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The Operational Implementation of the International Humanitarian Demining Development Concept

By C. J. Pearce

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Introduction

The International Humanitarian Demining Development (IHDD) concept did not evolve on a haphazard basis. The concept was born out of practical experience in Manica Province, Mozambique during the emergency relief phase between 1993 and 1995. Based on those experiences, and a serious concern that mine clearance was regarded as a purely technical activity with local involvement being relegated to by-stander status, GTZ and Mine-Tech held wide-ranging discussions over a lengthy period before defining the IHDD concept. Subsequently, with funding from the BMZ (German Ministry of Co-operation) two pilot projects were undertaken in Manica and Sofala Provinces, Mozambique. These pilot projects were aimed at proving the concept, drawing practical lessons and conclusions, and refining the process. In this they were successful. Following the pilot projects, additional BMZ funding was made available through GTZ for a full-scale IHDD project in Manica Province, which was extended through financing from the European Union.

Team Building

In an IHDD project, the first step is to build the Project Team. This is the bringing together of partners and stakeholders in the project. This includes not only the GTZ/Mine-Tech IHDD Team, but also the development agency, appropriate institutional representation. (i.e. in Manica Province, Mozambique, this would include the ODGO Representative (Office of Demining in the (Provincial) Governor's Office)), and other key players. Team building is achieved, initially, through the development of a common understanding of the concept, through training and discussion. It continues through the planning process and into implementation. Team building does

not take place only at the project management level. Team building extends down to grass-roots level in the field.

Planning

Planning is carried-out on a participatory basis using a methodology introduced by GTZ. The first planning step is to develop a Plan of Operation (POO), which is essentially the project strategy document. With a defined Project Goal and Project Purpose, results are defined together with indicators and means of verification for each activity within each result. Thus the process has in-built targets and milestones which can be monitored and evaluated as the project progresses. Typically, a Planning Workshop will be held, involving the partner and other stakeholders, to develop the POO.

The strategy defined in the POO lends itself to the next level of planning, which is the Project Work Plan. It is developed in a similar way to the POO, but with more specific results and activities. Again, Workshops are used to develop the Project Work Plan, and to review it during the course of the project. Planning is supplemented by regular meetings to review progress, analyze activities and results and determine the need for corrective action where required.

Against the backdrop of the POO and Project Work Plan, specific Operations Work Plans are developed for each IHDD operational phase. Thus the planning process cascades from the strategic to the management and operational level, with each plan complementing the other. Planning in the IHDD context is very much oriented towards serving, also, as a capacity-building activity, to build-up the local partner.

Capacity building obviously extends beyond involvement in planning. For example, part of the first major IHDD project in Manica Province, Mozambique, was to establish provincial mine action coordination capacity by providing an operations room, communications, and training to the ODGO. This capacity building has paid dividends in the implementation phase with regard to local coordination and support. Involvement of the provincial authorities has made the technical implementation both easier and more effective, notwithstanding certain policy constraints.

Implementation

IHDD operations are implemented in two distinct phases. These phases do not deviate from the now-accepted mine action activity descriptions of Level 1, Level 2, and Level 3 surveys. They complement them with additional activities specific to the IHDD. The two technical implementation phases of IHDD operations are:

International Humanitarian Demining Development Phase 1

(CMA/EOD/Level 2 Survey)

An IHDD Phase 1 operation is planned and conducted based on available Level 1 information. Its objectives are to:

1. Carry out Level 2 (Technical) Survey to clearly establish a minefield presence and to achieve area reduction so that subsequent mine clearance does not waste time, resources and finance on clearing mine-free areas.
2. Conduct CMA Training within the framework of the operation, both for humanitarian reasons, and to facilitate the gathering of additional information on the mine/UXO threat in the target area and surrounding areas. This also builds a communication platform with the community.
3. Carry out EOD (Explosive Ordnance Disposal) of UXO and isolated mines reported as a result of CMA Training.
4. Provide emergency medical support to the community whilst in-area.
5. Establish liaison and interaction with District authorities (in Mozambique, District Administration and Chefs de Posto), and involve them in the process. Also with key persons at village level (Headman, Teacher, Health Worker, Village Policeman etc.).
6. Identify key informants and recruit them to assist with indications of mined areas. These are usually long-term residents and ex-soldiers or militiamen.
7. Select volunteers for CMA Trainer training in the next phase, where applicable. This selection process is based on community selection of persons held in high regard in the community.
8. Continue gathering Level 1 information on the general area, including any information relevant to development activities. Such information includes population statistics, water sources, health, education, agriculture and local commerce.
9. Identify mine victims in need of assistance so that a referral process can be initiated.

Hence IHDD Phase 1 is not merely a technical Level 2 survey activity. It is very much community and development-oriented. At the end of a Phase 1 operation, independent Quality Assurance/Control (QA/QC) is carried out to confirm and verify the results. This is important, not only for safety and monitoring purposes, but also to evaluate the Phase 1 report and its recommendations as to clearance, time, manpower and technology recommendations, all of which have cost implications. It also serves as a basis for evaluation of costs for the next phase.

Recommendations from this phase may indicate a CMAD operation in the village area, rather than going into an expensive IHDD Phase 2 operation.

International Humanitarian Demining Development Phase 2 (Mine Clearance)

IHDD Phase 2 is the mine clearance phase, conducted on the basis of the Level 2 survey results of Phase 1. This phase, (apart from survey), includes

all activities from Phase 1, and is a continuation of it. The exception is that the local CMA Trainers are trained during this phase. Regular meetings are held with local authorities throughout the process, and they are kept apprised of progress on a continuing basis. Local key informants are often employed within this phase, as are local bush-cutters. Emergency medical support is worth an aside. In IHDD Phase 2 operations, Team Medics have saved the arm of a man attacked by a crocodile, dealt with serious malaria cases and even delivered a baby undergoing a difficult birth process. On one occasion, fortuitously, the Team Medic saved the life of a woman who had stepped on an anti-personnel mine just as the team arrived in the village.

During Phase 2, independent QA monitoring and field QC inspection is conducted. A final QC inspection is also carried out at the end of the Phase, before the area is handed over to the local authority.

While implementation in two distinct phases is the norm, in order to ensure proper evaluation of the problem before embarking on the next phase, or into a CMAD posture, phasing is not immutable. On several occasions, Phase 1 has moved from survey to clearance (Phase 2) without a break. This is only done where there are cogent reasons for such action. i.e. a serious, immediate threat to safety, or where small minefields are identified which are within the capacity of the Phase 1 (Survey) team to clear.

Impacts

IHDD operations have a number of impacts:

1. *Safety and security.* Obviously, removal of mines and UXO creates safety and security for the community.
2. *Confidence.* A major weakness with a purely technical mine clearance operation is that the community, as a result of not being involved, often do not believe in the process. We have recent proof of this in Sofala Province, Mozambique. The people avoid a bridgehead area that is good agricultural land. It was cleared by an organization some time ago, but they simply arrived, did the job and left. Essentially, that clearance was a waste of effort and resources. This is one precise reason why IHDD stresses community involvement and confidence building within the process.
3. *Land use.* The freeing of agricultural land is a major objective of mine clearance in rural areas, for all the economic reasons discussed previously. However, there has to be an appreciation of the true extent of returned land. A minefield (and one mine can represent a minefield in people's minds) may occupy, for example, an area of one hectare. Yet the land denied as a result could be as much as 5 hectares, or even more. For example, if 15 hectares of minefield have been cleared, this might free-up between 75 – 100 hectares of actual agricultural.

4. *Access.* A major constraint in rural areas is that of access. National priority focuses on main and major road access, not small rural roads. These, however, are vital to rural economies for movement of inputs, marketing outputs, and development. IHDD in rural areas can make an important impact by clearing such access roads. Mine clearance can be harmonized with other activities such as Food for Work in the context of rural road rehabilitation.
5. *Livestock production.* Domestic livestock are particularly vulnerable to mines, and as a result many rural areas have no livestock. Yet livestock represent the only real wealth of most rural communities. We have numerous examples of this. In Zimbabwe, in the South-East of the country there is a large sector of minefield laid during the Liberation War. Areas adjacent to the minefield have had their cattle population so decimated that the people no longer herd cattle – previously a traditional farming practice in the area. Losses in monetary terms are staggering in terms of local wealth. Cattle valued in excess of Euro 80 000 have been killed. Traditional grazing areas, capable of carrying cattle valued at Euro 90 000, are denied. One family lost 30 head of cattle, representing its entire source of wealth. Another man lost 16 cattle in one day. IHDD, through mine removal, can make a positive contribution to redressing this sort of situation. Equally, CMAD can do the same since the community minefield management plan will take into account aspects such as safe grazing areas.
6. *Protection of vulnerable groups.* Women and children are particularly vulnerable to the mine and UXO threat, due to their family duties and, in the case of children, natural curiosity and play outside the homestead vicinity.
7. *Knowledge.* Through CMA training, through interaction among all players and structures, people can recognize the threat, and become aware of coping strategies, their roles in the community structure and self-management obligations.

The value, relevance and impact of IHDD operations cannot be explained adequately with simple statistics. Statistics by themselves do not create a true picture, which is why I have not dwelt on them at length. It is, for example, possible to clear a minefield which has no significant impact on a variety of social issues. Yet the figures look dramatic in terms of mines and UXO removed. Statistics for the IHDD, since its inception (excluding figures for GTZ/Mine-tech combined work prior to the formalization of the IHDD) are:

- Area cleared: 65.08 hectares
- Mines/UXO removed: 896
- Area released: 325.4 hectares
- Other ammunition: 2683 rounds
- Access roads cleared: 42 kilometers
- Persons receiving CMA training: 10,333

- Local CMA Trainers trained: 38

Costs and Cost Effectiveness

The average cost per square-metre of clearance effected by the IHDD is in the range of Euro 1.68/m² to Euro 2.05/m². This is very competitive in terms of international mine clearance, particularly when consideration is given to the other activities and workload within the IHDD process. In Bosnia, for example, using World bank figures for a 10-month period in 1997, the cost per square metre of mine clearance and survey averaged Euro 3.07, with the upper cost being in the Euro 5.20 range. In Mozambique the average would usually be in the Euro 2.25 to Euro 3.18 range, and in Cambodia the Euro 1.82 to 2.73 range.

CMAD offers a very cost-efficient alternative to mine clearance, particularly once projects are established with maximum local participation. Typically, CMAD is some 65% to 70% cheaper once local structures are in place. This includes an EOD (Explosive Ordnance Disposal) team supporting the CMAD Facilitation Teams. In the overall mine action context, however, the combination of IHDD and CMAD offers the most effective and cost-efficient option. This is because the mine and UXO threat can be removed and contained by a combined process. This facilitates development, food security and poverty alleviation. Removal can be confined to real/definite priority targets, which directly impact on safety, and security, while in lesser priority target areas the threat can be contained through community self-management. Thus area coverage can be achieved on a wide scale, in turn facilitating more widespread development activities. Where a Level 1 survey is not needed, for every village cleared, 10 other villages can be made safe to live and work through the CMAD process. Where a Level 1 survey is required, the ration would be 1:7. This means that that for every village mine-cleared, a CMAD area coverage of 7-10 villages could be achieved. Combined IHDD and CMAD operations and programs will achieve a far greater impact than a conventional mine clearance/mine action approach, and at a significantly lower cost.

This is the true value and impact of IHDD and CMAD: Widespread coverage, giving the required safety and security. This permits development to proceed unimpeded to any serious degree, and unimpeded to a significant extent by the slow pace of mine clearance. It also creates a scenario of less pressure for mine clearance since much of the threat is contained and self-managed by the population whilst priority targets are mine cleared. Widespread coverage and control of the mine/UXO threat is also a cost-efficient option. In our experience, improved CMA techniques evolved as a result of a GTZ-financed research project implemented by the IHDD Team. This has led to a greater flow of Level 1 information on mines and UXO and better quality of information.

Additional Operational Aspects and Issues

Quality & Safety

Independent QA/QC is an integral part of the QA/QC process. However, quality is not restricted to that level. The Technical Partner (Mine-Tech) has its own Internal QA/QC Team that carries out random inspections of sites several times during an operation. In addition, each Team Leader is responsible for conducting QA/QC inspection on each of his team member's work on a daily basis. This is carried-out by a physical check of at least 10% of each clearance lane at the end of the day's work.

Safety is a quality aspect. All teams are equipped with the required safety equipment, medical back-up and procedures, required by international and national standards. Safety is enhanced through comprehensive SOPs (Standing Operating Procedures), and their application and management. The use of multiple technologies, as appropriate, also contributes to safety.

Technology Selection

The IHDD has available the full "Toolbox": Manual, Mine Detecting Dogs (MDDs), and Mechanical support equipment. The decision to apply a particular technology or grouping thereof is made in the IHDD process, and based on the known threat and terrain conditions, rather than by predetermination. We are technically inclusive, rather than being technically exclusive.

Constraints

Operational constraints are facts of life and must be recognized, particularly as they effect partnerships and contractual restrictions. Constraints at the policy level and within the institutional frame need to be addressed and resolved. It may appear that the GTZ/Mine-Tech IHDD Team does almost everything. For example, in Mozambique we have been asked why the mine clearance is not given to the Mozambicans. The answer is that, given the national policy frame, government finance and manpower constraints (which can only be resolved at national level), and the demands of international and national standards, *the IHDD has chosen a bottom-up approach to capacity building*. CMA Training (including training of local trainers), the equipping and training the ODGO in Manica Province, simple reporting systems for local communities, and planning workshops involving District Administrators and Chefs de Postso are examples. In addition, 45 Mozambican deminers have already been trained by Mine-Tech and integrated into their teams.

We have chosen a route, which, under local conditions is sustainable. A route has been chosen which is practical, which involves local capacities at all levels, which meets stated goals and objectives, and which is able to be continued by the villagers themselves.

Donor Coordination & Participation

The IHDD is a very open system and process; it encourages coordination and cooperation with donors and other agencies. We actively invite others to participate in our projects, and welcome constructive participation, in the identification of the need for a Health Post, or the possibility of access road opening, or victim assistance. On occasion, we do run into problems caused by a lack of collaboration and coordination. Sometimes, villages which have been selected as IHDD project priorities, have been taken-over by others without prior consultation and coordination. In one case an organization attempted to replicate IHDD operations without due consultation. Unfortunately, key aspects were ignored and the results were disappointing.

Replicability

Both IHDD and CMAD are relevant to mine action in rural areas elsewhere in Africa, and indeed the world. In an operational context, what is required is training of management and operations staff to work within the framework of the IHDD and/or CMAD concepts. The same applies to local institutions. IHDD and CMAD may be unique concepts, but they are not complicated concepts.

Conclusion

IHDD and CMAD are concepts developed from practical field experience. Their operational implementation has been developed, tested and adapted under field conditions and within the framework of already accepted international mine action practices. Where they differ from the more conventional mine action approach is in their community orientation and involvement of local institutions. CMA provides the bridge to community involvement.

Team building, at all levels, is an essential activity throughout the IHDD and CMAD processes. Planning, which is carried-out on a participatory basis, is seen as part of team building and local capacity building. Planning is structured to cascade from the strategy level to the operational implementation level. Team building is not only an activity at management level. At the operational level, teams work, on a daily basis with local government officials and community leaders.

Implementation of IHDD is effected in two distinct phases centered, respectively, on Level 2 survey and mine clearance. Both phases include CMA training and other confidence-building activities, and community and local administration involvement. Implementation is based on integration of mine action activities with those of development. Flexibility exists to enable a change from one phase to another without a break where the situation so demands.

Quality (QA/QC) is an integral part of the process throughout. The quality

approach is on a three-tier basis: Independent, Organizational and In-Team. Safety is an essential requirement, and is part of quality. Very detailed SOPs and adherence to them, together with strict conformance to national and international standards, is immutable.

IHDD and CMAD, because they are community-based concepts, make a meaningful impact in key areas related to mine action in rural areas. The true value and impact of IHDD and CMAD lie in improved safety and security (including that of vulnerable groups): confidence in the mine action process; boosting rural economies and development through providing access to denied land; and opening-up of feeder-roads. Community empowerment through sustainable self-management of the mine and UXO threat is also a goal.

Aspects such as quality and safety, as well as close monitoring of costs using both internal mechanisms and independent expertise are integral to IHDD/CMAD.

The IHDD adopts a technically inclusive approach to mine clearance technologies. It has available, and uses where appropriate and/or necessary, the three commonly accepted mine action technologies: Manual, MDDs and Mechanical.

Realistic recognition of implementation constraints, particularly in partner policy, institutional framework and finance, has led the IHDD to adopt a bottom-up, rather than top-down, approach. The approach takes cognizance of constraints; hence adopting a strategy based on the creation of sustainable local capacities.

IHDD, combined with CMAD provides a practical, cost-efficient and effective mine action strategy. We believe fervently that it is a strategy, which can be replicated in countries other than Mozambique.