LESSONS LEARNED
from the
International Pilot Project for Technology Co-operation

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Prepared for
The International Test and Evaluation Program for Humanitarian Demining

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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>TABLE OF CONTENTS</td>
<td>i</td>
</tr>
<tr>
<td>PREFACE</td>
<td>1</td>
</tr>
<tr>
<td>II. PURPOSE OF THIS REPORT</td>
<td>2</td>
</tr>
<tr>
<td>III. PRESENTATION OF RESULTS</td>
<td>2</td>
</tr>
<tr>
<td>A. Project Operations and Staffing</td>
<td>3</td>
</tr>
<tr>
<td>B. Scheduling</td>
<td>4</td>
</tr>
<tr>
<td>C. Funding</td>
<td>6</td>
</tr>
<tr>
<td>D. Information Transfer</td>
<td>7</td>
</tr>
<tr>
<td>IV. CONCLUSION AND RECOMMENDATIONS</td>
<td>8</td>
</tr>
</tbody>
</table>
PREFACE

The ‘lessons learned’, listed in the following report, were those encountered during the conduct of the International Pilot Project for Technology Co-operation (IPPTC). While the problems cited did cause time delays and/or additional financial expenditures, they did not, in the end, prevent the goals of the IPPTC program from being met. This success is attributable to the quality of the project team members themselves. Their professional approach to addressing problems and points of disagreement was always done with respect for one another and resulted in forming a strong collegial bond. The ingenuity displayed by team members in solving problems, especially those involved in the in-country field tests, should, for all times, dispel any thought that scholarly thinkers are hidebound thinkers. It is to the IPPTC project team members that this report is dedicated.
I. BACKGROUND

In mid-1998, concerned European and NATO nations initiated discussions to establish a cooperative program to address the test needs for humanitarian demining systems and equipment. These discussions led to the formation of the International Test and Evaluation Program (ITEP) on 17 July 2000. In anticipation of the forming of ITEP, four of the founding nations and an entity of the European Commission undertook a pilot project, in the autumn of 1998, to provide programmatic information, in the form of “lessons learned” to guide the planning and design of future ITEP-sponsored projects and test programs. The pilot project participants were Canada, the Netherlands, the United Kingdom, the United States and the European Commission’s Joint Research Centre (JRC). The name of the project was the International Pilot Project for Technology Co-operation (IPPTC).

The initial meeting of the IPPTC project team took place at Ft. Belvoir, Virginia, USA, in December 1998. All participating countries and governmental entities were represented. The “lessons learned” presented in this report were recorded as the project progressed. Most can be found mentioned in the minutes of the project’s meetings or in field trip reports of project participants.

II. PURPOSE OF THIS REPORT

It was recognized by the founding membership of ITEP that their desire to initiate a project quickly would be thwarted by the necessary process of defining and establishing an organization comprised of multiple nations and governmental entities. (This process, in fact, took almost two (2) years.) However, it was thought to be necessary to start a project as soon as possible so that the problems associated with multi-membership international programs could be identified and solutions addressed both by ITEP and, where necessary, by individual membership country or entity. Coincidentally, there was broad international interest in improving the ability to detect landmines for humanitarian purposes. Therefore, Canada, the Netherlands, the United Kingdom, the United States, and the JRC agreed to undertake a pilot test project of commercially available handheld metal detectors to 1) evaluate the detectors and, 2) identify ‘lessons learned’ (problems) associated with conducting multi-membership international test programs.

The balance of this report addresses point two in the above paragraph.

III. PRESENTATION OF RESULTS

The first public exposure of the IPPTC Lessons Learned was made at the 2001 UXO Forum meeting in New Orleans, Louisiana, in April 2001. For presentation purposes, the ‘lessons learned’ were grouped under general category headings that seemed appropriate. This general presentation approach is continued here but with some changes made to the general category headings.
The ‘lessons learned’ list is not all encompassing. The lessons presented, however, do represent those issues that took time to solve, slowed us down in the performance of our main task of testing the detectors, or simply came to mind when we identified ‘things that happened’ that we thought would never happen based on our collective experiences. Depending on the reader’s experience and background, the response to the lessons might be ‘well, of course’ or ‘they should have thought of that’ or even ‘what was the project team thinking of’. Be that as it may, each of the lessons cited cost the project something (in time, money, or frustration), and it is our hope that having forewarning, these lessons will not have to be repeated.

A. Project Operations and Staffing

1. Designate a single team leader: At the onset of the project, a single person was selected as the Project Coordinator. Unfortunately, this position title does not convey the extent of responsibilities that were eventually thrust upon this person. No project group, even one where all are considered technical equals and decisions are made by consensus, can operate without a leader. Someone must chair meetings, manage schedules, worry about financial commitments and obligations, negotiate impasses, and speak for the project to high authorities.

2. Create a Terms of Reference (TOR) Document: The time spent on drafting a TOR will be returned to the project many times over in time saved in discussing and negotiating issues, most of which relate to procedural or project business issues. The TOR can (should) address the purpose and objectives of the project, project membership, data rights, financial responsibility of membership, and project-peculiar project arrangements such as pre-agreed methods of payment or contribution (whether made with money, credits, or in-kind payment).

3. Allow time to discuss technical as well as administrative matters: In projects where the project work is done by subsets of the membership at times and facilities away from project meeting sites, time allowances for technical discussions must be made when periodic project meetings take place. Scheduled agenda items at early IPPTC meetings were primarily related to project business matters, e.g., schedule, budget, task staffing, project support requirements, and so on. Known specific technical issues were scheduled on meeting agendas, but it turned out that once technical discussions were started, related technical issues came to light that consumed large blocks of meeting time. With the project membership coming from different countries, the general meetings were the only time that all the members were together physically. It was quickly found that 2-3 day meetings were not sufficient and finally scheduled week-long meetings to accommodate the needed technical discussions.
4. **Establish an agreed upon decision making process:** Even though most future project decisions, like in the IPPTC project, will be made on a consensus basis, it was found that there were times when consensus could not be reached and a decision, rather than abandoning the issue, had to be made. Frequently, impasse situations are vested with as much emotion as fact. It is for times like these that a pre-agreed-to process should be established. And, it is not necessary that all such decisions be addressed by the same person. There can be designated project experts to handle technical impasses. Certain pre-identified types of decisions could even be addressed to a higher authority outside of the project. (We did not have this luxury).

5. **Each participating country must approach a project assignment as a formal time commitment for its technical personnel:** Test projects, such as the IPPTC, must be viewed as a valid project for the individuals assigned by the participating country members, and not be viewed as an ‘other duties as assigned’ task. The amount of work and time involved in designing and executing a test program, and in writing and editing the final report, are not insignificant. For some individuals, the time involved amounted to half of their working time, a time much greater than the time needed to just ‘attend project meetings’. In cases where such provisions for time commitments were not made, project tasks fell behind schedule, thereby impacting the efforts of all concerned.

6. **Foresight should be exercised in assigning personnel who appear will be available through the end of the project:** When the IPPTC was established, every person initially assigned was on the project to fill a specific function. Since such project staffing does not allow for staffing a responsibility or position in depth, it can prove to be a hardship to the project when people started to disappear for a variety of reasons, e.g., reassignments, job changes, and terminations. While no organization can guarantee that a specific individual will be available for an extended period of time, some forethought can minimize the occurrence of early departures. Ensuring adequate project time coverage certainly will have a positive effect. Requiring that a person honor a commitment to fulfill a project and providing them the latitude to do so, even though they may be promoted to another position, will also minimize early departures from a project. Each time a person was lost from the project, that person’s subtask suffered a time delay while another person became familiar with what was being done.

B. **Scheduling**
1. *When scheduling project activities, the project team should be sensitive to the fact that it may take more time to do something ‘as a committee’ or in countries other than one’s own:* On more than one occasion, the IPPTC found itself in a schedule bind because it had assumed that in working as a multi-national cooperative team, events would happen on the same schedule expected when working a project at home. Consideration was not given to the fact, for example, that one country’s acquisition procedures might not mesh with another team members; or, that a fast-track procurement would take the slow-track option when more than two entities became involved. But the real schedule problems arose when the project members projected their own scheduling experiences when scheduling activities in other countries. Resulting project delays were not measured in days, but rather in weeks and months.

2. *When field tests are required in member countries or in other countries, the field test leader should be in country at least a week, and in some cases, two weeks prior to the start of tests. In all cases, a pre-test visit should be made at least one month in advance of the tests.* The IPPTC test team leaders made pre-test visits to the ‘other countries’ in which we planned field tests to inspect test sites, arrange for local support, and to negotiate necessary business arrangements. In all cases, had these visits not been made, critical arrangements, which we thought would be handled by local contact, had not been made, or were made in a fashion not in keeping with the best interests of the project. In all cases, the arrival of the test leader one to two weeks in advance of the tests was necessary to handle ‘last minute arrangements’. Issues that had to be addressed included getting test equipment and instruments released by customs; negotiating acceptable means for payment of local support organizations; assuring that test sites were as required; and making arrangements for local lodging and transportation.

3. *Sufficient time must be spent on developing test plans and procedures to insure that the test objectives can be met. Identify the questions to be answered and then design the tests to acquire the necessary data:* While the IPPTC team did spend some time addressing test plans, it was more of a cursory review of test plans that were resident with various project members. While the project was quite articulate on what the project was to do, the team did not, in hindsight, spend adequate time in forming the questions that the project tests were to answer, and then examine each test plan and procedure to insure that the appropriate data was being collected. As a result, toward the end of the project the team found itself asking ‘do we have the data to answer this question?’ By this point in time, neither schedule nor budget allowed the project to revisit any part of the testing procedure.
4. Address the issue of test result presentation, at least in general terms, early in the project: The IPPTC team members were all government employees with defense backgrounds. Therefore, a lot of time was spent discussing the pros and cons of various ways of presenting the test results so that they had an impact, yet conveyed the message the project intended to deliver to a broad audience of readers. While this may not be a problem that can be totally avoided, it should be noted that many of the IPPTC data presentations were the result of a trial and error process.

C. Funding

1. A project budget should be created up-front and should represent the collective thinking of the participants. Parts of the budget may be expressed in anticipated people-time commitments (for planning use by the participating governments). The project budget can be made an appendix to the TOR. The project team found itself caught short, from time to time, by financial or business sins of omission. The project team did an excellent job in budgeting for the major project expenses, but tended to overlook the smaller expenses that became irritants. For example, the member countries each volunteered to cover the cost of shipping test items on one leg of the movement of the test items as they moved from test site to test site. In one case, the estimated cost that a member country agreed to pay had been by about 400%. Also, by not thinking through a budget up-front, or reviewing an existing budget from time to time, costs were encountered for which plans had not been made. These items became project irritants. Shipping, publication, the time to conduct tests and draft the report, and travel costs were all underestimated.

2. Recognition must be given to the problems associated with working in a cashed-based economy. Project leaders should not assume that third-party agents will work on contract or will understand the need to meet a project’s schedule. For example, money had been transferred to the US Embassy in Cambodia to pay for support from the local mine action center. The Embassy, following US acquisition procedures, was prepared to issue a check upon submittal of an invoice after the work was completed. The Cambodians insisted upon being paid in cash on a daily or weekly basis, as the work was performed. Only the resourcefulness of the Field Test Team leader saved the project from potential delay and/or derailment. In Croatia, over a months delay resulted when the project failed to take into account the time associated with the JRC contracting and payment process. (JRC acted as the project’s business agent for the Croatia Field Tests.)
3. *Future projects should ensure that their participating entities’ available funding for projects also has flexibility in use and disbursement or that their entities have flexibility in addressing monetary problems.* Funding transfers (not availability) proved to be a major challenge. As a case in point, one country paid the shipment bill for another country for the project’s test specimens and equipment between field test sites, with the understanding that the second country would repay the first country. When efforts were made to repay the first country, the second country’s acquisition system, whose procedures had not been followed in the agreement, could not legally make repayment.

D. Information Transfer

1. *Future projects would benefit from more access to humanitarian demining experts by the project team members.* In the case of the IPPTC project, the minimal access to professional deminers was generally handled on an off-line basis by one of the team members. While input was received, the overall project would have benefited from having one or two such experts as fulltime project team members. Should this be done, future projects will have to make financial provisions to pay for such participation.

2. *When conducting field tests in non-participants countries’, and particularly in lesser developed countries, the impact of using local languages must be taken into account during the project planning process. The translation of test and training documents to the level required can prove to be more involved than anticipated.* Prior to going into Cambodia, provisions were made to hire a person to translate the test and training documents into the local language. It came as a surprise when it was found out that the local deminers could not read. Furthermore, when training the local deminers in use of the mine detectors for the test, the services of a translator were required to convey the instructions to the deminers. Since English phrases often do not directly translate to other languages, training sessions were delayed from time to time while explanations were clarified. The same problem slowed the process of securing after test reports form the deminers. Since they could not read, they had to have the questionnaire read to them and filled out by a second person.

3. *Lack of standardized information on soil characteristics around the world will continue to cause extra work and cost for future mine detection sensor testing.* When conducting field tests in countries other than those of project participants, gathering test soils data will probably require that a soils expert be sent into the field as part of the test team to make the required measurements. Due to the magnitude of the undertaking to
assemble a worldwide soils characteristics database, perhaps the best way to address the problem would be to develop a standard soils test procedure to be followed for each test site. The IPPTC report discusses such an approach with appropriate recommendations.

4. *What becomes of project data and who has rightful access to it is a key issue that should be addressed and agreed upon for each project. At a minimum, each team participant should have the right to see and use the data during a test project.* Many issues surround the use of data from projects such as the IPPTC. From the project’s participants point of view, decisions should be made as to what each participating rights are regarding data that each participant generates as his contribution to the project. On a broader scale, there are liability issues associated with publishing test results that a manufacturer may not consider favorable. Also, thought should be given to how published equipment performance data might be used to gain a competitive advantage.

IV CONCLUSION AND RECOMMENDATIONS

All the objectives of the IPPTC program were met. The in-air and in-soils laboratory tests and field tests of the hand-held metal detectors were quite successful in the depth of information made available, for the first time in one place, on a critical class of humanitarian demining equipment. And while the project ran smoothly, for the most part, the obstacles and irritants faced and solved, provided the opportunity to compile a list of ‘lessons learned’ for use in future ITEP test projects.

Many of the recorded ‘lessons learned’ should be addressed by future project teams themselves. Project planning, scheduling, staffing and so on, are items best worked by those conducting the project. Developing project budgets will include not only project team members, but also ITEP support functions, sponsoring agencies in participating project entities’ governments, and possibly outside organizations that may become involved.

Also, a number of the ‘lessons learned’ should be addressed by ITEP. Issues, such as developing a standard Terms of Reference framework which projects can amend to suit particular project needs, would best be handled by ITEP. Also, positions on legal issues should be addressed by ITEP or its Executive Committee.

In concluding, if only one recommendation were to be made, it would be that the ‘lessons learned’ cited in this report should be taken seriously and addressed. If not, these problems will again cost time and money for future projects.