - Natural resource prospecting and extraction companies (petroleum and mining), accustomed to dealing with geologic and geographic features, tend to be alert to the possible risks caused by landmine/ERW hazards. They usually seek information in advance regarding safety of the planned exploration sites and of their access routes, including contamination data and in-depth technical survey, and typically budget for necessary clearance of specific areas. Examples of petroleum companies doing this were cited in Angola, Ethiopia, Libya, and Sudan; mineral exploration and mining companies were mentioned in Angola, Cambodia, Croatia and Ethiopia.

- Community development NGOs usually select their sites for intervention for reasons unrelated to landmine contamination. Some may choose to work in a mine affected area and others may prefer not to – thus general information about the area should be relevant to their selection. They tend to look at the implications of landmine hazards primarily at the operational implementation level as one more specific problem to be dealt with when it arises in the course of the project (eg, when rebuilding a school, preparing a fish pond or making agricultural land available to a poor family). Since prioritization of their tasks may be slow, they would often be well-served by a broader service partnership with a demining organization able to respond to their specific requirements.
 - Ministries and construction companies dealing with route infrastructure (roads, railways, electric power distribution, water transport and irrigation systems) are generally aware that such infrastructure may be affected by landmines. In fact, such infrastructure often provided locations for planting of mines. Most rehabilitation projects follow existing routing, which may have been the target of mine laying or scene of conflict, and new system expansion will typically upgrade or parallel existing routes. Such projects will have a specific requirement for survey and clearance support for safety and access.
 - Government ministries usually have an overall awareness of the landmine problem, but may not consider the specific implications of that problem for their own programs. Construction of facilities (schools, health centers, markets, bridges) is often proposed for the site of previous destroyed facility or available unused land. In such cases, the specific land may be mine affected and require survey and possibly clearance. The ministry concerned may not allow for the respective costs or time in its program, resulting in higher costs to be absorbed by some entity, search for an alternative site if available, or postponing the work in mine affected communities and working elsewhere.
 - Provincial and local authorities of mine affected areas generally have a strong awareness of the fact that landmine hazards are obstacles to the rehabilitation and development projects which they wish to undertake with their limited resources, and prioritize them for resolution by the national mine action authority
 - In general, national government departments and units, particularly those in the social sector, were often cited as the organizations least aware of the importance of using mine action information in the planning and implementation of their activities.
 - Organizations that had not paid much attention to the issue generally become much more alert when they or another organization has an accident with loss of life or of equipment.
 - Many development organizations operate on a tight budget and assume that since they are “helping” the country it is the responsibility of the national authorities to ensure that any demining that is required will be done on a timely basis. From the national side however there are rarely idle demining resources to assign to such tasks, particularly if they were not included in the annual priority setting and planning process. There is a need for national policy regarding budgeting for demining in support to development projects.
16. The following general mapping of potential clients for mine action information can serve as the basis for national programs to conduct outreach for specific mapping of clients in their own country. This effort should be continuing, not just one-time, resulting in a regularly updated inventory of development activities requiring mine action support, to be incorporated in turn into mine action operational planning.

Non-mine action (development) organizations potentially using mine action information

17. Based on the responses to the Phase 1 survey, the following organizations are potential users of mine action information:

Organizations making request?	Type of activity for which information was requested?	Information provided and format (map, table, database, report, photo, other)
Central Government		
Presidential Secretariat	Coordination of all projects implemented by the other organizations	Area cleared, devices found, types of devices found, use of cleared lands for development activities, casualty records, etc
Ministries	Survey, Clearance, Victim assistance, MRE	Maps, support to clear the land, victim assistance
Cabinet of Ministers	All kind of info support as it required for the governmental activities in the mine action field	Report, tables, maps
National inter-ministerial steering committee for Mine Action	Coordination of clearance strategy and operations plan	IMSMA quantitative data
Ministry of Foreign Affairs	Factual and technical information, consultative opinion	Maps, tables, database, reports
Ministry of Internal Affairs	Information on the suspected mine area in order to ensure security of SHA	Maps, reports, data
Ministry of Labor and Social Protection/Welfare	On the Mine Victim Assistance joint projects	Reports and advice
Ministry of Education	Rehabilitation of individual schools Rehabilitation program for multiple schools Mine Risk education in schools	Reports on how individual schools affected List of all mine affected schools How to identify and avoid hazard
Ministry of Health	Rehabilitation of individual health centers Rehabilitation program for multiple health centers Planning for public health needs Victim surveillance Inoculation campaigns	Reports, whether and how individual health center is mine affected List of all mine affected health centers Accident and victim information Travel and access to villages
Ministry of Economic Development	For implementation of the Regional Development Plan, reports on all mine action activities undertaken	Maps, tables, database, reports
Ministry of Finance	Operational plans and strategy to identify Government contribution	Reports
Ministry of Water and Irrigation	Information on contaminated water canals and wells Rehabilitation of irrigation systems	Maps, database, reports, survey, clearance
Ministry of Tourism	General information before planning projects	Maps, survey, clearance
Ministry of Interior, police, other security offices	Public safety, security, counter terrorism, lectures on UXO and MRE to new police officers	Mined area maps, UXO area maps, ordnance types, located, destroyed

Ministry of Nation building and Estate Infrastructure Development	Coordination, executing and implementing foreign funded projects implemented in the conflict affected areas	Area contamination, survey information, information on clearing agency, area cleared, devices found, MRE activities, land release certificates, casualty statistics, etc
Ministry of Defense	Movements of IDP and resettlement/relocation projects	Casualty information, information of devices recovered
Ministry of Resettlement and Disaster Relief Services	IDP resettlement projects	Survey, Clearance Certificates
Ministry of Agriculture	Land reclamation, specific sites or general agriculture and rural development program	Reports on land blocked and traditional production, contamination and clearance
Ministry of Rural Development	Agricultural and community development	Contamination information, advice, survey and clearance
Ministry of Highways & Road Development	Road development projects	Clearance Certificate
Ministry of Roads and Bridges	Rehabilitation	Dangerous/suspected mined area level detailed information
Ministry of Housing, Urban Development & Construction	Housing estate development, land use and zoning, construction of housing	Communities with affected housing, Clearance Certificate
Ministry of Internal Commerce	Access to markets	Survey and clearance
Ministry of Electricity to build substation in suspect area	Identify and remove hazards	Survey and clearance
Ministry of Natural Recourses to permit private company to conduct seismic survey for oil exploration	General information of their identified area in regard of the existing mine and UXO.	List of villages surveyed and the items found, with A3 map of the area
Ministry of Planning – for geologic survey	Number and size of suspect areas and of areas surveyed	Report, map and tables of areas identified and surveyed
Ministry of Electricity to extend power transmission line	Survey and Clearance	Maps and Mine fields data
Government Poverty Reduction Fund	Schools, health centers, etc	Clearance requests
Ministry of Transport	Roads and railways	Contamination information and advice
Ministry of Industry	Reactivation of industrial activities	Contamination information and advice
Ministry of Youth and Sport	Sport Activities	Contamination information and advice
Ministry of Social Welfare and Health	Outreach projects, impact assessment and strategic planning exercises	General impact data, casualty data, conflict analysis information
Election organizers	Mined communities	Map of suspect areas and access
Census Institute	Gazetteer and access	Database, maps
National parks	Park access and facilities for tourism	Maps, survey
Hydropower dams	Rehabilitation and connection	Maps, survey, clearance
Armed forces	Security, counter terrorism, strategic planning	Mined area maps, UXO area maps
National Cartographic Institute	Gazetteer	Database, maps
National Statistics Institute	Data on areas suspect and cleared	Report, tables

National Development Authorities		
National Roads Authority	Reconstruction	Maps, survey and clearance
National Railway Authority	Rehabilitation	Survey and clearance
National Electricity Authority	Rehabilitation	Maps, survey and clearance
National Water Authority	Dams and distribution	Maps, survey and clearance
National Irrigation Authority	Small-scale irrigation	Database, reports, survey and clearance
National Institute for Private Investment Promotion	Hazard information for areas under consideration by investors	Maps, database, survey
Provincial and Local authorities	Survey, Clearance, Victim assistance, MRE	Maps, support to clear the land and to victims
Provincial Councils	Resettlement and all types of development activities	Clearance Certificates, details on devices recovered, MRE programs and casualty
Provincial and District Government	IDP- reconstruction	IMSMA quantitative data
Provincial & Village authorities	Agricultural land, wells, fish ponds, roads, schools, health centers	Clearance requests
Provincial Authorities	Regional Development Planning	Contamination information and advice
Fire Departments	Consultation to confirm whether forest fires on contaminated land	Contamination information and advice
Municipalities with contaminated areas	Municipal service delivery, location of suspect areas	Contamination information and advice
Local government	Local development projects and public safety projects	Mined area maps, MRE information
Local communities	Location of areas suspected and cleared	Maps, field visit, clearance plans
Community Organizations	Locations of dangerous areas	Maps
Municipal water company	Water system rehabilitation	Maps, survey and clearance
Municipal power company	Power distribution rehabilitation	Maps, survey and clearance
Media	Development, political, social reporting, advocacy, fund raising	General impact data, casualty data, conflict analysis information
UN and International Organizations		
UNDP	Factual and technical information, consultative opinion	Report, tables
UNDP	Linking mine action and development	Decision and advice from mine action centre about demining priority tasks
UNDP	Construction of buildings, bridges and other development program	Clearance Certificate for implementation of project activities
UNOPS	Construction of buildings, bridges and other infrastructure	Clearance Certificate for implementation of project activities

UNHCR and IOM	Safe area to resettle	
UNHCR	Safe movement and resettlement of IDPs and refugees	Maps, specific task data. Reports
IOM	Safe movement and resettlement of IDPs	Maps, specific task data, Reports
UNICEF	School and play area construction	Clearance requests
UNICEF	Child protection, child focused MRE activities, vaccination campaign	General mine/ERW threat maps
UNESCO	Temple sites	Clearance requests
IFAD	Roads, Bridges, Health Centre, Wells, Sanitation	Clearance requests
OCHA	Humanitarian aid delivery, and IDPs,	Dangerous/suspected mined area level detailed information
UNFPA	Census	General mine/ERW threat maps
WHO	Health clinic and hospital rehabilitation projects	General and sometimes specific information
WFP	Road rehabilitation, agricultural land, fish ponds	Maps, detailed information on roads scheduled for work, area clearance
Peacekeeping Mission	Movement of peace keepers, rehabilitation of road network, redeployment of forces, public safety	LIS information, specific information on specific areas, general mine/ERW threat map
World Bank and regional development banks	Water, electricity, irrigation, resettlement, school, roads, bridges, health centers	Clearance requests
Embassies	Magnitude of the problem and socio-economic impact, Survey, Clearance, Victim assistance, MRE	Maps, reports, victim assistance
JICA	Schools	Clearance requests
GTZ	Schools, agricultural land	Clearance requests
USAID	Schools, agriculture, roads	Reports, clearance requests
Embassies	Various type of planning, missions, general knowledge, decision making for funding etc.	General and sometimes specific information
Donors	Conflict, security and development analysis, strategic planning	General impact data, casualty data, conflict analysis information
International NGOs	Request for mine and UXO clearance to support their humanitarian and rehabilitation activities	Maps, database, reports, survey and clearance
Norwegian Refugee Council	IDP- reconstruction	Maps, specific task data, Reports
Action Contra la Faim	Village access	Clearance requests
Handicap International	Linking mine action and development	See above in question
World Education	Schools	Clearance requests
Room to Read	Schools	Clearance requests
Refugee organizations	Repatriation to war affected areas	Demographic information, mined area maps, MRE materials, casualty information

Development orgs (e.g., CARE)	Impact assessments, strategic planning, conflict and development analysis	General impact data, casualty data, conflict analysis information
Save the Children	Child protection, education	MRE
World Vision	Irrigation & Roads	Clearance requests
World Vision	Rural agricultural development	Clearance
AustCare	Rural agricultural development	Clearance
GOAL	Watsan	Clearance
Warchild	Child protection,	MRE
NGOs supporting maternal health to target mothers of vulnerable children	MCH and child protection	
National NGOs	Victim assistance, MRE, reports	Reports, support to victims
MRE organizations	IDP	Maps, specific task data, Reports
Disability organizations	Outreach projects, impact assessment and strategic planning exercises	General impact data, casualty data, conflict analysis information
Local campaigns on land rights, disability, child protection	Information on impact of landmines on these groups	Tables
Commercial companies		
Telecom company to install communications tower	General information of their identified area in regard of the existing mine and UXO	General info: Dist, Sub, Village, Mined Areas names plus coords, size of MA and their latest status, with A3 map
Oil Company to connect wells and pumping stations through suspect area	General information of their identified area in regard of the existing mine and UXO	General info: Dist, Sub, Village, Mined Areas names plus coords, size of MA and their latest status, with A3 map
Construction Contractors	Construction of bridges, roads, power lines, buildings, etc.	Mined area maps, Assuring of Clearance Certificate and Construction with Mines
Environmental Impact Assessment Companies	EIAs of road and power line construction	Mined area maps
Mining exploration & extraction	Access	Maps, survey, clearance
Petroleum exploration companies	Data for tenders	Maps, survey, clearance
Road construction companies	Data for tenders and support	Reports, survey, clearance
Hotel and recreation investment companies	Land for development of tourism	Maps, survey, clearance certificates
Private individuals whose land is mined	Make land available for use	Clearance
Commercial clearance companies	ERW contamination information	Map and Table of Mine Area Contamination

Mine Action information requested for use by development organizations

18. In discussion with the potential clients, the types of information that are most useful and which are of little use will quickly become evident. For some clients a map and table listing relevant mine affected communities may be sufficient, while others will want complete coordinates of suspect hazard areas. Still others may want a table of specific blockages for each community, or information on victims and their activities. Whatever the results prove to be will serve to define specific information products that the national mine action authority can design into its information system for production on request. Repeated contacts will establish the communication channels and the mutual expectation to consult and consider the need for and response to landmine hazards in future projects.
19. While there are a wide variety of possible specific requests by development organizations, the information covered is usually from a fairly standard range. It includes:
- Confirmation whether a specific site contains minefields (or SHAs)
 - Confirmation whether a specific project route/swath crosses suspect hazard areas
 - Suspect hazard area (SHA) location and dimensions (coordinates, boundaries, map, reports) – individually, impacted community, district, province, route, etc
 - Cost and length of time required for demining
 - Expected dates to begin and complete demining
 - Number of mine victims and survivors in a given area
 - List of priority demining tasks
 - LIS impact ranking for communities in area of interest
 - Socio-economic activities blocked by SHAs in area of interest
 - Maps at various scales (these are often the best maps in available in the country)
 - Gazetteer with location geo-reference codes
20. Certain mine action information relevant for demining operators is rarely requested and of little use to development organizations, including:
- Mine types and number found
 - Soil characteristics
 - Full database
 - IMSMA standard reports on locations
 - IMSMA standard reports on task planning and progress
21. Generally the mine action field invests more heavily in field data with a GIS component than do many other organizations. For many years the only decent local maps in Afghanistan or Kosovo were provided by mine action and the provision of maps at appropriate local scales was a useful product of mine action, even without considering the hazard information. In addition, the national mapping agency in several countries developed the capacity to produce a wide variety of maps and other information based on digitized maps and gazetteer developed by mine action. This is of considerable benefit to development organizations.
22. The mine action database contains socio-economic and community information beyond the operational information. Clearance organizations often have access to hazardous areas well before other organizations (particularly in advance of development NGOs). The data is often more comprehensive and initially more up-to-date than other datasets. Nonetheless, potentially relevant information in the mine action database has proven to be rarely used by development organizations:

- Population data
- Social services
- Public facilities
- Economic base

23. Minimal utilization of this data should not be surprising for several reasons. The data collected was usually a one-time snapshot which may have been accurate when collected following the conflict but becomes rapidly out-dated. The data was only collected for surveyed communities, thus is of limited usefulness for a national or provincial office which requires complete data for all communities. A community development organization will collect its own current data. Finally, most organizations only are willing to accept outside data for their own use from “trusted sources”. The data collectors were not experts in the respective material and the mine action authority was not especially qualified to assure the quality of such data. While the mine action authority is a “trusted source” for mine action information, it is not a “trusted source” for demographic and socio-economic information.

Factors contributing to under-utilization of mine action information

24. Even in highly mine-affected countries, landmine/ERW hazards are quite localized and the territory blocked is very limited. It is possible to work in substantial areas of a very mine-affected country and yet not directly encounter landmine obstacles, which may affect only a limited portion of a given project (only certain areas or certain beneficiaries). Some organizations may avoid landmine issues to carry out their mandates within their limited budgets, perhaps selecting a different community or site rather than rehabilitating a facility affected by mines. This detail may be missing or not even relevant to general project planning, and become relevant primarily at the implementation level.

25. Community development NGOs generally do not target communities based on landmines (unless integrated mine action development project), but do consider this as one of the factors to be dealt with if identified by the community. They seek assurance of safety for their project, relying on the demining agency to provide technical decision and statement that it is safe enough. This is generally based on clearance, but if the demining agency is ready to sign certification of safety under its responsibility, this could be enough.

26. In general, the lack of use of mine action information may be due to one or more of several factors:

- Lack of knowledge of mine action problem and its relation to their activities
- Unaware of the information which exists or where to get it – this is more widespread than mine action organizations realize, in spite of public information efforts
- Even in highly mine-affected countries, territory blocked by landmines is very limited.
- Many central development organizations could carry out the full range of their activities and never have to deal with landmines.
- Community development organizations generally select priorities for other reasons
- Many organizations dealing with local infrastructure and services have the option to shift to other site, rather than to rehabilitate a facility or area affected by mines.
- The information they receive may be overwhelming in its detail and they may not know how to select what is relevant
- The information obtained may be in formats that are not easy to interpret
- They may not know how to use it because they do not deal with it frequently enough
- They do not understand the prioritization process, in order to get their sites prioritized

Problems resulting from insufficient use of mine action information

27. Several problems arise from insufficient use of mine action information. These are related to the success of (a) the specific project, (b) overall mission of the development organization, (c) planning of demining activities and (d) resource mobilization for mine action.

- The threat of landmine contamination affects the specific plans of many sectors, including transportation (roads, bridges, and railways), power (electricity generation and distribution), water, agriculture, and social sectors (education, health, social welfare). The sectors are often not clearly reflected in national mine action plans nor do the development plans of the sectors reflect their need for demining services. With more use of mine action information there is a greater chance that planners will incorporate the need to resolve potential landmine problems in their plans.
- Individual projects may face unplanned delays and costs due to insufficient consideration of the presence of landmine/ERW hazards in their area. While projects may begin with only vague or no awareness of the potential problem, they may be brought to a halt when landmines are encountered. This may not be essential to the entire project, but may stop an important component (eg, construction of a school or health facility). This will result in delay and added costs. It may also require that the project reconsider individual beneficiaries, since the effects of landmines can be very specific. Such problems could be avoided with better use of information and appropriate planning.
- The broad mission of a development organization may be compromised by the lack of consideration of the landmine/ERW presence. There were several reports of government and NGO organizations with programs covering multiple communities, in which mine affected communities were excluded because there were not sufficient funds in the program budget. This was most common with programs addressing rehabilitation or investment in a specific capacity in many communities (irrigation, schools, and health centers), in which a minority of the candidate communities had landmine problems. When no funds had been allocated to resolve such problems, the organization was more likely to achieve its own program goals by selecting non-mine-affected communities. The result would be that the program which was meant to provide a general improvement actually excluded mine affected communities from benefit. If landmine information were taken into consideration during the planning stage there might be alternatives, ranging from obtaining the funds necessary to resolve the problems to appropriate work arounds.
- Mine action planning is made more difficult when development operators, having not considered landmine problems during their own project design and planning stage, encounter landmine obstacles which must be removed for their project to continue. This customarily results in an urgent request for demining support which was not included in the annual demining plan. Responding to this urgent request may require postponing action on a planned activity. This makes it more difficult to complete planned work and could be avoided by incorporating these requirements into the annual demining planning process, if they were considered during the development project planning stage.
- Several respondents noted that humanitarian and development organizations often avoid working in mine affected communities until given assurance that it is safe to do so. They are often very risk averse and willing to work in hazardous areas only with the guarantee of full clearance – which sometimes uses expensive clearance assets where they were not otherwise needed. Enhanced use of mine action information by development organizations would reduce wasted efforts to clear to satisfy the risk averse and help mine action better plan without “emergencies” resulting from poor planning by others.

- Explicit consideration of landmine issues during the planning of development activities would increase the awareness of both the development organization and interested donors regarding the significance of landmine issues and the cost of resolving them. This would result in increased funding for mine action, whether directly to mine action organizations or via the respective development project budgets.
- Finally, in addition to the above programmatic implications of the under-utilization of mine action information, there is a higher probability that the staff or beneficiaries of the development organization will suffer injuries or damage because of the untreated landmine hazard.

28. The extent to which these problems occur varies significantly among programs. Some programs report that there are not really any problems because they are effectively resolved through existing coordination mechanisms. UN programs in particular tend to report that there are few if any problems with information flow, due to their systematic public information efforts. However, based on some of the comments received, as well as other experience of the author, it is likely that these programs over-estimate the results of their outreach efforts, which are generally more effective toward international NGOs and donors, but much less so with individual government ministries.

Mine action authority actions to enhance use of mine action information

29. According to one respondent, “I think the mine action sector is more willing and interested to engage than the development sectors; there is an openness that is recent and dynamic at every level – field, office, managerial and operational. However, we have not adopted the right language or approach to do this without appearing arrogant and dominant. The information we give is suspect, it is too technical, too bogged down in unfamiliar terminology. We blind people with science and alienate with our directness and authoritarian persona. We need to take a less dominant stance, and provide information, provide assistance. We can improve by providing more practical steps regarding how to use mine action information in the language that development actors use. We should also consider adapting mine action terminology to more “civilian” phrases. We should be clear that we are providing a service to the development sector, and to act and communicate as if we are there to provide a service. It means a more humble role and understanding of our place in the bigger picture.”
30. With fewer new victims today, it may seem to most non-mine action organizations that the problem has been largely resolved. It is natural that most parties are not aware of specifics that do not influence their work. It is incumbent on the mine action community to make the continuing problem known and to show how its information would be useful for development actors. There is a need to inform potential clients of information available, to actively seek to understand different client needs for distinct tailored information and to help them use it.
31. There are several actions that mine action authorities can take to increase the use of mine action information by non-mine action actors; such increased use will have an indirect benefit of improving the planning of mine action activities. Actions under the direct responsibility of the national authority include in particular (a) actions to increase the usefulness of mine action information for non-mine action actors and (b) actions to increase awareness of the available information. In addition there are broader government policies to support such use of information, discussed in the next section, which mine action authorities should advocate.
- Increase usefulness of information to non-mine action users:
 - Conduct market research with development clients to understand what information is most useful and how it is used

- Provide sector analyses showing how mine action information can make a difference to the success of the sector development programs and projects
 - Provide useful management information, not just raw data. Conduct more data analysis, not just data entry, to provide useful information for management decision-makers in other sectors
 - Design information products (standard and tailored) for different users
 - Engage in as many planning fora as possible to discuss participant requirements
 - Provide technical assistance to interpret and use data for specific projects
 - Periodically conduct end-user surveys to determine who is using what information, why, and what other information would be useful
- Proactive public information role to increase awareness of information available:
 - Strengthen public relations and media relations with continuous advocacy of information available and how mine action is a service to other organizations
 - Conduct extensive public information campaigns to inform non-mine action actors about mine action data available without exaggerating the threat and sense of risk
 - Periodic comprehensive press releases, describing national or provincial situation, strategy, changes, contact information, etc. and circulated in press and TV
 - Develop and maintain a well-designed and user friendly website with data on mine affected communities, suspected mined areas, minefields, clearance, mine risk education and mine victims, readily accessible through the internet (eg, CROMAC MIS Portal and SAC LIS Explorer)
 - Establish strong working relationships with other actors in development
 - Regular briefings at various levels for the UN agencies, humanitarian aid community, and concerned government institutions with updates on hazards and clearance
 - Establish mine information office at geographic level where planning is conducted, and information distribution points at local levels. Provide local public information kit through police stations. Post contamination maps in public area (village square, police station) and seek local updates. Contact information for MAC on all public information materials such as mine warning signs, MRE posters, banners, etc.
 - Streamline access to information, relaxing bureaucratic processes and authorizations
 - Coordinate with universities to make mine action information available for research
 - Conduct mine action research and circulate results among non-mine action actors
 - Invite non-mine action actors to mine action events (4th April) and handovers
 - Conduct national and regional training on mine action data (how to use it, how it can facilitate planning, better target programs, etc)
 - Produce and distribute national, provincial, district and community hazard maps for public display in the corresponding territories
 - Disseminate data and information through relevant government departments and encourage sector distribution (health, watsan, education, social services, agricultural or rural development, internal affairs, etc)
32. While public information campaigns are very important, it is possible that mine action centers often over estimate their reach and effectiveness, as happens with many other kinds of marketing. This is an empirical question that should be confirmed by each program.
33. Flow of information depends on structure through which information is shared and the personalities in the various organizations, which should be supported by service orientation of mine action organizations and staff to support success of development. As one respondent said, “First and

foremost inform non-mine action community of what information is available in terminology familiar to the non-mine action community; filter out technical jargon and don't use IMSMA reports.”

34. Establishment of a special unit within the mine action authority to work with development actors helps to accumulate knowledge about their needs and strengthen positive working relations. Most organizations do not have a special unit dedicated to respond to requests for information. This is typically handled through the central office with support from the information section. While organizations tailor the specific information provided to each request, in most cases this involves general information about an area where a company or NGO is considering to work, usually provided in standard format, including: district, sub-district, village and mined area names and codes as well as size of contaminated area, coordinates and latest status of mined area, with a map attached showing the suspect area locations. For many development organizations, it would be useful to have a basic information packet available on request:
 - General data and map presenting the overall problem
 - Specific data and map for possible project areas
 - Victim data – numbers and locations of accidents
 - Explanation of how planning and prioritization is conducted
 - Understanding of operators and how to work with them

35. Certain measures depend on whether the mine action center is nationally owned or is part of a broader UN program. When the UN is responsible it typically has coordination mechanisms (eg, Clusters) through which it can circulate information directly to potential users. The coordination may however be less well developed with the national ministries and with private development actors, and these areas require specific attention. OCHA or the UN Mission may play a key role in information dissemination in such cases.

36. As a matter of principle, demining services for development infrastructure projects or other projects with a prime contractor for which landmines could cause a delay with contractual implications are best provided through competitively selected demining organizations under contract to the prime contractor. Increased support to development organizations, particularly for investments in infrastructure or natural resources requires a flexible response capacity that can respond to needs of individual organizations promptly and expand or contract as combined requirements grow and shrink. Experience suggests that the commercial demining sector is central to this responsive flexibility and that it often provides more timely response to the needs of the prime contractor. Contracting by the prime development contractor maintains the overall responsibility in the hands of the prime contractor, rather than creating the possibility of disagreement or excuses because of delays by the demining organization. Competitive selection keeps pressure on the demining contractors to maintain good price and quality with realistic commitments on progress. Since most development contractors have little experience with demining contracts, the national authority may wish to provide technical assistance on the preparation and evaluation of tenders for demining and quality assurance as well as standard contract clauses reflecting essential elements of the national mine action standards.

37. Effectively supporting the increased integration of demining under the responsibility of construction contractors for development projects implies a need for increased attention to regulation, standards, accreditation, quality assurance and the corresponding legal framework. There will be a particular need for technical advisory services to (a) provide accurate information regarding the extent of contamination and the need for clearance to determine how planned investments may be affected by landmine hazards and (b) possible solutions and their costs so that mitigation of the hazards may be built into the respective projects.

38. Since demining for development projects normally focuses on a defined area or right-of-way, the prime contractor may require clearance of only part of a contaminated area and leave its extension untouched. The national authority should consider including in the National Mine Action Standards – NMAS the requirement for minimum width of clearance in such cases and marking the contiguous hazard area. This requirement would be included in the contract (by reference to NMAS or explicitly), and be the responsibility of the prime contractor to ensure that it occurs. A further option to consider would be for the national authority to fund (directly or through the prime) the cost of the additional clearance, taking advantage of the presence of the demining contractor at the site.
39. As part of its active outreach to all development organizations, particularly government agencies responsible for infrastructure projects, the mine action authority should maintain:
- Active outreach to ensure organizations are aware of the landmine problem and how it can affect their investment programs, the mine action program and the services that it can provide to support them and good practices in dealing with landmine contamination
 - Inventory of all planned investments that may be affected by contamination
 - Inventory of any development investments avoided because of contamination concerns
 - Technical assistance to define mine action specific support required and estimate its cost
 - Ensure identification of source of funds (national budget, donor, MAP, other)
 - Joint plan with each agency for the demining services and the development investment
 - Technical assistance to conduct tenders, if these will be done by concerned agency
 - Periodic review of agency's investment program to identify possible contamination concerns and initiate demining services to address these contamination concerns
40. It should also ensure continuous attention to strengthen the use of information. "Humanitarian information products, services and tools should be periodically evaluated and their users surveyed in order to examine their use, practicality, and effectiveness and to make user-centered adaptations and modifications." (OCHA, "Global Symposium on Information for Humanitarian Action," 2008:4, p 7)

Central Government policies to supported increased use of mine action information

41. The mine action authority should advocate that the central government adopt specific policies in support of integration of mine action services with development investments, which will support enhanced use of mine action information. These include:
- In order to ensure that development actors and donors are fully aware of the significance given by the Government to the landmine problem and to the need to consider it whenever relevant, the Government should include appropriate references to the issue in its Poverty Reduction Strategy or similar national policies. Since in most countries landmines are a local problem in specific areas, but perhaps not widespread enough to be identified as an overarching national priority, the landmine problem should be identified as "of a critical nature wherever it exists".
 - Engaging with the sectors and units that require demining services for the success of their own programs, including encouraging them to identify landmine contamination as a problem within their plans and budget submissions and providing the technical advice to quantify the requirements, will provide strong justification for the inclusion of demining in the poverty reduction plans and annual state budgets.
 - Central Government should adopt and widely disseminate a policy that (a) demining services required by any public or private investment over a certain threshold must be

included in the respective overall program budget, based on consultations with the national mine action authority regarding the nature of the contamination and the cost to mitigate it and (b) responsibility (financial and contractual) for the demining services will fall to the prime contractor for the investment project, be conducted by accredited mine action service providers and subject to qualified quality assurance.

- The need for demining support be required to be included in budget submissions to the Ministry of Finance for infrastructure or other investments (census, elections) that may face such requirements. The need for such support and a realistic estimate of cost should be included, developed in consultation with the mine action authority.
- The need for demining support be required to be included in projects proposals submitted by NGOs to the Ministry of Cooperation or corresponding local authority.
- Private development companies should be encouraged to coordinate and plan their demining requirements with the mine action authority. This should include appropriate estimates of need and budget, as well as consideration of treatment of mined areas immediately adjacent to those to be treated under the responsibility of the private investor; eg, areas to be left should be marked and adjacent areas could be cleared at the cost of the government as an add-on to the initial clearance contract.
- The Central Government should adopt a policy and advise donors, development banks and any other institutions that may finance infrastructure development (as well as its own agencies which negotiate with those parties) that demining services required by any public or private investment over a certain threshold must be included in the respective overall program budget, based on professional assessment of the possible landmine obstacles to the program and consultations with the national mine action authority regarding the nature of the contamination and the cost to mitigate it.
- Loan negotiations for infrastructure projects (roads, communication networks, power pylons, schools, health centers) should consider and if possible incorporate the cost of necessary demining. Although these costs could be part of the government counterpart contribution, if no specific new budget allocation has been agreed, it is recommended to fund them from the respective loan proceeds.
- The Central Government should adopt a policy that the fact of being mine affected should not lessen the opportunity for a community to be included in area development, community development and other public sector investment and public service programs. The cost of demining associated with such programs should be considered in the overall program budget. Such a policy will likely increase the funds available for mine action, as a service directly supportive of local development.

42. Finally, national laws and regulations regarding other hazardous conditions should be reviewed for their applicability to actions regarding landmine contamination, in order to introduce similar procedures to those currently applied to prevent uncontrolled development on unsafe land, based on geological survey information, environmental impact, pollution control, land use control, flood zone, earthquake zone, malarial zone, etc.

Next steps

43. Phase 1 of this project has confirmed that most national mine action programs agree that it is important to enhance the use of mine action information by development partners and has provided a map of potential client organizations and their information needs. The next step is to agree on three Phase 2 focus countries to jointly conduct national client mapping and project inventory, develop specific information products and recommend national policy framework measures.

Annexes

1. Project Announcement
2. Questionnaire to National Programs
3. Mine Action Programmes and Organizations Contacted and Responses
4. Data typically contained in mine action databases
5. Socio-economic impacts of landmines
6. Potential development organization clients and their considerations

Annex 1: Project Announcement
Announcement of SAC Applied Research Project:
Enhancing Use of Mine Action Information by Development Actors

SAC is initiating an applied research project to increase the effective use of national mine action information by non-mine action organizations (government, non-governmental, private sector, etc). In order to identify current good practices and prepare useful guidelines, we intend to survey the mine action community as a whole, including national programmes, international organizations, NGOs and commercial firms, and we will then work closely with a few national programmes with particular interest in this issue, to assist them to support non-mine action actors and to develop examples and guidelines for wider use. The project will run for one year from September 2008, with the financial support of the US DoS.

How do non-mine action actors use landmine information to ensure the effectiveness of their own activities? What can mine action programmes do to facilitate increased use of mine action information by others? Anecdotal information from many countries indicates that these questions are becoming more important for both mine action programmes and development stakeholders. This requires better understanding by the mine action community of the interests and needs of non-mine action actors. Some non-mine action actors need to know where they can go safely, others need to know what areas they must avoid, and others need information to plan for necessary clearance in a timely manner to avoid delays and cost overruns. In all cases the situation must be explained in the client's own terms using appropriate tools and formats.

Experience to date indicates varied types of development project information needs:

- Community development projects (NGOs, CBOs and others) need information on the nature of blockages affecting the development potential of a specific communities
- Infrastructure projects (e.g., roads and power lines) need information regarding precise hazards along their route
- Social sector projects (e.g., potable water for all or health for all) need to identify the limited number of communities where landmine blockages must be resolved to avoid distortions and ensure their services will reach the entire population
- Natural resource investment projects (e.g., petroleum and mineral exploration) need precise information about where they can work safely, what they must avoid, and what must be cleared to complete work in defined territories
- Industrial and agricultural investors need information regarding potential hazards and the cost to remove them on specific sites they are considering

The project will begin with a brief survey to identify a wide range of actors that have requested mine action information to support their own projects, the type of information requested, what was provided, how it was used, and whether it met the client's need. We will identify policies that may encourage interested parties to include landmine information in their planning, proven tools to provide the information, and implications for the operational support that may be identified as necessary.

We will explore these issues in much more detail through specific consultancies which will assist a limited number of focus countries to strengthen their own experience and will highlight good practices to adapt for use elsewhere. If your programme would like to be a focus of this applied project, or if you have thoughts on these issues, please contact Charles Downs, Project Leader.

Annex 2: Questionnaire to National Programs

Thank you for taking the time to provide information on the experience of your organization regarding use of mine action information by non-mine action actors. We are interested in a wide range of non-mine action organizations, including national ministries, provincial authorities, local authorities, national and international NGOs, UN agencies, donors, development banks, national and international private sector businesses, etc. Experience indicates that timely use of mine action information by these organizations can be essential to their success in their own development projects and provision of services to the population as a whole. Insufficient use of such information may result in higher costs and delays for their projects, and emergency requests for urgent mine action support which complicate effective management of the mine action programme. Enhancing use of this information by non-mine action organizations will increase the effectiveness of mine action and its support to development. Your response will identify issues, practices and tools that may be of use to the broader mine action community. (This questionnaire is a Word document which will expand to fit your response.)

1. What organizations have requested mine action information? Why did they want the information? What information did they request? What information did your programme provide and in what format? How did they use the information? Was there a need for further mine action support?

(Please use attached Table 1 to respond to this set of questions.)

2. Does your programme make non-mine action organizations aware of the mine action services and information that it has to offer them? If so, how? For example, have you developed a targeted programme of outreach? Which organizations do you target? Apart from the organizations that have requested mine action information in the past, which other organizations (government, non-governmental, private sector) would benefit from greater use of mine action information? (Please list on Table 2)
3. When organizations request mine action information, how does your programme make this information available? Are there restrictions on who can access this information? Is information available in a standard format or is information tailored to suit the specific needs of different organizations?
4. What can the mine action programme do to increase the use of mine action information by non-mine action actors?

5. Does your programme have a specific unit or procedures to track and respond to requests for mine action information? How does it work?

6. Do humanitarian and development actors (government, non-governmental, private sector) usually consider the delays and costs that landmines and other explosive remnants of war may cause them? Are they required by law or other national administrative guidelines to take this into consideration? Do they avoid working in contaminated areas or work around the problem?

7. How does your programme respond to requests for operational support from non-mine action actors? For example, are most requests sufficiently timely to include in annual operational plan? Are requests often for immediate action? Does this require postponing planned activities or disappointing the new request? Who pays the costs of such support?

8. How important is the issue of improving non-mine actor use of mine action information for your programme? Would your programme be interested to partner with SAC to develop and try out tools and procedures in the second phase of this project?

9. Please provide any other comments you think may be useful:

Annex 3: List of programs contacted and responses received

Program Contacted	Response Received	Questionnaire Received
Afghanistan	X	X
Albania	X	
Angola	X	X
Azerbaijan	X	X
Bosnia and Herzegovina		
Cambodia		
Chad		
Colombia	X	
Croatia	X	X
Egypt	X	
Eritrea		
Ethiopia		
Guinea Bissau	X	
Iran		
Iraq (National and Kurdistan)	X	X
Jordan	X	
Kosovo		
Lao PDR	X	X
Lebanon		
Mauritania	X	
Mozambique	X	
Nepal	X	X
Senegal		
Serbia		
Somalia (Somaliland and Puntland)	X	X
Sri Lanka	X	X
Sudan	X	X
Tajikistan	X	X
Uganda		
Western Sahara	X	
Yemen	X	
Zambia		
Zimbabwe		
International NGOs and Organizations		
- Danish Demining Group – DDG	X	X
- Swiss Demining Foundation – FSD	X	X
- The HALO Trust		
- Handicap International	X	X
- Mines Advisory Group – MAG	X	X
- Norwegian Peoples Aid – NPA		
- ICRC	X	
UN Agencies		
- UNMAS	X	X
- UNDP	X	X
World Bank	X	X

Annex 4: Data typically contained in mine action databases

Description of Key Information Typically Contained in Mine Action Databases
Community Background
Unique ID of Province, District, Municipality, Locality, Community
Community Reference Point and GPS coordinates
Name, gender and age of participants in community interview
Type of settlement
Facilities: Transport, health, education, infrastructure
Current population
Main economic base of community
Past Mine Action
History of armed conflict in the community area
Mine/UXO awareness provided last 24 months
Marking/survey carried out last 24 months
Clearance carried out last 24 months
Landmine Victims
Old victims - Number of people killed by mine/UXO before 24 months ago
Old victims - Number of people injured by mine/UXO before 24 months ago
Recent victims - Number of people killed by mine/UXO last 24 months
Recent victims - Number of people injured by mine/UXO last 24 months
Name, age at time of accident and gender of each recent victim
Number of landmine/UXO survivors living in the community
Name, if any, and survey designation of SHA where accident happened
Accident date
Killed or wounded?
Occupation at time of accident and current occupation, if living
Activity when the accident happened
Wounds received as a result of accident
Description of victim assistance given during the last 24 months
Suspected Hazard Area
Name, if any, and survey designation of SHA
Co-ordinates and estimated size of SHA
Digital photo of sketch map of SHA
Contamination type (mine and / or UXO)
Terrain: Vegetation type and landscape type
Socio-economic blockages
1. Housing blocked
2. Roads blocked (various type of roads and paths)
3. Other infrastructure blocked (various type of infrastructure)
4. Fixed pasture blocked
5. Access to drinking water blocked

6. Access to other water blocked
7. Irrigated cropland blocked
8. Rain-fed cropland blocked
9. Non-agricultural land blocked (various types of rural land use)
Current mine action activity
Mine/UXO awareness planned and carried out
Marking/survey planned and carried out
Clearance planned and carried out
Clearance completion scheduled
Clearance completion certificate

Annex 5: Implications of Landmine Contamination for Socio-Economic Activities

Issue (Blockage)	<u>Socio-economic implications</u>	<u>Project considerations</u>
Water	Access to water source is blocked Access to water system infrastructure blocked	Rehabilitation of source requires clearance; provision of alternative leaves lingering danger – clearance project Rehabilitation and maintenance require clearance of access and along route for repair – delay and increased cost if not considered in planning stage; likely local priority once identified There is not usually a viable alternative
Agriculture	Fields are contaminated Access to fields/markets is blocked Family and community food security at risk Risk of violence over land	Fields need to be cleared for use – clearance project Transport of production to market more costly (if possible) – road clearance needed to gain benefit of agricultural projects Agricultural land most often used by single family; in most cases there is not an equally desirable alternative, every square meter counts
Livestock grazing	Grazing land contaminated Food security at risk Herders forced to go to unknown areas Risk of violence over land	Animals and herders at risk, livestock replacement increases risk unless investment made to clear large land areas
Housing	Building contaminated (ERW or booby traps) Housing areas contaminated Risk of injury upon return Risk of violence over limited housing	EOD/clearance project Housing not safe for humans and animals until area cleared (people may return, but live in danger)
Schools	Buildings contaminated School area contaminated/blocked Risk of accident to children and others	Schools need to be cleared for rehabilitation and use – EOD/clearance School area not safe for use until cleared – delay and higher cost of rehabilitation Most schools are not contaminated, therefore identify limited number that are contaminated and include costs in budget or they are likely to be left without repair and reactivation Construction on alternate site possible (land title issues)
Health centers	Buildings contaminated Health center area contaminated Risk of accident to use health center	Clinic needs to be cleared for rehabilitation and use – EOD/clearance Clinic area not safe for use until cleared – delay and higher cost of rehabilitation Most clinics are not contaminated, therefore identify limited number that are contaminated and include costs in budget or they are likely to be left without repair and reactivation Construction on alternate site possible (land title issues)
Fuel (gathering)	Forest area contaminated Livelihood at risk Risk of violence over reduced gathering area	Livelihood activity for several people causes risk until area cleared In most cases there is no equally attractive alternative
Children	Areas used by children for work or play may be contaminated – grazing, water collection, fuel collection	Difficult to redirect behavior, identifies need for MRE and alternative livelihoods
Roads	Roads contaminated Humanitarian access blocked Travel to markets, schools, health centers creates risks or takes longer	Road rehabilitation may be blocked by accident with high cost of delay and urgent clearance, unless survey and clearance with appropriate margin precede construction While there is usually less desirable alternative travel route, usually there is not an alternative road for reconstruction

Bridges	Bridge access contaminated Humanitarian access blocked Travel to markets, schools, health centers creates risks or takes longer	Bridge rehabilitation and maintenance require clearance of bridge access plus turning radius Most cases have no attractive alternative for motor vehicles, and thus reconstruction (with clearance) is necessary
Paths	Foot/animal route is contaminated Travel to/from local centers creates risks	Survey and clearance necessary to reduce foot traffic risk There may be an alternative route, but it also requires checking
IDP/refugee return	Return corridors are contaminated IDPs and refugees cannot move safely	Survey and limited clearance required to ensure safe return There normally are theoretical alternatives, but returnees may choose own route
Humanitarian Access	Routes for humanitarian assistance are contaminated	Survey and clearance required to ensure safety of assistance Principal alternative is air delivery, far more expensive
IDP resettlement	Potential resettlement areas contaminated	Survey and limited clearance required to ensure resettlement areas selected are free of contamination, or known contamination marked
Access to markets	Access routes are contaminated Farmers cannot get to traditional markets to sell produce or buy needs	Survey and limited clearance required to ensure access routes are clear Alternative routes usually requiring more travel time
Markets (urban infra)	Market is contaminated Area around market is contaminated	(same as schools and health centers)
Tourism	Tourism sites contaminated: point sites (temples) and environmental sites for hiking and outdoor roaming	Tourism projects only viable if area known to be cleared, with possibly limited out-of-the-way hazards marked
Industry	Factory buildings contaminated	Building must be cleared, like schools Rehabilitation requires safe access to building area Reactivation requires investment and inputs
Mining	Area of exploration contaminated Area of mine contaminated Access routes contaminated	Exploration requires safe route including appropriate margins; project will suffer delays and higher costs if survey and clearance not planned Survey may identify alternate access routes, although rehabilitation of old route usually most desirable, with clearance included as “engineering” cost
Petroleum	Area of exploration contaminated Area of production contaminated Access routes contaminated	Exploration requires safe route including appropriate margins; project will suffer delays and higher costs if survey and clearance not planned Survey may identify alternative access and alternative drilling points, with clearance included as engineering cost
Irrigation	Water canals contaminated, and water system in contaminated area	Canals require clearance, and surrounding area must be cleared to permit vehicle access for repairs and maintenance Normally no alternative exists to irrigate same land, irrigation rehabilitation project will suffer delays and higher costs if not planned
Electricity Distribution	Pylons are contaminated and pylon route passes through/over minefields	Rehabilitation and maintenance require safe access; project will suffer increased costs and delay if survey and clearance not planned Usually most convenient to follow existing route; possible to deviate slightly if survey confirms contamination limited
Hydro power dams	Dam and surrounding area contaminated	Rehabilitation requires safe access including for heavy equipment; project will suffer delay and increased cost if survey and clearance not planned Alternatives rarely exist for reactivation, other than regarding timing

Annex 6: Potential development organization clients and their considerations

- National mine action center. The NMAC establishes operational priorities to respond to impact as measured by the LIS, which is generally accepted by the international community as the default basis for tasking mine action resources, in the absence of other demands.
- Sector ministries. Ministries are generally concerned with landmines to the extent that their own activities are blocked by the presence of landmines. They are not concerned with the extent of impact on the community; rather their concern is to know in which communities their own programs face complications due to landmines. Such programs could include reactivation of schools, health centers, irrigation systems, etc. For example, if the Ministry of Roads has a five year strategy of opening all roads of a certain level and is negotiating a development bank loan to support it, the information on which roads are blocked by landmines and their extent will be important factors in properly planning and costing the effort. Similarly, a Ministry of Health program to reactivate potable water in all villages should take into consideration that in the 3,000 villages where it will work (hypothetically), there may be 100 in which landmines block access to the water source. These 100 villages require additional attention and resources.
- National development programs. Similar to the sectoral ministries, the concern of national development programs is not whether villages suffer from high, medium or low impact, but simply that execution of their part of the national development plan will face landmine obstacles in certain specific areas. For example, a program to reactivate or extend the electricity transmission network would need to know where the planned route would cross suspected hazard areas. They may then plan to reroute the lines if possible, or plan for clearance if that is the best option — both situations have implications for the time schedule and cost of the program.
- Provincial government authorities. In some countries the provincial government is responsible for key local development planning decisions. They may receive a list of communities ranked by LIS impact, and they may prioritize other communities for economic and social projects. For the second category, their concern is primarily to know whether or not there is a landmine problem that will interfere with community development, regardless of whether the impact is high or low.
- International development NGOs. Some international NGOs may choose to work in communities because of the extent of landmine impact. Community development NGOs may select communities where they will work for other reasons, and should know whether or not those communities face landmine problems, independently of their extent, as this may affect their choice, and certainly will affect the cost.
- Private companies exploring for natural resources. Private companies exploring for natural resources such as petroleum or mineral resources seek to know whether landmine contamination will interfere with their work, and if so to have the hazards removed or marked so that they can work around them. Companies may require such information in order to prepare their bid for the right to explore tendered blocks.
- Private owners or companies seeking to reactivate or invest in industry or tourism. These parties need to know whether the old facilities, access to areas for materials and for use associated with the main business have been cleared of hazards.
- Private construction companies seeking to bid on development projects. In some cases the necessary mine action is recognized by the funder, but within an amount specified by the construction bidder, and it must be included in the overall contract.