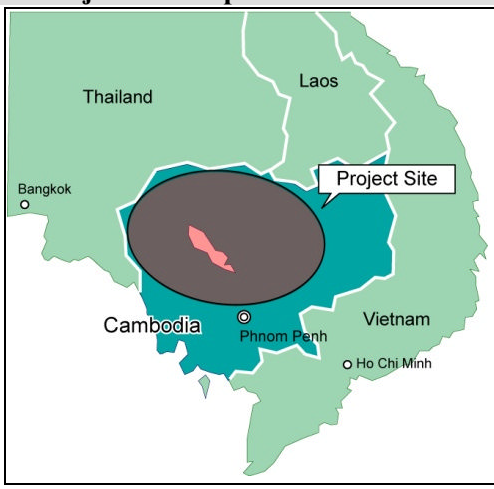
Kingdom of Cambodia

Ex-Post Evaluation of Japanese Grant Aid Project

"Project for Improvement of Equipment for Demining Activities (Phase IV)"

Mr. Koichiro Ishimori, Value Frontier Co., Ltd

1. Project Description



Project Location

Staff detecting landmines

1.1 Background

The Vietnam War and the Civil War in Cambodia from the early 1960s to the late 1990s have resulted in a wide spread of landmines in the land of the country, and it has become one of the most affected countries. The landmines that were buried during the period are estimated to be 4 million to 6 million and are not still cleared even today. Threats to safe lives of the people and hindrances of effective land use have been preventing it from developing in economic and social terms.

1.2 Project Outline

The objective of the project is to promote landmine clearances by procuring equipment and vehicles required to clear landmines for the Cambodian Mine Action Centre (CMAC).

Grant Limit/ Actual Grant Amount	1,761million yen/1,525 million yen
Exchange of Notes Date	August 2004
Implementing Agency	Cambodian Mine Action Centre (CMAC)
Project Completion Date	June 2005
Main Contractors	(1)(5)(6): Sirius Corporation (Japan), (2): Toyota Tsusho Corporation (Japan), (3)(4): Itochu Corporation (Japan), (7): Marubeni Corporation (Japan).
Main Consultant	Pacific Consultants International (Japan)
Basic Design	Basic Design Study on the Project for Improvement of Equipment for Demining Activities (Phase IV)

	March 2004 to October 2004
Related Projects	JICA "Project for Strengthening CMAC's Function for Human Security Realization"

2. Outline of the Evaluation Study

2.1 External Evaluator

Mr. Koichiro Ishimori, Value Frontier Co., Ltd

2.2 Duration of the Evaluation Study

Duration of the Study: November, 2009－September, 2010

Duration of the Field Study: 13 February, 2010－26 February, 2010

8 May, 2010－17 May, 2010

2.3 Constraints during the Evaluation Study

Equipment and vehicles required to clear landmines that have been procured by the project are operated at 8 provinces and 1 city[1] (approximately 83,820 km^2). The study has been able to check their operation status through the database run by CMAC. Due to limitations on the budget and time available for the study, the study has been unable to check it through field visits to all the project-related locations.

3. Results of the Evaluation (Overall Rating: A)

3.1 Relevance (Rating: a)

3.1.1 Relevance with the Development Policies/Plans of Cambodia

The Second Five Year Socioeconomic Development Plan (2001-2005) at the time of the basic design aimed by 2005 at clearing 144 km^2 of land of landmines that were impeding rural development under one of its priorities, economic growth and poverty reduction. CMAC's Five Year Strategic Plan (2003-2007) aimed at annually clearing 18 km^2 of land of landmines and tried by 2007 to achieve at least 30% of reduction in casualties compared to the 2001 figures.

The National Strategic Development Plan (2006-2010) at the time of the ex-post evaluation study aims by 2010 at clearing 120 km^2 of land of landmines that are still impeding rural development under one of its priorities, reforms of the agricultural sector. CMAC's Five Year Strategic Plan (2010-2014) aims at annually clearing 30 km^2 of land of landmines and tried by 2012 to achieve zero victim.

[1] Banteay Meanchey, Battambang, Pailin, Preah Vihear, Kampong Thom, Kampong Cham, Pursat, Siemreap, Oddar Meanchey.

3.1.2 Relevance with the Development Needs of Cambodia

It was said that there were 4 million to 6 million landmines in Cambodia, and the number of annual casualties was 898 in 2004. While the size of the total areas of which CMAC as a national leading demining organization was expected to clear and release through survey was approximately 3,852 km^2, the size of the areas which CMAC had cleared from April 1993 to March 2004 was only 113 km^2, approximately 3% of the total areas. Therefore, the project that has procured equipment and vehicles required to clear landmines and constructed the central workshop in order to accelerate landmine clearance activities met the development needs at that time. In light of the above, the needs of the project were judged to be high.

It is said that there still leave millions of landmines in Cambodia, and the number of annual casualties is still 215 in 2009. While CMAC has been recently making great progress in clearing landmines, the size of the areas which CMAC has cleared from April 1993 up to now is still 260 km^2, approximately 7% of the total areas. Therefore, the project that has procured equipment and vehicles required to clear landmines and constructed the central workshop in order to accelerate landmine clearance activities still meets the development needs today. In light of the above, the needs of the project are judged to be high.

3.1.3 Relevance with Japan's ODA Policies

The Charter on ODA (2003) highlighted the importance of landmine clearance activities from the perspective of human securities.

The previous Mid-term Policy on ODA (1999) also prioritized landmine clearance activities from the perspective of human securities under one of its priorities, conflicts/disasters and development.

The Country Assistance Strategy for Cambodia (2002) considered landmine problems in Cambodia as an unavoidable agenda for its reconstruction and growth and highlights the importance of providing comprehensive supports for landmine clearance activities under one of its priorities, realization of sustainable economic growth and stable society.

Besides, the project is judged to be relevant in that it took the form of a grant aid project considering its humanitarian nature.

In sum, this project has been highly relevant with the country's development policies/plans, development needs, as well as the Japan's ODA policies, therefore its relevance is high.

3.2 Efficiency (Rating: a)

3.2.1 Project Outputs

The planned and actual outputs of the project are described in Table 1, including notes and reasons in case of a difference between the two.

Table 1: Outputs

Plan (Basic Design)	Actual (Ex-post Evaluation)	Notes
(1) Procurement of equipment & vehicles: ・Mine detectors (600 units) ・Wagon & pick up (66 units) ・Truck & Trailer (52 units) ・Bulldozer (2 units) ・Motorbike (51 units) ・Brush Cutter (14 units) ・Others, e.g. Radio (1 set)	(1) Procurement of equipment & vehicles: As planned	Procurement of equipment & vehicles and construction of the workshop was appropriate for improving effects/ impacts and sustainability of the project.
(2) Construction of the central workshop: 1 location	(2) Construction of the central workshop: As planned	

Source: Cambodian Mine Action Centre (CMAC)

3.2.2 Project Inputs

3.2.2.1 Project Period

The project period planned for the basic design was about 9 months[2] including tender procedures. The actual project period was also 9 months from October 2004 (tender opening) to June 2005 and thus same as planned.

3.2.2.2 Project Cost

The project cost planned for the basic design was 1,761 million yen. However, the actual project cost was 1,525 million yen and thus lower than planned[3].

In sum, the actual project period was same as planned and the actual project cost was lower than planned, therefore the efficiency of the project is high.

3.3 Effectiveness (Rating: a)

3.3.1 Quantitative Effects

Table 2: Operation Indicators

Indicators (unit)	2003	2005	2006	2007	2008	2009
Land cleared of landmines (km^2)	10.5	22.1	26.8	27.7	33.8	35.5
Locations cleared of landmines (place)	225	543	585	570	755	572
Accidents during clearance (case)	6	11	6	4	0	1

Source: Cambodian Mine Action Centre (CMAC)

[2] The 9 months do not include the period of trial operations of brush cutters.

[3] Due to introduction of brush cutters, the unit cost of landmine clearance per m^2 by CMAC is cheaper than that by other NGOs that clear landmines in the country.

Due to the introduction of brush cutters and other equipment and vehicles by the project, the size of the land cleared of landmines became 22.1 km^2 in 2005 when the project completed, which was twice of the 2003 figure before the project, and already exceeded the 2007 target, 20 km^2. The total size of the land cleared of landmines from 2006 to 2009 reached 123.8 km^2, and it resulted in the earlier achievement of the 2010 target, 120 km^2, which is set by the National Strategic Development Plan (2006-2010).

Locations cleared of landmines in 2005 became 543 places, which was nearly twice of the 2003 figure, and already exceeded the 2007 target, 300 places.

The number of accidents during landmine clearance activities in 2005 nearly doubled in comparison to the 2003 figure due to doubled activities. Despite ever growing activities, however, it has since 2006 been decreasing because of thorough safety control of them.

Brush cutter

Central workshop

3.3.2 Qualitative Effects

According to the beneficiary survey[4] that was conducted towards 100 households who live near the project sites during the ex-post evaluation study, it was found that 100 households out of 100 were satisfied with the project. According to the hearings that were done towards 5 deminers, it was found that 5 deminers out of 5 acknowledged that safety and efficiency of landmine clearance activities got improved due to the project.

In sum, this project has largely achieved its objectives, therefore its effectiveness is high.

[4] The beneficiary survey was implemented at Pramoy village and AngLong Reap village of Pursat Province. They were chosen because in other project sites NGOs that have nothing to do with the project have been carrying out respective landmine clearance activities, and consequently it is difficult to objectively measure effects and impacts brought by the project. In the two villages, 50 households were randomly chosen, respectively.

3.4 Impact

3.4.1 Intended Impacts

Table 3: Indicator on the Living Environment

Indicator (unit)	2003	2005	2006	2007	2008	2009
Landmine casualties (case)	664	741	390	280	237	134

Source: Cambodian Mine Action Centre (CMAC)

The number of landmine casualties in 2005 at the project-related provinces and city increased in comparison to 2003. Since 2006, however, it has been significantly decreasing due to expansions of land cleared of landmines and mine risk education towards people (134 cases in 2009 indicates that there are still lands that are not cleared of landmines).

According to the beneficiary survey mentioned above, 100 households out of 100 answered that the project contributed to building schools and hospitals in their neighbors. Similarly, 100 households out of 100 answered that the project contributed to making them feel safe to live.

In sum, both the statistical data from CMAC and the results from the beneficiary survey indicate that the project has contributed to improving the living environment of the project-related provinces and city.

3.4.2 Other Impacts

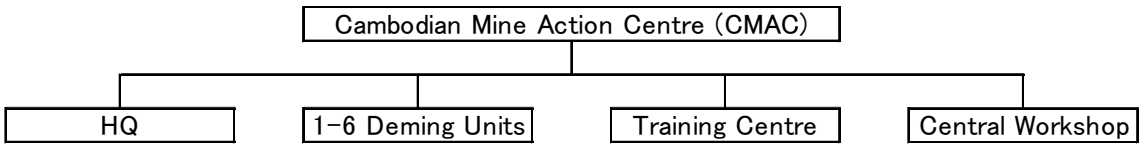
The ex-post evaluation study examined other impacts, such as those on the natural environment, resettlement, and land acquisition, and other unintended impacts through the beneficiary survey and hearings from CMAC, but there have not been such observations.

In sum, the project has had impacts on improving the living environment of the project-related provinces and city, and thus only the positive impact is observed.

3.5 Sustainability (Rating: a)

3.5.1 Structural Aspects of Operation and Maintenance

Structure of operation and maintenance is same as planned at the time of the basic design. The procured equipment and vehicles are operated by full-time staff (ranging from 162 to 488 depending on Demining Units (DU)) under operation and planning section of each of the 6 DUs of CMAC and are maintained by 21 full-time staff under technical affairs section at the newly constructed Central Workshop.



Source: Cambodian Mine Action Centre (CMAC)

Chart 1: Organizational Diagram of CMAC

3.5.2 Technical Aspects of Operation and Maintenance

The educational level of the staff at operation and planning section of the 6 DUs of CMAC ranges from an elementary school diploma to an university degree, but they have been operating all the procured equipment and vehicles with no problem. Besides, they have been receiving trainings[5] at the Training Centre and trying to improve their technical capability. Therefore, there seems to be no technical problem with them.

The educational level of the staff at the Central Workshop of CMAC also ranges from a junior high school diploma to a post graduate degree, but they have been maintaining all the procured equipment and vehicles with no problem. Besides, they have been receiving on-the-job-trainings (OJT) under another JICA project[6] and trying to improve their technical capability. Therefore, there seems to be no technical problem with them.

3.5.3 Financial Aspects of Operation and Maintenance

The balances from 2006 to 2008, which were available at the time of the ex-post evaluation study, were positive in all respective years. The governments of the developed countries[7] that have been supporting roughly 90% of the annual total budget of CMAC have expressed their intentions to continuously support CMAC in the future. The Royal Government of Cambodia that has been supporting the rest of it has also its intentions to do that, because it has been not only putting a high priority on the Five Year Mine Action Plan (2010-2014) but also making an international commitment to fully clear antipersonnel landmines by signing and ratifying the Ottawa Treaty[8]. Therefore, there seems to be no financial problem with CMAC.

---

5 Trainings vary from field surveys of mine fields to mine detection and clearance activities.

6 Since April 2008, JICA has been implementing "The Project of Strengthening CMAC's Function for Human Security Realization" for the duration of 2 years and a half. This contributes to improving technical capability of the staff at the Central Workshop and largely the sustainability of the project.

7 United States of America, Canada, Germany, The Netherlands, Sweden, Australia and others.

8 The official name of the treaty is Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destructio. 156 counties have signed and ratified it as of March, 2009.

3.5.4 Current Status of Operation and Maintenance

All the procured equipment and vehicles are well operated by each DU, and therefore there seems to be no problem. They are also well maintained through the database[9] at the headquarters and each DU, and therefore there seems to be no problem.

The constructed Central Workshop is also well operated and maintained by its staff, and therefore there seems to be no problem.

In sum, no major problems have been observed in the operation and maintenance system, therefore sustainability of the project is high.

4. Conclusions, Recommendations, and Lessons Learned

4.1 Conclusions

The relevance, efficiency, effectiveness, impacts, and sustainability of the project are all high.

In light of the above, this project is evaluated to be highly satisfactory (A).

4.2 Recommendations

4.2.1 To CMAC

In order to promote its landmine clearance activities, CMAC should make efforts to diversify sources of funds and expand funds by approaching governments in the developed and developing countries that have not supported CMAC and multinational companies that may be interested in landmine clearances as their Corporate Social Responsibility (CSR).

4.2.2 To JICA

The equipment and vehicles procured by the project have been depleted due to heavy use under severe circumstances. Meanwhile, it will take Cambodia another 16 years to clear landmines from the mine fields that are considered to require to use them (approximately 583 km^2), even though it can keep the present efficiency of landmine clearance; i.e. 35.5 km^2 per year. In order to keep the present efficiency, therefore, it is important to renew depleted equipment and vehicles. Particularly, depletions of brush cutters[10] and vehicles[11] are significant. Since the Project for Improvement of Equipment

9 "The Project of Strengthening CMAC's Function for Human Security Realization" mentioned in the footnote 6 has been developing and improving the database as well. This again contributes to sustainability of the project.

10 According to CMAC, 10,000 hours of operation is the timing for renewal of brush cutters. While the operating hours of all the brush cutters that were procured by the project reached 7,000 hours as of March 2010 and they had another 2 years before reaching the timing for renewal, those of brush cutters that had been procured before the project already reached over 10,000 hours.

for Demining Activities (Phase V), signed in March 2009, does not include renewal of such equipment and vehicles, it is recommended that JICA should include it in the Project for Improvement of Equipment for Demining Activities (Phase VI).

4.3 Lessons Learned

A study by CMAC found out that the major factors contributing to the reduction in the number of landmine casualties were not only the increases in the land cleared of landmines but also the wide spread of mine risk education towards people by CMAC. It is therefore important to pay due attention to implementation of mine risk education when JICA supports landmine clearance activities in other countries in the future.

Comments from the Third Party Evaluator

1. Comments on the project

The project has built into a recognizable important part of remedy for Human Security. Landmines have been a concrete obstacle to development and rehabilitation of nations under post-war reconstruction, such as Cambodia. The contribution to address landmine issues itself is addressing the core issue in a more strategic manner toward long term sustainable solution of livelihood of communities directly impacted by the landmines and the rest of the country. Cambodia needs this contribution and JICA has provided it. What this particular project deserves an outstanding attribution is that it has enabled both the landmine clearance activities twice faster than before and having reduced significantly the number of landmine casualties.

2. Comments on the way the evaluation is done

The method that is applied for the evaluation is effective because it has a clear scientific frame for its measurement with precise baseline information, clear indicators, and using available secondary data as much as possible, such as records and reports from the implementing agency (in this case CMAC). That for sure brings about an accurate rating for the project; therefore, supporting a conclusion of the success. From hearing about and looking at the evaluation report and from my own experience, the recommendations are relevant and practical.

Mr. Soth Plai Ngarm, Board Member/Research Director,
Centre for Peace and Conflict Studies, Cambodia

[11] According to CMAC, 120,000 km of drive is the timing for renewal of vehicles such as wagons and trucks. The average driving distance of all the vehicles that were procured by the project already reached 140,000 km as of March 2010, exceeding 20,000 km, and that of vehicles that had been procured before the project reached over 200,000 km.