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CAMBODIAN MINE ACTION CENTRE

Annual Report January-December 2005



Saving Lives and Supporting Development for Cambodia



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FOREWORD

May I express, on behalf of all CMAC staff, my sincerest appreciation and gratitude to the Royal Government of Cambodia, all donors, partners and friends, for their valuable and continual support to CMAC. Taking this opportunity, I am honored to present you CMAC Annual Report from January to December 2005.

In the period from January to December 2005, **22,086,486m²** was cleared and released to the communities in support of risk reduction and development. On top of that, **1,437,124** linear metres of mined affected areas was marked for subsequent clearance as well as to warn villagers from stepping into dangerous areas. Further, **3,503** hectare of area reduction conducted by TST teams was made for specific clearance in the next stage. This operational achievement equals to **32.58%** over the work plan. In total **74,165** anti-personnel mines, **851** anti-tank mines and **128,865** UXO were found and destroyed during this period. Beneficiaries from these activities include **37,582** families and **5,990** students of **99** villages. However, we are very sad that one of our EOD team leaders, Mr. Sa Kea, lost his life during the operations in Banteay Meanchey Province. We sadly share this tragedy with his family and friends and appreciate his valuable work with CMAC for over 10 years.

In regard to costing, the yearly financial statement indicates that the global cost per square meter is less than fifty cents before depreciation. However, this calculation is not based on net cost on clearance alone, but it includes overhead costs and costs on the overall activities such as mine risk education, marking/survey, EOD activities, training and other costs associated with strengthening of the community participation in mine action through the participatory approach such as building the volunteer network for Community-Based Mine Risk Reduction and Community-Based UXO Risk Reduction programs in 30 high landmine/UXO casualty districts.

With the arrival of 14 new brush cutters (vegetation cutting machines) donated by the Government of Japan in Phase IV, we are confident that these machines will tremendously help to relieve most of the difficulties our deminers are facing - the heavy vegetation and small metal fragments which usually consume between 60%-70% of total demining time. New demining tools and methodologies have been initiated and applied, for example, the formation of long leash MDD teams, the improved practice of manual clearance and search drill (combined one-man lane and two-man lane drill), and the improvements to MDD and Brush Cutter operational SOP. This is of utmost importance if CMAC is to utilize its tools and strengths to the maximum to respond to the requests by the communities in a timely manner.

On the management side, CMAC tirelessly seeks better ways and approaches to ensure the sustainability and efficiency of the organization. CMAC is committed to employing the best practice embraced by other organizations of national and international standard. CMAC constantly works to achieve continual improvements in organizational culture and behaviors through encouraging employee participation, sound human resource management and capacity building. For instance, CMAC has sent over 30 middle managers to participate in the middle management training conducted by Cranfield University. Audit reports also reflect many improvements, cost effectiveness and transparency in CMAC with satisfactory

audit opinion on the overall CMAC management. CMAC has been implementing ISO 9001:2000 since February 2004, and it has acknowledged of being done well in the surveillance audit in September 2005 as part of their follow up audit which conducted by BM TRADA from Bangkok.

In addition to the management progress mentioned above, CMAC constantly seeks further improvements and assurance to the quality of its demining service. CMAC has adopted a policy of "Safety, Quality and Productivity" and has communicated this policy to all levels of the employees. In realizing the importance of the mine action service, CMAC works tirelessly to provide the optimum assurance to our customers that our work is of high safety and quality standard. In this regard, CMAC has strengthened a sound field monitoring system and team. As a leaning organization, there are always rooms for improvements.

The above remarkable achievements have been a result of the strong commitment, effort and motivation of our deminers and staff.

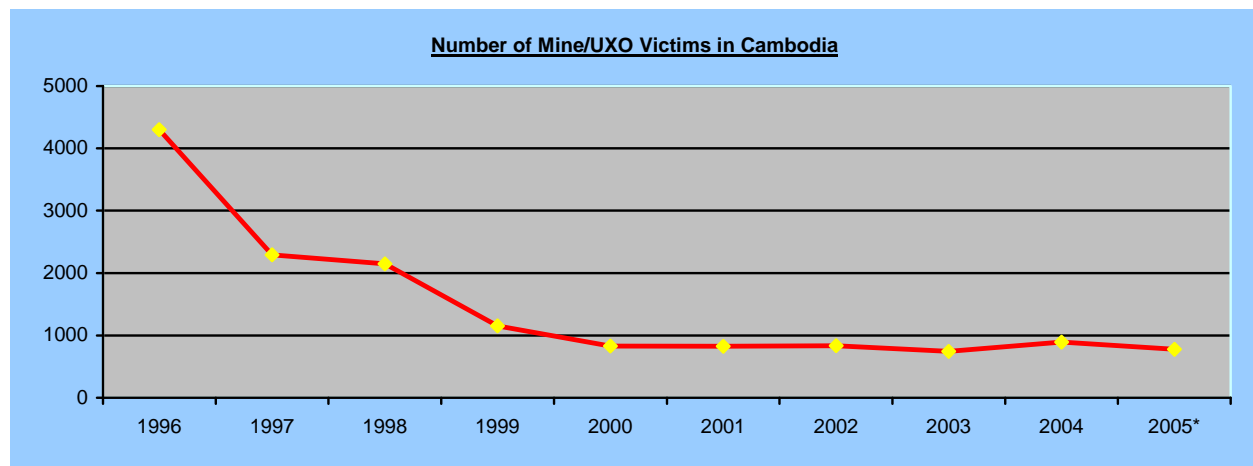
Once again, may I express my sincere gratitude to the international community, governments, peoples, international and local partners for the continued support and commitment to help reduce the suffering and risks of the Cambodian people so that a safe environment for development and livelihood can be restored in the country. This continued support is crucial for both the humanitarian and development causes. We appreciate that this important investment is the prerequisite to high economic returns, poverty reduction, and social/democratic improvement in the affected communities.



Khem Sophoan
Director General
CMAC

EXECUTIVE SUMMARY

Despite enormous efforts by all the demining operators in Cambodia in the last 12 years to combat the landmine and UXO problem, these killing tools still continue to maim and kill around 800 to 900 people per year. Based on the CMVIS report, the following casualty data have been recorded in the last few years.



Note: 2005 statistics for January – October.

In the past 13 years, CMAC made significant achievements in solving the landmine and UXO problem and contributed remarkably to the casualty reduction, community development and people's awareness of the risks associated with their daily activities in the affected areas. The following shows the result of CMAC's operational activities, in terms of clearance and mine/UXO destruction, from 1992 to December 2005:

- Number of areas cleared: 2,678 areas
- Area cleared: 145,276,264 m²
- Area marked: 4,355,933 m
- Area reduction: 52,910,000 m²
- Anti-personnel mines: 310,990
- Anti-tank mines: 5,573
- UXO: 1,027,876
- Small calibers: 26,300 kg
- Fragments: 332,052,440

The Work Plan 2005 set an objective to provide beneficiary support to 4,840 families directly and 36,287 families indirectly in 216 mine/UXO high contamination villages. To achieve this socio-economic objective, the Work Plan set out to clear 310 sites equivalent to a total of approximately 16,658,000 m² of contaminated land. Of this clearance target, 88% was set for community development purpose and the remaining 12% for emergency response to risk reduction tasks. In addition, the CMAC also planned to deploy the 21 EOD teams to collect and destroy at least 100,800 pieces of UXO. The Plan was designed in full accordance within the national framework including the Provincial Mine Action Committee (PMAC) and Mine Action Planning Unit (MAPU). However, due to the nature of unforeseen situations, the Plan was designed to carry certain flexibilities associated with diverse factors including financial contributions, environment and resource availability.

In the reporting period, CMAC deployed the following teams to implement the Work Plan:

MINE ACTION TEAM	Year 2006											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1-Demining site	4	4	2	2	2	2	2	2	2	2	2	2
2-Normal Demining Platoon (NP)	11	11	6	6	6	6	6	6	6	6	6	6
3-Mobile Demining Platoon (MP)	33	33	38	38	38	37	37	37	37	37	37	37
4-Explosive Ordnance Disposal Team (EOD)	21	21	21	21	21	21	21	21	21	21	21	21
5-Technical Survey for Clearance Task (TSC)	19	19	19	19	19	19	19	19	19	19	19	19
6-Community Mine Marking Team (CMT)	14	14	14	14	14	14	14	14	14	14	14	14
7-Mine Awareness Team (MAT)	6	6	6	6	6	6	6	6	6	6	6	6
8-Community-Based Mine Risk Reduction (CBMRR)	13	13	13	13	13	13	18	18	18	18	18	18
9-Community-Based UXO Risk Reduction (CBURR)	2	2	2	2	2	2	13	13	13	13	13	13
10-Mine Detection Dog Team (MDD)	8	8	8	8	8	9	9	11	12	12	12	12
11-Mechanical Brush Cutter (BC)	12	12	12	12	12	12	26	26	26	26	26	27
12-Technical Survey Team (TST)	4	4	4	4	4	4	4	4	4	4	4	4
13-Mine Risk Reduction Team (MRT)	6	6	6	6	6	4	4	4	4	4	4	4
14-Community-Based Demining (CBD) platoon	1	1	1	1	1	1	1	1	1	1	1	1

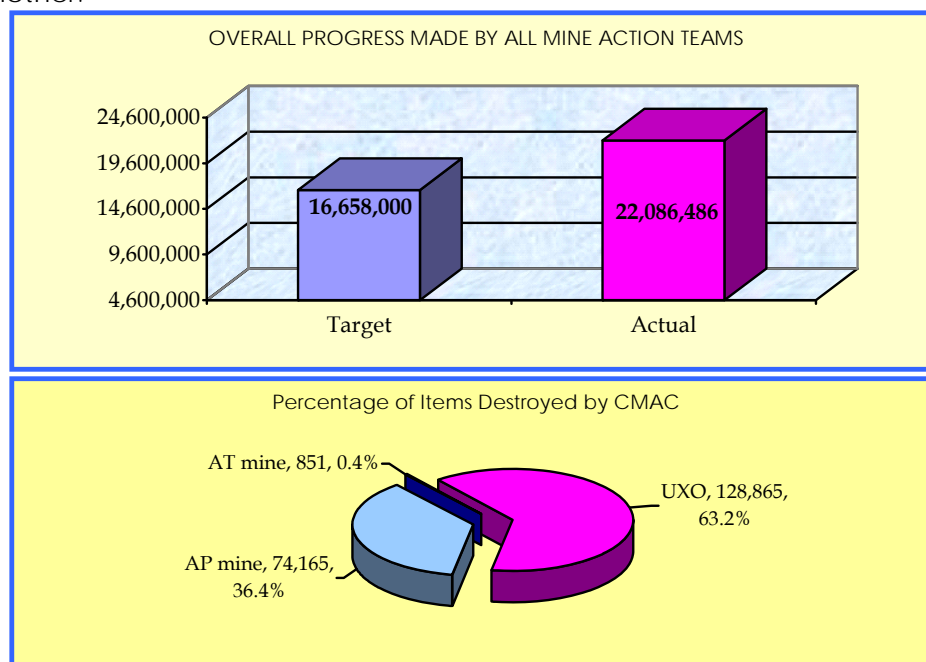
To support the total capacity deployed in the field operations, CMAC has been funded through two main channels: the UNDP Trust Fund and bilateral agreements, commonly called bilateral projects. Through 2005, in addition to the UNDP Trust Fund, CMAC was engaged in the following bilateral projects and partners:

Project Title	Project Donor/Partner	Project Location
The Integrated Demining and Development Program	Netherlands/NPA Cambodia	DU1, Banteay Meanchey
The Project to Support Community Mine Marking Teams	Rotary International	DU1, Banteay Meanchey
The Project for Supporting Humanitarian Demining Activities in Battambang Province, Phase III	Japan	DU2, Battambang
Integrated Demining and Development Project	CARE Cambodia	DU2, Battambang
Humanitarian Min Action Project in Pailin and Samlot	The United States of America	DU3, Pailin
The Project for Supporting Humanitarian Demining Activities in the Provinces of Kompong Thom, Oddar Meanchey and Preah Vihear	Japan	DU4, Preah Vihear
Mine Clearance and School Construction Project	Peace Boat, Japan	DU4, Koh Ker, Preah Vihear
Mine Clearance and School Construction Project	Peace Boat, Japan	DU1, O Sampor II, Banteay Meanchey

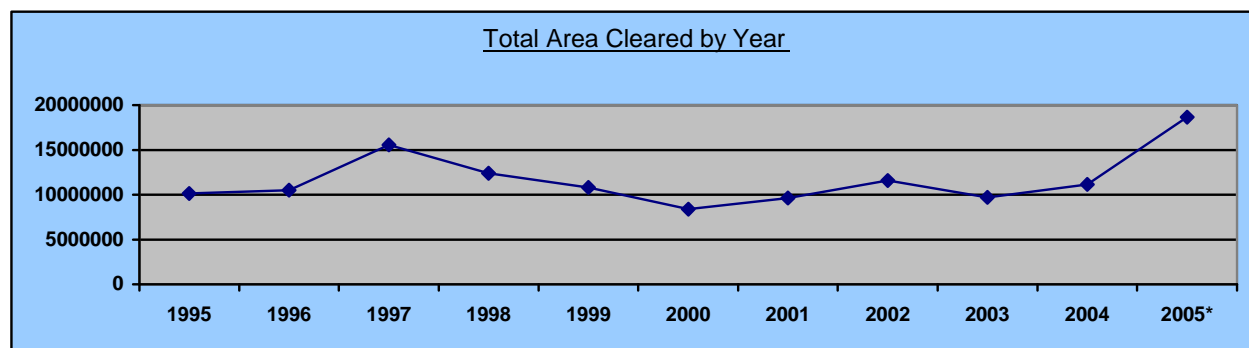
The Project for Supporting Humanitarian Demining Activities in Pursat Province, Phase II	Japan	DU5, Pursat
Mine Clearance and Risk Reduction in Kra Kor, Kra Vanh and Veal Veng Districts	Save the Children Norway	DU5, Pursat
Humanitarian Demining in Siem Reap and Oddar Meanchey	Germany	DU6, Siem Reap & Oddor Meanchey
CMAC-JMAS Project for UXO Clearance Activities	JMAS	Prey Veng, Svay Rieng & Kandal
CMAC-JMAS Project for CBURR	JMAS	Prey Veng, Svay Rieng & Kandal
Mine Awareness and CBMRR Project	UNICEF, HIB and NPA	Battambang, Pailin, Banteay Meanchey

The last twelve months of 2005 witnessed a remarkable operational achievement combined with a number of new initiatives in operational methods and technologies. These improvements and positive changes were a result of CMAC's commitment to the policy of "Safety, Quality and Productivity" to meet the donor and partners' requirements as well as the changing environment in mine action.

During the reporting period, CMAC achieved the highest operational productivity ever accomplished since its establishment. Compared with the previous years, the progress within this period is even higher than the total productivity in some previous years, and nearly as high in some years. It is worth mentioning that during this period, CMAC encountered a serious accident involving death of an EOD team leader during operations and loss of both eyes to another.



Description	12-month Progress
Number of areas (minefields) cleared	541
Area cleared (m ²)	22,086,486
Area Reduction (m ²)	35,030,000
Area marked (m)	1,437,124
Anti-personnel mines	74,165
Anti-tank mines	851
UXO	128,865



Note: Progress in 2005: January – October Progress only.

Besides mine and UXO clearance, CMAC also carried out other important mine action (non-clearance) activities such as mine risk education, survey, area reduction, training and community-based mine/UXO risk reduction program through a participatory approach whereby the affected community is empowered to carry out mine/UXO awareness education, risk assessment, prioritization of mine action tasks and establish community mapping about the scope of mines and UXO in their own community. At the same time, CMAC also develops a mine/UXO training package for local authority as commune council and police. Through 2005, CMAC's mine awareness teams and CBMRR network conducted a total of 42,229 household visits, 855 sessions, reaching an audience of 298,208 people, 38% of whom were children.

It should be noted that in prioritizing the minefields for clearance, CMAC fully follows the PMAC and MAPU process. This incorporates the socio-economic assessment and land use after clearance. The following table shows the beneficiaries from the land that CMAC cleared in 2005.

Type of Beneficiary	Platoon & MDD
Direct beneficiaries (families)	2,768
Indirect beneficiaries(families)	34,814
Students (person)	5,990
Beneficiary villages (villages)	99
Minefields cleared and handed over	541

It is worth highlighting that this remarkable attainment of the highest operational productivity during the ten months was a result of a number of contributing factors. The changing environment in mine action, improved methodologies and technologies, enhanced organization behavior, sound control and monitoring system and constant commitment to continual improvements in all areas of operations and management are some of the factors contributing to the high productivity.

As far as methodologies and technologies are concerned, it should be observed that CMAC has made continuous efforts to improve its demining service through better mine action methodologies and technologies. One of the mine action tools currently employed, the Technical Survey, makes significant contributions to the overall mine action productivity through thorough minefield survey to define the real boundary of a confirmed minefield, identify a suspected minefield, confirm a no-threat area, and recommend appropriate tools to be used in each type of minefields. The selection of subsequent mine action tools are based on this information. No-threat areas are usually released for community use and this is usually known as area reduction. The effective toolbox integration (use of appropriate tools

in the same minefield to respond to different types of terrain sophistications) also contributes to the high productivity. This toolbox concept has been the core focus in CMAC and great efforts have been made to optimize this practice. Manual search clearance and search drill (combined one-man lane and two-man lane drill) was also a good initiative to improve the field productivity and efficiency. In addition, the introduction of long leashed mine detection dogs, the attachment of deminers to the brush cutter teams and the continual improvements to the SOP's were some of the innovative approaches to optimize mine action outputs in response to increased needs for safe land. Improvements in human resources management (converting operationally non-productive staff to be operationally productive) also have an effect on the overall productivity. As a result, Headquarters and Training Centre staff were reviewed and reduced where possible so that more funding could be channeled to field operations.



With such a very high productivity and good progress, CMAC has never compromised on quality and safety. The policy of "Safety, Quality and Productivity" has been adopted and communicated to all levels of the employees. The rule of safety and quality has compelled CMAC to work tirelessly to provide the optimum assurance to all customers that CMAC's work is of high safety and quality standard. In this regard, CMAC has established, maintained and expanded a sound field monitoring system and body, both internal and external. This monitoring

system has a vital role in ensuring and assuring that land cleared by CMAC meets the national and international standard and is safe for intended uses. This monitoring system also ensures that the mine action process employed by each tool follows proper SOP's for the respective tool. In addition to the internal and external monitoring, CMAC's mine action projects are also regularly audited to ensure full compliance, transparency and efficiency. Audit reports on different projects reflect satisfactory audit opinion on the overall CMAC management as well as financial management. CMAC has also successfully maintained ISO 9001:2000 since February 2004 and the recent follow up surveillance audit has also confirmed to do well and with some recommendations for further improvements.

One important milestone in CMAC's collaboration and partnership effort in mine action was the CMAC - MAG Cooperation Agreement whereby CMAC contracts 2 MDD teams to MAG. This implies significant accomplishments, experience as well as the increased credibility of CMAC's MDD in the mine action community and the importance of MDD as a tool in mine action. According to the discussion, another team would be contracted to MAG in support of MAG's humanitarian demining effort. This cooperation agreement indicates not only the importance of MDD as a tool in mine action and the credibility of CMAC's MDD program but also the partnership, cooperation and coordination between demining operators in Cambodia, which is one of the prerequisites to mine action success in this highly contaminated country. The Swedish Government financially supports CMAC MDD capacity development. CMAC also partners with the Geneva Centre for International Humanitarian Demining (GICHD) and the Norwegian People Aid (NPA) in the field of MDD technical assistance.

Another highlight in CMAC's mine action effort in 2005 has been the establishment of explosive harvesting research facility at CMAC's Training Centre by Golden West Co. Ltd. funded by the US State Department. This research program aims to enhance and expand CMAC's EOD capacity to combat UXO and to develop safe and effective technology to extract explosives from remnants of wars for use by demining organizations in their humanitarian combat with landmine and UXO problem. The research facility is now up and running and employs experienced international experts to conduct research and train Cambodian counterparts in explosive harvesting. When fully functional, the explosive program will save donors and the Government millions of dollars on explosive procurement and transportation, minimize security and safety problems associated with transportation of explosives and help end the environmental pollution derived from UXO demolition.

An important value-added component in mine action operations is the equipment maintenance. Vehicle, mine detector and radio communication maintenance has been one of the most demanding and critical tasks which requires appropriate skills, facilities and management. Seeing this importance, the Japanese Government approved through the Grant Aid the construction of a repair and maintenance workshop in Battambang capable of housing major repairs of vehicles, brush cutters (heavy machines), mine detectors and other radio communication equipment. With this Workshop, CMAC will be able to increase its efficiency and effectiveness in terms of equipment provision to support field operations. Together with this maintenance workshop, the Japanese Government provided a grant aid worth more than 16 millions US dollars in equipment to support CMAC's mine action activities. This grant equipment, which was handed over to CMAC on 27 June presided over by the Prime Minister, symbolizes the continued commitment and support to CMAC for the quality of its work and contribution to the risk reduction, poverty reduction and community development.



Mine was situated under bamboo root, at minefield, Pailin

CMAC constantly works to achieve continual improvements in organizational culture and behaviors through encouraging employee participation, sound human resource management and capacity building. In this respect, CMAC has sent over 30 middle managers to participate in the middle management training conducted by Cranfield University. Minefield management, helicopter zone construction and medical training were delivered by the US trainees to CMAC staff. During the first six months, CMAC Training Centre (TC) held a total of 30 training courses attended by 1,033 trainees. In addition to training its own staff, CMAC's TC also provided training to external demining organizations. For instance, in the second quarter, deminers of the RCAF, who were expected to be sent to participate in humanitarian demining in Sudan, received training conducted by CMAC TC's instructors.

Yearly financial statement indicates that the global cost per square meter is less than fifty cents before depreciation. However, this calculation is not based on net cost on clearance alone, but it includes overhead costs and costs on the overall activities such as mine risk education, marking/survey, EOD activities, training and other costs associated with

strengthening of the community participation in mine action through the participatory approach such as building the volunteer network for Community-Based Mine Risk Reduction and Community-Based UXO Risk Reduction programs in 30 high landmine/UXO casualty districts.

Two other important events should also be noted. First, the visit by the famous movie star Jackie Chan, the UNICEF Goodwill Ambassador, in April 2005 marked an important event for international relations, highlighted for the humanitarian cause how much children and victims of remnants of wars can suffer and stressed the serious need and importance to combat landmines and UXO in Cambodia. The visit served not only to raise mine and UXO awareness but also called for more action against these hidden killers which continue to make people, especially innocent children, to suffer.



Mine was found in the corn farm, Pailin

Another event to be highlighted was the inauguration of CMAC's new headquarters building donated by the Royal Government of Cambodia. The new office building not only radically improves the working environment and professionalism of the staff, saves the Government's budget for rent, and provides better facilities to support effective and efficient work, but also symbolizes the Royal Government's full effort and commitment to support CMAC and mine action activities as a whole.

To maintain low costs in operations is challenging affairs for management. Demining activity is a human based effort; there has been a strong interest in CMAC what it calls resource based human resource management, in which human resources are viewed as the basic of competitive advantage. This means that CMAC achievement is not only derived from the formal reorganization and reshaping of work in the field of financial and logistic management, but it is also powerfully derived from within the workforce in terms of the training and expertise available to the



Mine was situated under house's column, Pailin

organization, the adaptability of employees which permits the organization strategic flexibility, and the commitment of employees to the organization's business plans and goals. In line with this vision, there are a number of initiatives are introduced to the organization such as long leash dog trial was successful and now is in operations. One man one lane and two men one lane has been implemented. ISO 9001:2000 accreditation is still in a good shape after ISO Audit firm from Thailand conducted an audit in September of 2005.

INTRODUCTION

This Progress Report provides an account of the achievements, progress and issues of the Cambodian Mine Action Centre during twelve-month period of this year. It is structured in a way, which provides the reader with easy, up-to-date information regarding CMAC's activities of different tools. Comparisons are also made between the progress and the Work Plan, and where appropriate, explanations for under-achievements or excessive over-achievements. In general, it can be noticed that the overall progress for the reporting period is much higher than the targets. This is due to several factors as described in this report.

This Progress Report outlines organizational culture and behavior changes, the overall mine action progress in twelve months of 2005, the implementation of bilateral projects, and the accounting and financial management as well as its financial statement for the reporting period. It also includes true stories about mine survivors and some public relations activities.

The *organizational culture and behavior changes* section describes the progress in overall management, including corporate and operations, finance and logistics, as well as new initiatives designed to improve safety, quality and productivity of CMAC's demining operations. Support, Human Resources and Finance management highlights remarkable collaborative efforts and achievements in terms of maintaining and continually enhancing cost effectiveness, sound and transparent resource management, addressing several critical issues in the support and human resources functions and improving Accounting and Finance policy and procedures.

All bilateral projects implemented by CMAC are highlighted in Bilateral Projects section, which describe the activities and achievements of each project during the period of twelve months of 2005. This section also provides a socio-economic description of each project.

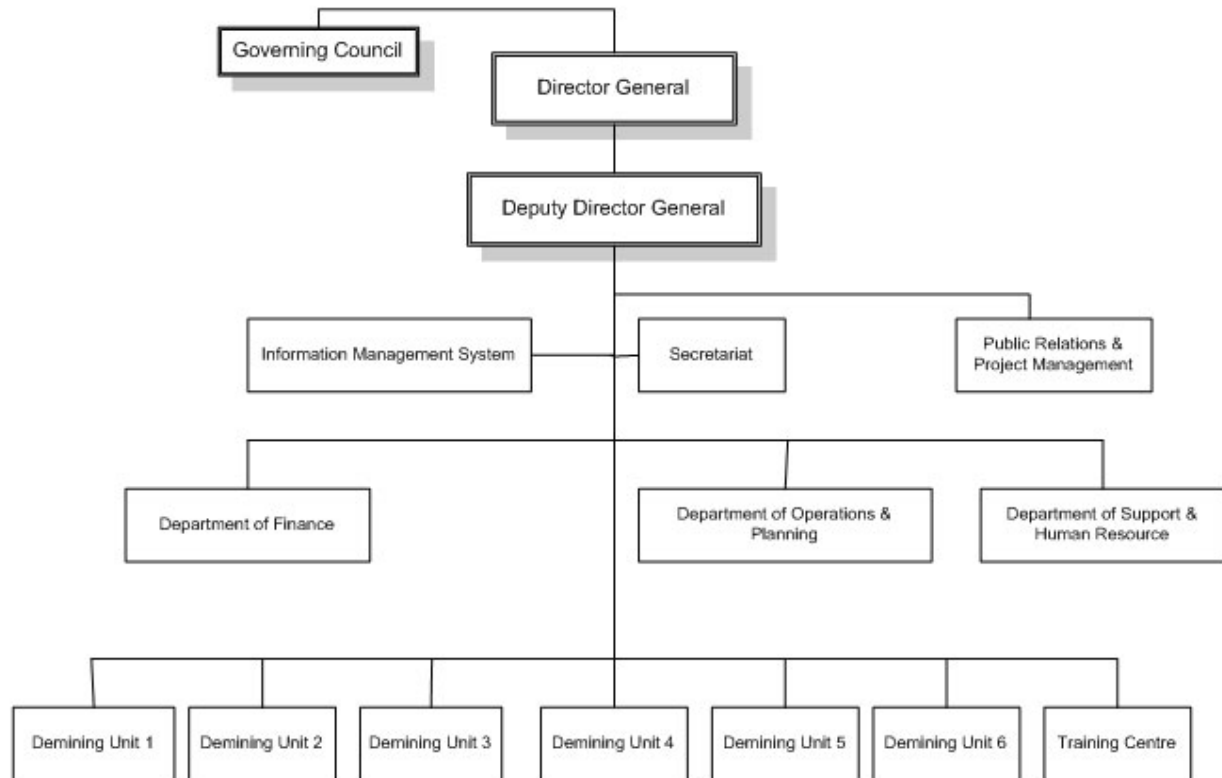
The *Mine Action Achievement* section provides details of the deployment during the reporting period, the progress made by each mine action tool compared to the set targets in the Work Plan, the overall progress during the period, the socio-economic account, as well as the challenges faced by CMAC. This section lays out the core activities of CMAC. As the reader may take note, the overall operational achievement is very high in terms of productivities. Reasons are given to explain as to why this was possible.

This report ends with voice of landmine survivors who survived landmine accidents and continue to struggle with life, with the inheritance they received from the legacy of wars. These stories are indeed touching and true, and reveal the true tragedy caused by landmines and UXO as a post war problem. These are only a few stories to be told. There are many untold stories, which are sometimes beyond ordinary people's imagination and may never be told or heard of. It is also possible that these untold stories are even more tragic or heart-breaking than the one you hear.

Organizational Culture and Behavior Changes

1. Corporate Management

CMAC ORGANIZATION CHART



1.	H.E. Mr. Ieng Mouly	Delegated Chairman
2.	H.E. Lt. General Pol Saroeun	Vice Delegated Chairman, Deputy Commander in Chief and Chief of Joint Staff of RCAF
3.	H.E. Mr. Khem Sophoan	Secretary -General The Director General of CMAC
4.	H.E. Lt. Gen. Mol Roeup	Member Advisor to the Prime Minister and Deputy Chief of Joint Staff of RCAF
5.	H.E. Mr. Rath Sarin	Member Undersecretary of State, Ministry of Land Management, Urbanization and Construction
6.	H.E. Mr. Sak Setha	Member Director -General of Administration, Ministry of Interior
7.	H.E. Mr. Sok Chenda	Member Secretary General of the Council for the Development of Cambodia

Long-term strategy and changes in mine action are driven factors for CMAC management to set up an optimal vision to meet this new challenged environment. In 2005, it also emphasis on positive changes in good governance and organizational culture as a major indicators for its achievements. As cost minimization is also a key principle for changes and in mine action, human resource (deminers) is a driven resource and a key tool for success, thus CMAC management has been a strong interest with human resource management what CMAC calls resource based human resource management, in which human resources are viewed as the basic of competitive advantage. This means that CMAC achievement is not only derived from the formal reorganization and reshaping of work, but it is also powerfully derived from within the workforce in terms of the training and expertise available to the organization, the adaptability of employees which permits the organization strategic flexibility, and the commitment of employees to the organization's business plans and goals. To manage and control this change is to be like the child who digs up the newly planted and now germinated seed to see "what it is growing". In the same way, CMAC performance and achievements are driven from different contexts with various elements and layers of strategies.

The organizational culture and behavior changes has been linked to changes in mine action with the impact of globalization leading to the need for better service, cost effectiveness, flexibility, responsiveness and the quality. With strong commitment to these qualities is not only having an impact on CMAC as an organization, but on the overall cost and productivity of demining operations. Despites some foreseen and unforeseen problems of financial shortfalls, CMAC has been able to double its productivity in the first six months of this year, lowering the cost to a reasonable level. The changing environment, policies and funding mechanisms and levels in mine action as well as internal drive to achieve efficiency and cost effectiveness have made this possible.

Strategically, the rolling Five-Year Strategic Plan which continues from the original Five Year Plan 2003–2007 has served a clear vision and provided an indicative direction in mine action for CMAC. Entering the third year of implementation, CMAC proves to be on the right track towards significantly contributing to the vision landmines and UXO impact free set by the Royal Government of Cambodia. The Work Plan 2005, through a bit humbly set to meet the funding situation, reflects CMAC's effort to adhere to the Strategic Plan. Based on the operational progress achieved in this progress report, it is reasonable to assume that the level of productivity will reach that set in the Five-Year Strategic Plan while the level of cost is significantly reduced. The reasons for the high productivity and low cost will be elaborated in this Report.



As part of CMAC's commitment to good governance, transparency and cost effectiveness, a number of audits are conducted each year on different projects implemented by CMAC. CMAC's proof of good governance, efficiency and transparency is reflected in several recent audits reports by different well-known audit firms such as PricewaterhouseCoopers, KPMG and Ernst & Young, which have expressed satisfactory opinion on the overall management of CMAC, with some rooms to be improved. The implementation of ISO 9001-2000 is another good example of CMAC's strong commitment to quality management system, which is the backbone for a successful organization. In addition to these, the White Paper, which CMAC established in 2004, continues to be a very important document which

guides CMAC in terms of organizational behavior and culture changes. Positive results have been noticed in the overall performance of the staff, operational achievements and change in organizational behavior. CMAC maintains its continued effort to implement this white paper especially as it moves toward a more competitive environment in mine action.

In addition to these guiding documents, CMAC management has made tireless efforts to strengthen CMAC and build up its capacity to meeting the changing environment in mine action. Effective fund raising, project management, promotion of partnership and ownership, national and international coordination and relations, internal capacity building, in-house management issues, safety and quality of demining, financial management and effective deployment (to suit the resources available) – these are some of the critical tasks which consume a great deal of the management time. As a learning organization, CMAC management will constantly seek for better ways for organization, by defining an appropriated policies and work practices to “fit” the generic strategies of cost reduction, quality enhancement and safety through innovation of new demining technologies and methodologies.

It should be noted that at one time during the first six months of this year, there are 16 different projects to be managed. These projects often require separate audits, monitoring, and reports (both operational and financial). In addition to these projects, CMAC in its capacity as a national organization is actively in involved with key international mine action organizations such as GICHD to share its experience as well as to learn from others.

One important milestone in CMAC’s collaboration and partnership effort in mine action was the CMAC – MAG Cooperation Agreement whereby CMAC seconded 1 CMAC’s MDD team to MAG. According to discussions, another team would be seconded to MAG in support of MAG’s humanitarian demining effort. This cooperation agreement indicates not only the importance of MDD as a tool in mine action and the credibility of CMAC’s MDD program but also the partnership, cooperation and coordination between demining operators in Cambodia, which is one of the prerequisites to mine action success in this highly contaminated country.

In strong efforts to improve demining technologies and methodologies, CMAC is committed to bringing in the most advanced technologies to be employed in mine action. Several test and research projects were and will be carried out in CMAC, including test of different types of mine detectors (including new types of detectors), the Explosive Harvesting Research Program, test of mechanical brush cutters, trial of new search drill, demining methods and long leashed mine detection dogs. Work is under way to test mechanical clearance machines and other new initiatives, which are expected to help increase demining productivity and efficiency.

2. Operations Management

CMAC does not ignore global changes in mine action. Besides safety and output –oriented approach, CMAC also made noteworthy progress in other areas of operations and introduced new initiatives aimed to improve its humanitarian demining capacity to respond to the serious need of the affected communities as well as the changing environment in mine action.

Throughout recent years and in the progress report 2005, attention was given to reducing costs wherever possible while not compromising the safety, quality and productivity. A number of initiatives, trials and research projects have been successfully introduced and implemented to improve effectiveness and efficiency as well to expand the technical capacity of CMAC’s operations. These initiatives include:

- Trial of **long leashed mine detection dogs** started in early October 2004 and now two long leashed MDD teams are fully operational. One more team is under training and is expected to be formed in the beginning of next year.
- **UXO Surface Search** has been trialed and the SOP is being established to enable this operation in the near future. It is worth noting that most of the EOD's current activities are busily involved with collecting UXO found on the surface or handed over by the villagers, local communities, local authorities or the military or police forces. It is assumed that this mode of UXO collection will be changed in the future and buried UXO will have to be retrieved in order to give way to development and safe livelihood.
- **Community Based UXO Risk Reduction (CBURR):** This effort introduced into CMAC in March 2004 by establishing two Community Based UXO Risk Reduction Districts in Kandal and Kampong Speu Provinces as part of its 8 months trial. 2005, CMAC collaborates with Japan Mine Action Service (JMAS) by deploying 12 CBURR in 12 districts in 6 provinces. This effort is became an important tool for information sharing, coordination and speeding up intervention action in responding to the requests of the community related to UXO threats.
- **Strengthening Local Authority (Police) on UXO Risk Reduction:** UXO accidents have been increased due to a number of factors that including laws reinforcement, economic pressures as well as coordination and intervention action. In order to strengthen this collective effort, it is vital to reassure that the local community and local authority " know how "to work and communicate each other. To address this issue CMAC has developed a training package for police officers. Training priority was given to police from the highest casualty areas as indicated in the Cambodian Mine Victim Database of the Cambodian Red Cross.
- Trial of **one-man lane (OML)** drill and **two-man lane (TML)** drill working together were conducted in order to find ways to improve clearance productivity. The result was positive and both methods are being implemented.
- Trial of **brush cutters to clear mines** was conducted. The trial was completed at the end of December 2004 with a positive result. This became fully operational since early 2005. In addition, currently 4 deminers are attached to a brush cutter team to conduct clearance.
- **Community-Based Demining (CBD)** teams have been established and deployed in Kamrieng district of Battambang under the supervision of Demining Unit 2 (DU2). This concept of CBD demining is a success and CMAC is planning to establish another CBD in Preah Vihear Province in the second half of this year.
- Work is under way to restructure the current CMT and MRT teams into a 9-member team, likely to be called Community Clearance Team (not yet decided) which will operate to respond to risk reduction requests in high casualty communities. These teams will be very flexible and will be able to respond to urgent risk reduction tasks.
- **Mine Detection Dog teams contracted to MAG:** Given long experience and cost effectiveness in operations, MDD is now considered a tool of choice for some demining operators. As a result, a Cooperation Agreement has been signed between CMAC and MAG whereby CMAC contracted two MDD teams to MAG. It is expected that more teams will be contracted to MAG in the future under this cooperation.

- EOD Harvesting Project:** to safeguard environmental pollution as a result of UXO demolition, and to reduce procurement of explosive to support the operations, CMAC and Golden West Co., Ltd. are working together on a research project, funded by the State Department, to expand CMAC's EOD capacity to extract explosives from mines and UXO for re-use by demining operators. This is safe and economic technique and will reduce environmental and soil pollution significantly.

3. Logistics and Human Resources Management

The Support and Human Resources is a key tool to support the field operations as required. There were a total of 2,095 permanent employees and 191 SSA-Special Service Agreement as at December 2005. The Number of permanent staff slightly decreased from 2,204 staff in January to 2,095 staff in December.

Internal Audit

Based on our internal audit scope, a summary of ratings for each of the areas under review has been provided below:

Section	Rating	Number of Findings
Overall organisation	Satisfactory	3
Programme	Satisfactory	1
Human resources	Satisfactory	8
Finance	Satisfactory	3
Procurement	Satisfactory	6
General administration	Partially satisfactory	10
Information systems	Satisfactory	4
Overall Rating:	Satisfactory	

The definition for each rating is provided below:

Rating	Definition
Satisfactory	In general, controls were in place to ensure that operations are economic, efficient, and effective; and that activities are conducted with due regard to CMAC and UNDP values. Any weaknesses identified were not significant enough to compromise the overall performance and the control environment. The range of corrective actions required by management is moderate.
Partially satisfactory	The majority of key controls were applied. However, some significant control weaknesses were identified. Timely corrective action by management is required to correct these weaknesses.
Deficient	Control weaknesses identified were widespread or were significant enough to have a negative impact on performance. Management needs to take immediate corrective action to improve the control environment.

Those who have experience in the field of mine action would not argue that demining is a very dangerous job. CMAC therefore posts safety in the first rank among its four core values. Logistically, responding to the safety requirements is a serious challenge for CMAC. Being well prepared for the worse case is another challenge, sometimes mismatched by the limited resources and the cost saving requirement.

With the collaboration with and support from JICA experts, computer system including Staff File, Fixed Assets Tracking System (FATS) for Human Resources and Logistics Management is being developed and will be introduced into implement in 2006. These computer systems will be a value tool for Support and Human Resources Department to improve their performance toward transparency, accountability and cost effectiveness.

A support workshop, a two days workshop started from 29 to 30 November 2005, was held in Demining Unit 2, Batambang Province in order to identify the weaknesses on logistics supply, vehicle maintenance, fuel and lubricant consumption, control mechanism and report system, and find the strengths and opportunity in supporting CMAC demining activities. The participants of the workshop were come from Support Department, Demining Units 1-6 and Training Center who are being responsible in the area of support. The representative from Finance Department and JICA expert, Adviser to Maintenance and Transport, were participated and provided their presentation, comments, clarify that added more value to the workshop.

Another key accomplishment to be highlighted is the ratification of the Human Resources Policy Manual by the Governing Council of CMAC on 19 November 2004 following months of development, reviews and interim implementation. This revised manual features some positive changes in the human resources policies, which provide clear guidelines in the human resources management as well as encourage and motivate the employees in general in the performance of their duties.

3.1. Logistics and Procurement Management

Logistics and Procurement Services are a key factor in the operations even in a military field. CMAC has tried all the best and always made initiatives how to properly support its operations at the field, and how to well manage its support chain and secure its asset movement from one place to another when deployment take place.

- Coordinated, verified, received and custody the equipment from the Project for improvement equipment to support demining activities in Cambodia, Phase IV. The received equipment including Mine/UXO Detectors, Brush Cutter, Vehicles and Motorbikes, and other demining equipment that worth up to more than 16 millions US Dollar. These equipments will be distributed to all demining units to support and speed up the demining activities,
- As demining technique was modified (Safety distance), Logistics Office has coordinated and provided PPE to all deminers in all demining units in order to ensure the safety in demining,
- With approval from Property Survey Board (PSB), all unserviceable consumable stores were and will be disposed at Demining Units. Format and instruction for this disposal were provided and disseminated to all demining units in order to ensure a smooth implementation,
- With the approval from top management, a re-supply method from CMAC Center warehouse to all demining units is implemented. This process will provide better time and opportunity for all Logistics Officers of all demining units in support providing to demining activities on grown. Format and instruction for re-supply process were provided and disseminated to all demining units in order to ensure a smooth implementation,
- A global list of broken fixed assets was prepared and sent to Property Survey Board for approval and take further action as required.
- Involved in fixed assets disposal. As results, 47 broken vehicles belong to Royal Government of Cambodia, after receiving approval from



Equipment Received from Japan's ODA, Phase IV



the Council Ministers, were transferred to governmental organizations. Unserviceable and un-repairable assets including motors, demining tools, office equipment 1,353 items were disposed through auction and other assets 203 items that could not be recovered were destroyed (burned).

- Involved and coordinated in order to update CMAC Cost Database for 2005, and for project proposal preparation.
- Integrated MDD supply chain from Training Center into Logistics Supply System.



Equipment Received from Japan's ODA, Phase IV



Re-supply activities (Central Warehouse)

3.2. Medical Service

Medical staffs have used all their best effort to provide hygiene education and health promotion, consultation and treatment in order to improve CMAC staff health, especially the deminers who are working on the mine fields in the remote areas. Through these effort, in 2005, the disease was decreased by 20.15% (Disease statistics) compared to 2004. Especially, the malaria was decreased by 43.17%.



Medical Kit Checking



After applying updated demining methodologies and technologies, and conducting disciplinary countermeasures, the CMAC staff injured by mine and UXO in 2005 was decreased by 14.29% compared to 2004. A significant point is that the management and

CMAC staff of all levels has used all the best ability and effort in providing medical evacuation, treatment and re-deploy them into CMAC appropriate activities. As result, 63.64% of the injured staffs are re-deployed in 2005.

With the collaboration and support from US Embassy, 20 CMAC staff (Medics) from different demining units and different demining areas were trained on basic and advance medical course conducted by the US trainers/facilitators in Training Centre, Kampong Chhnang. With this training course, the capacity of the medics is upgraded and their works are improved.



3.3. Maintenance and transportation

Transportation is the biggest component of CMAC operation and as such constitutes the largest cost items in the inventory. The cost is accumulative in spare parts, fuel and maintenance costs. In order to strengthen and improve the capability and quality of vehicle maintenance toward cost effectiveness, a workshop building and vehicle repair tools were constructed and equipped followed by a series of training for mechanic staff in order to help them familiar with these tools. These building and tools were granted from the People of Japan through the Project for Improvement Equipment to Support Demining Activities in Cambodia, Phase IV.

Currently, maintenance and repair services for brush cutter are provided by the Central Workshop. Mechanic team for brush cutter was reformed and the number of mechanic staff was increased in order to respond to a heavy workload. A guideline for brush cutter maintenance and repair services is being reviewed and developed.

A series of discussion were conducted in order to restructure the central workshop



Central Workshop facilities in Battambang Province

to stand as a Demining Unit and increase the workload of the workshop on Service C and heavy repair, maintenance and repair vehicles of the Demining Unit 2, and this workshop will be an autonomy body to sustain its operations in the future.

In order to provide better quality of maintenance services, share the experiences and lesson learnt, a rotation of mechanics between Demining Units and Central Workshop was conducted. The department of Support and Human resources with assistance for Maintenance and Transport Section has held a number of meetings with drivers and mechanics from different Demining Units and central Workshop to explain the pre-prevention measures and maintenance procedure, the requirement of participation and ownership, and counter measures to be taken and disciplinary actions as well.

3.4. Human Resources

The Human Resources has played its important roles and contributed to enable CMAC achieve its objectives and goal. We can highlight the major activities of Human Resources in 2005 as the following:

- Reformed Demining Unit 5 to be Forward Office of Demining DU2. In this reform, some positions were reduced or deleted such as deputy manager, logistics assistance, socio-economic assistance, mechanic and driver. However, as the scope of work is remained big (JPN07), the management mode is approved to keep as a Demining Unit 5 until the end of the year 2005.
- Staff reformed for Headquarter, Demining Units and Training Centre. This reform including reducing un-produced staff (their responsibilities can be handed to or added to other staff) such as interpreters, building maintainers and radio operator, re-arrangement position (upgraded position for Standard, increased number of operation assistance, converted CMT medic to be a mobile platoon medic, converted supervisor to be an operation assistant etc.), re-arrangement salary scale, created new position (truck trailer driver for all demining units), and reviewing job descriptions.
- Reformed mobile platoon, brush cutter teams and mine detection dog teams. This reform including staff reducing such as section commanders, store-man and first aid driver for MDD teams, and creation new position such as team leader, assistant team leader and deminers for brush cutter team and senior dog handler.
- Coordinated and prepared training courses for the affected staff from the reform process. Those staff were trained and re-employed as brush cutter operators, deminers attached to brush cutter, truck trailer drivers, close marker for MDD teams etc.
- Established Quality Assurance (QA) team with its members comes from TC manager and instructor, Survey Officer, Internal Audit for Operation and Explosive Field Officer. The team is based in Demining Unit 2 and equipped with technical equipment to enable this team to conduct their duty perfectly.
- Through a governmental motivation system, CMAC management staff received 54 Medals including ..., gold 4, silver 19, and bronze 29.
- Through staff performance appraisal for the year 2004-2005, 168 Office and field staff from Headquarter and different Demining Units was evaluated to be the outstanding staff of CMAC and received letter of appreciation from the Director General.

- In order to share knowledge and experiences, 57 students from different institutions, universities and agencies were selected as interns to work on the areas of Human Resources, Procurement, Management Information System, Public Relation and Finance.
- Coordinated and facilitated training on medical, mine field management and helicopter zone construction. These training courses were conducted at Training Center (Kampong Chhnang) and Demining Unit 3 (Pailin) for 120 staff come from different Demining Units and Training Center. The Courses were supported by the US Embassy.



Mine Field Management: a Helicopter Zone Construction Training Activities at DU3, Pailin

- With support from US Embassy, Department of Support and Human Resources facilitated and sent 19 staff from different Demining Units, Training Center and Headquarter of CMAC to attend the Middle Management for Mine Action conducted by Cranfield collaborated with VBNK at Siem Reap.
- Facilitated and sent 2 EOD staff for overseas training in Belgium.
- Facilitated for ISO training, which was conducted at CMAC Headquarter for 22 staff.

4. Accounting and Financial management

Financial position in the first six months tends to be a bit difficult for some aspects, but it could be no problem for overall operations. Limited cash flows from UNDP could be led to some trouble in staff feeling.

Cash flows from most of projects seemed to be a bit difficult because of some fluctuation in foreign exchange rate.

Financial Procedures Manual and Financial Policy Manual have been enacted and approved by the Director –General of CMAC for interim use, and training has been provided to all relevant staff of Demining Units.

5. New CMAC Headquarters Facilities

CMAC new building Headquarters was inaugurated on 27 June 2005 under the auspicious of the Prime Minister Hun Sen, who always pay close attention to CMAC and provide CMAC with a proper workplace by building this new building situated at Duong Ngeap Street, Phoum Kork Chombak, Sangkat Chom Chao, Khan Dong Kor, Phnom Penh. The new building location is of 8,000m², building surface is of 2,500m². The new building is constructed by OCITY Company with the total costs of 724,739 dollars (land and building) and 8 months was spent to build the new building. The new building consists of 32 rooms: 2 meeting rooms, and 29 working offices with one library room.



It should be recalled that over the last 12 years, CMAC has hired a private building to run its operation activities by using a lot of the Government Counterpart funds. Therefore, the decision to build the new building not only identifies the Government's advocacy for CMAC, but also witnesses the economic decision making in saving the national budget. Another important aspect is that to have a new building can make CMAC staff confident and warm in their working environment. And it can build a trust of donors and development partners.



PROJECTS IMPLEMENTATION

Projects implemented by CMAC in 2005 were channeled through UNDP namely UNDP Trust Fund, and directly came to CMAC upon donors and development partners.

UNDP TRUST FUND

The involvement of UNDP with mine action and especially with CMAC started in the UNTAC era after the emergency phase in 1992/3 upon the request made by the United Nations Secretary General to assist the Royal Government in the administration of the demining program in Cambodia.

The current donors to UNDP trust Fund are Adopt-A-Minefield USA-UNA, Australia, Belgium, Denmark, France, Japan, Netherlands, New Zealand, Norway, South Korea, Sweden and the United Kingdom. The financial contribution through UNDP Trust Fund is vital for CMAC to maintain the current level of operations as well as capacity building within the framework of a national organization. This contribution is shared among other bilateral donors to ensure that CMAC operations effectively respond to the needs of communities. The UNDP Trust Fund allows flexible support for all CMAC's four core activities. In other words, without UNDP Trust Fund CMAC will not be able to fully function and to carry out its mandate.

In 2005, based on CMAC transaction records, USD 3,083,360.29 was received from CMAC major donors through UNDP Trust Fund. The table below shows donors and fund received by CMAC through UNDP Trust Fund.



No.	Donors	Amount of Financial Assistance in dollars
1	AAM	289,934.57
2	Australia	1,526,808.67
3	France	136,944.02
4	Japan	283,018.94
5	Norway	224,473.01
6	Sweden – Capacity Building	622,181.08
Total fund received through UNDP in 2005		3,083,360.29

Besides running the administration of CMAC demining program, this contribution can be used in demining operations in various mines and UXO affected provinces. In 2005, the productivity of land cleared by UNDP Trust Fund is approximately 7,902,859m². The cost per square meter can be lower than fifty cents.

BILATERAL PROJECTS

Projects signed between CMAC and donors or development partners are called bilateral projects. In 2005, there were 13 bilateral projects implemented by CMAC.

Summary of Bilateral Projects Implemented In 2005

Project Title	Project Donor/Partner	Project Location
The Integrated Demining and Development Program	Netherlands/NPA Cambodia	DU1, Banteay Meanchey
The Project to Support Community Mine Marking Teams	Rotary International	DU1, Banteay Meanchey
The Project for Supporting Humanitarian Demining Activities in Battambang Province, Phase III	Japan	DU2, Battambang
Integrated Demining and Development Project	CARE Cambodia	DU2, Battambang
Humanitarian Min Action Project in Pailin and Samlot	The United States of America	DU3, Pailin
The Project for Supporting Humanitarian Demining Activities in the Provinces of Kompong Thom, Oddar Meanchey and Preah Vihear	Japan	DU4, Preah Vihear
Mine Clearance and School Construction Project	Peace Boat, Japan	DU4, Koh Ker, Preah Vihear
Mine Clearance and School Construction Project	Peace Boat, Japan	DU1, O Sampor II, Banteay Meanchey
The Project for Supporting Humanitarian Demining Activities in Pursat Province, Phase II	Japan	DU5, Pursat
Mine Clearance and Risk Reduction in Kra Kor, Kra Vanh and Veal Veng Districts	Save the Children Norway	DU5, Pursat
Humanitarian Demining in Siem Reap and Oddar Meanchey	Germany	DU6, Siem Reap & Oddor Meanchey
CMAC-JMAS Project for UXO Clearance Activities	JMAS	Prey Veng, Svay Rieng & Kandal
CMAC-JMAS Project for CBURR	JMAS	Prey Veng, Svay Rieng & Kandal
Mine Awareness and CBMRR Project	UNICEF, HIB and NPA	Battambang, Pailin, Banteay Meanchey

1. CMAC – NPA PROJECT IN DEMINING UNIT 1, BANTEAY MEANCHEY: The Integrated Demining and Development Program

1.1. Project Background

This project is supported by the Netherlands through the Norwegian People’s Aid in Cambodia (NPA), implemented by CMAC Demining Unit 1 in Banteay Meanchey Province, with an amount of USD 2.5 millions to support a 4-year Integrated Demining and Development Program in Northwest Cambodia. The project period runs from May 2004 to December 2007. During the reporting period following resources were mobilized:



- Demining unit1 office staffs (21 persons)
 - 4 Mobile Demining Platoons (124 persons)
 - 2 Technical Survey for Clearance Tasks teams (10 persons)
 - 2 Explosive Ordnance Disposal teams (6 persons)
 - 2 Mechanical Brush cutter teams (7 persons)
 - 1 Mine Awareness team (4 persons)
 - 1 Community based mine risk reduction team (1 person)
 - 4 District Focal Point teams of Community based mine risk reduction (4persons)
- Total personnel funded by project is **176 persons**

The project’s goal is to bring about personal security to communities living in mines affected area in O’Chrov and Malay district, Banteay Meanchey province in order to enable them to increase their socio-economic opportunities and to facilitate the safety of resettling rural communities threatened by mines and UXOs, thereby enabling national and international development agencies to carry out the development activities in the target area, specifically to support NPA resettlement project.

1.2. Project Work Plan and Deployment

As stated in IWP 2005, the expected outputs of the project were to clear **1,200,000 m²** of contaminated land. All project resources were mainly deployed at O’Chrov and Malay District of Banteay Mean Chey, which are highly contaminated by mines/UXO.

1.3. Project Activities and Achievements

During 12 month period from January to December 2005, the project cleared a total area of 2,125,361m², marked 117,188 linear metres, found and destroyed 5,167 anti-personnel mines, 167 anti-tank mines, 6,362 UXO and 2,957,294 fragments were detected.

In addition to clearance and marking, the project also carried out risk education activities by conducting 157 sessions of mine



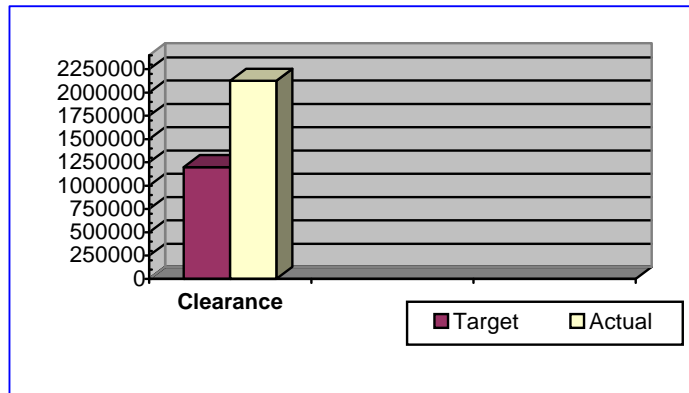
awareness presentation with 31,850 people from 2,909 households in 118 villages attending. At the same time, the CBMRR networks conducted 1,914 presentations reaching 379 villages with the participation of 15,763 audiences.

Demining Components	Progress Achievements					
	Area cleared (m ²)	AP Mine	AT Mine	UXO found	Linear metres marked	Fragments
4 Mobile Platoons	1,340,596	3,002	59	448	0	2,897,688
2 TSC	18,393	23	1	13	117,188	9,789
2 BC	765,251	312	7	81	0	49,275
2 EOD	1,121	1,830	100	5,820	0	542
Total	2,125,361	5,167	167	6,362	117,188	2,957,294

Demining Components	Household	Session/ Presentation	Village	People involved	Mines/UXOs reports
MAT	2,909	157	118	31,850	118
CBMRR	4,055	1,914	379	15,763	2,583
Total	6,964	2,071	497	47,613	2,701

1.4. Effectiveness and Efficiency Analysis

Actual clearance of 2,125,361 m², shows an over-performance of 925,361m² compared to the target of 1,200,000m². In general, productivity level of the project represents **12.7%** during the 12 - month period against total CMAC clearance work plan for 2005.



The removal and demolition of 5,167 anti-personnel mines from the contaminated ground may indicate that 5,167 lives could be saved, and the collection and destruction of 6,362 UXO may save up to 31,810 lives and limbs from potential deaths or injuries. As a result, it could be assumed that the grant of USD 567,001.5 in 2005 can save 36,977 people lives and release 2,125,361 m² confirmed as safe land for 4,887 families of vulnerable people, who are threaten by landmines and UXO.

1.5. Socio-Economic Benefits

The area cleared was handed over to the local authorities to be used by the local population and infrastructure development such as roads, agriculture, canals and resettlement. The total cleared area benefits 4,887 families.



Land's owner plot of M3152-B, at Reaksmeay Samaki village, Nimit Commune, O'Chrov district, Banteay Meanchey province, after landmines cleared by MP#122, constructing house

Road constructing by villagers at Stoeung Bott vilaage, Poi Pet commune, O'Chrov district, Banteay Meanchey province, after landmines cleared by MP#101

No.	M/F No.	Locations	Purpose of Use	Beneficiaries
1	M5677	O'Samphor I, O'Samphor, Malai	Agriculture	33 families
2	M5701	O'Samphor I, O'Samphor, Malai	Resettlement	72 families
3	M5813	Kla Ngorb, Tuol Pongro, Malai	Resettlement	52 families
4	M5808	Kop Thom, Nimitt, O'Chrov	Resettlement	8 families
5	M4633	Banteay Ti II, O'Samphor, Malai	Resettlement	33 families
6	M5816	Stoeung Bott,Poi Pet,O'Chrov	Road Construction	124 families
7	M5817	Stoeung Bott,Poi Pet,O'Chrov	Road Construction	124 families
8	M5259B	Reaksmey Serey Pheap, Nimitt, O'Chrov	Agriculture	25 families
9	M5948	Sok San, Nimitt, O'Chrov	Resettlement	6 families
10	M5368	Santepheap, Tuol Pongro, Malai	Agriculture	17 families
11	M5821	Yeang Dangkum,O'Bey Chorn, O'Chrov	Agriculture	30 families
12	M5811	Sok San, Nimitt, O'Chrov	Road Construction	3,787 families
13	M3152-B	Reaksmey Samaki, Nimitt, O'Chrov	Agriculture	12 families
14	M5367	Santepheap, Tuol Pongro, Malai	Agriculture	17 families

2. CMAC-JAPAN KUSANONE PROJECT IN DEMINING UNIT 2: The Project for Supporting Humanitarian Demining Activities in Battam Bang Province, Phase III

2.1. Project Background

This project has been supported by the Government of Japan under the Japanese Grant Assistance for the Grass-root Project (KUSANONE) with amount of **USD 829,953** to support one year demining operation implemented by CMAC Demining Unit 2, Battambang Province, which is one of the most mine/UXO affected provinces with a high casualty rate. This project started from January to December 2005 with following resources:

- 7 Mobile Platoons
 - 2 Technical Survey for Clearance Task
 - 2 Explosive Ordnance Disposal Teams
 - 1 Mine Detection Dog Team
 - 4 Brush Cutters
- Total Project Staff: 271 people

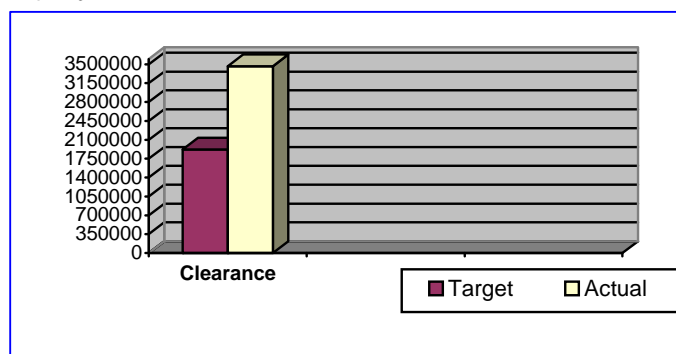


2.2. Project Work plan and Deployment

During the project period of 2005, all project resources of Demining Unit 2 were mainly deployed in high affected districts such as Ratanakmondul, Mong Russey, Koh Kralor, Sampov Loun, Kam Reang, Bovel and Phnom Preuk districts of Battambang. As highlighted in IWP 2005, the plan of the project is to clear 1,920,000 m² of contaminated land during the period for one year from January to December 2005.

2.3. The Project's Achievements

In 12 month period, the project achieved land clearance of 3,466,102 m², marked 99,747 linear metres, and found/destroyed 10,445 anti-personnel mines, 215 anti-tank



mines and 18,930 UXO. In terms of area cleared, the project achieved 180.5% of the planned target, i.e. 80.5% higher than one year target of 1,920,000m².

Tools	Productivities						
	Area cleared (m ²)	AP found	AT found	UXO found	Liner marked	Excavate (m ³)	Fragments
7 MP	2,888,118	4,765	101	1,519	00	00	2,537,722
2 TSC	53,514	00	00	00	99,747	00	7,947
2 EOD	6,158	4,336	110	17,315	00	00	00
1 MDD	236,236	37	00	25	00	00	2,065
4 BC	282,076	1,307	04	71	00	6,187	00
Total	3,466,102	10,445	215	18,930	99,747	6,187	2,547,734

2.4. Socio-Economic Benefits

During 12 month period from January to December 2005, 52 minefields were completed, benefiting 758 students and 5,237 families for access to roads, schools, resettlement, pagoda, and small scale agriculture areas as well as other areas which impacted by other non-clearance activities such as EOD, mine risk education, and survey and marking.

2.5. Effectiveness and Efficiency Analysis

The productivity of clearance (3,466,102 m²) increased sharply, i.e. 80.5% surplus, compared to one year target of 1,920,000m². In general, project's productivity represents **20.8%** during the 12 month period against the CMAC Work Plan 2005.

Demolition of 10,445 anti personnel mines and 18,930 UXO could be interpreted as 10,445 lives and 94,650 lives have been respectively saved and spared. In short, the grant of **USD 829,953** can save 105,095 people lives and release 3,466,102 m² of land for 5,237 families and 758 students, who were under the threat of landmines and UXO.

By simple mathematical calculation, cost per square meter is **USD0.23** in term of clearance only. This cost does not take into account the many other values added activities for example UXO demolition work, marking, survey,...etc. With these activities included in the calculation, the cost could again go well below USD 0.23.

3. CMAC-USA PROJECT IN DEMINING UNIT 3, PAILIN: Humanitarian Mine Action Project in Pailin and Samlot, Cambodia

3.1. Project Background



This project has been supported by US Department of State with an amount of **USD 1,360,000** for the period of 12 months demining operation implemented by CMAC Demining Unit 3 based in Pailin – the most heavily mine/UXO affected municipality with the highest casualty rate. This project has been starting from 15 May 2004 to 14 May 2005.

From 15 May 2005 to 14 May 2006 US Department of State has agreed to

support CMAC DU3 with amount of **USD 1,864,541.73** for continuing from the current project with the following resources:

- 1 Demining Unit HQ: DU3
 - 9 Mobile Demining Platoons
 - 3 Mine Detection Dog teams
 - 4 Brush cutter
 - 2 Explosive Ordnance Disposal Teams
 - 3 Technical Survey for Clearance Teams
 - 1 Technical Survey Teams
 - 3 Community Mine Marking Teams
 - 1 Mine Awareness Teams
 - 1 Community Based Mine Risk Reduction Team
- Total project personnel: 403 persons

Note: In this report CMAC is going to address the completion report of the project within the period term from 15 May 2004 to 14 May 2005, which has currently been finished. The project resources covered the following man input:

- 1 Demining Unit HQ: DU3
 - 6 Mobile demining platoons
 - 3 Technical survey clearance teams
 - 1 Technical Survey Team
 - 2 Mine detection dogs
 - 2 Brush cutter
 - 18 SSA (Short Services Agreement Personnel)
- Total project personnel: 264



The goal of this project is to bring about personal security to communities living in mine-affected districts and to reduce suspected mine-contaminated areas.

- To bring about personal security, better socio-economic opportunities to communities living in mines/UXO affected areas chosen in consultation with all the concerned authorities and local communities.
- To support national and international development agencies' efforts to carry out development activities in the target areas in collaboration with CMAC.

3.2. Project Activities and Benefits

From May 2004 to May 2005, a surface clearance 1,447,694 m² was achieved and 126,607 linear meters of minefield boundary was marked for risk reduction. During this period, 2,559 anti-personnel mines, 33 anti-tank mines and 204 UXO were found and destroyed, and 4,664,940 fragments were unearthed.

Tools	Productivities						
	Area cleared (m ²)	AP found	AT found	UXO found	Excavate (m ³)	Liner marked	Fragment found
6 MP	1,116,337	1,936	26	144	-	-	4,530,366
3 TSC	44,319	78	4	26	-	126,607	80,161
2 MDD	287,038	121	3	27	-	-	54,413
2 BC	537,663	424	-	7	21,820	Vegetation cutting not included in the clearance progress	
Total	1,447,694	2,559	33	204	21,820	126,607	4,664,940

The project cleared a total of 23 minefields and benefits 3,566 families directly and indirectly in 9 villages of Pailin. This clearance supports the development and construction of roads, resettlement, agriculture, school, and roads.

M/F Cleared	Locations	Purpose of Use	Beneficiaries (families)	Remarks
M 5426	Tnal Keng	Road Construction	429	Cleared by MP109 with The intervention of MDD and BC#08 some portion in M4908A & M4732A.
M 4908A	Phnom Koy	Rsetle+Agriculture	19	
M 4732A	Chamkar Cafe	Rsetle+Agriculture	10	
M 4196	Tum Nob	Road Construction	938	
M 5971	Phnom Spong	Agriculture	5	
M 5592A	Krachabb	Road Construction	Indirect use of 513 families	Cleared by MP110, MP111 and integrated with BC#07 and assisted by MDD in some portion.
M 5592B	Krachabb	Road Construction		
M 5592C	Krachabb	Road Construction		
M 5592D	Krachabb	Road Construction		
M 5592E	Krachabb	Road Construction		
M 5592F	Krachabb	Road Construction		
M 5838	Krachabb	Resettle+Agriculture	18	Cleared by MP110
M 5972	Kon Domrei	School	272	Cleared by MP111

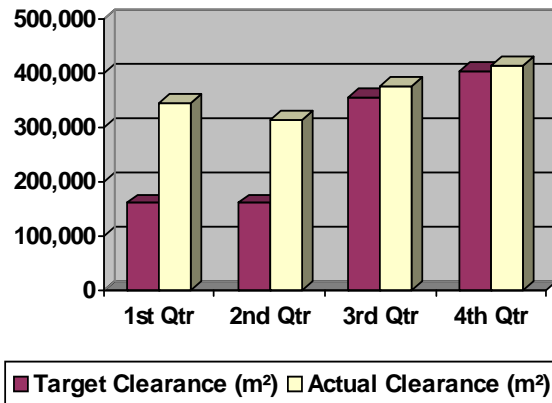
M 5418A	O Churkram	Resettle+Agriculture	12	Cleared by MP121
M 5418B	O Churkram	Resettle+Agriculture	40	
M 5484	O Churkram	Resettle+Agriculture	30	
M 5485	O Churkram	Road Construction	375	
M 4430A	Dey krahorm	Resettle+Agriculture	8	Cleared by MP127 and assisted by MDD for some portions M4430B
M 4430B	Dey krahorm	Resettle+Agriculture	19	
M 4730	Tangein Krom	Road Construction	92	
M 5531	Bor tangsu	Road Construction	570	Cleared by MP131 and assisted by MDD and BC#08 some portions
M 5407	Toul Lvie	Resettle+Agriculture	30	
M 5537	O Ro-el	Road Construction	210	
Total: 23 Minefields			3,566 families	

3.3. Effectiveness and Efficiency Analysis

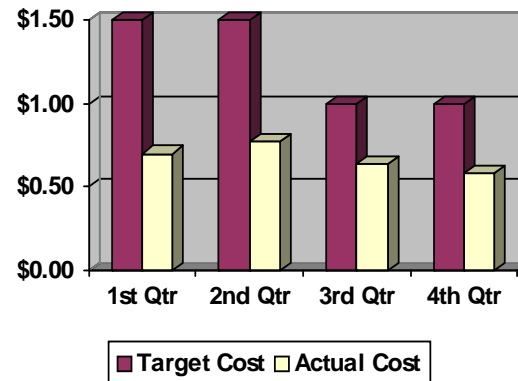
The clearance output of the US project in Pailin for the reporting period is 1,447,694 m². Based on the cost allocated for operations (Salary + Operations Costs + Overheads), it could be said that ratio per square meter is USD 0.67 for the period of the project implementation from May 2004 to May 2005. It could be assumed that it is a very successful project.

The charts below reveal the trends of project progress by quarters compared to the project target. The Chart 1 showed that the progress has been made gradually from the start of the project, but a bit decrease in the second quarter, to the end of the project period in term of clearance, while the Chart 2 illustrated the relative decrease in costs per square meter compared to the target cost imposed by the project donor.

**CHART 1 : Target Clearance Vs Actual Clearance
in the First, Second, Third and Fourth Quarter
(15 May 2004 -14 May 2005)**



**CHART 2 : Target Cost Vs Actual Cost
in the First, Second, Third and Fourth Quarter
(15 May 2004 -14 May 2005)**



3.4. Challenges Encountered

During this period, demining platoons and mobile teams of Demining Unit 3 faced some serious obstacles, which eventually affected the clearance productivities.

- Soil is difficult: laterite soil, hard clay soil, soil with metallic, muddies in rainy season.
- Condition of minefield: thick bamboo bushes and other thick bushes.
- Former road: ground was compacted with laterite and stone.
- Minefields were in former military camp and along K5 barrier.
- Conducted double check by using bomb locator as some of the minefields were reported that there were laid a lot of anti-tank mines;

In addition, the environment factors such as heavy rain in the rainy season, and road conditions have hindered demining operation. The limited capacity of staff at the middle and front line management level is an important determining factor, which affects the quality and process of planning, controlling, managing and reporting.

3.5. Lesson Learnt

- The productivity and problems encountered has already shown in III and V respectively. The Quarterly productivity of operational field components was significantly increased due to the strengthened the capacity of field staff, various tools has been used in the right approach such as brush cutter and MDD; it could be added to support the manual demining work.
- The new method has been developed, trialed and introduced such as One Man One Lane Drill and Two Men One Lane Drill to be flexible.
- Health care associated to the field operators considered have been improved and taken care of.
- Current CMAC's policy & procedures regarding SOP has been regularly revisited to ensure that their adjustments can be made safely and effectively and reflect to the current situations.

4. CMAC-JAPAN KUSANONE PROJECT IN DEMINING UNIT 4, PRAEH VIHEAR PROVINCE: The Project for Supporting Humanitarian Demining Activities in the provinces of Kompong Thom, Oddar Meanchey and Preah Vihear

This project has just signed on 25 October 2005 between H.E. Khem Sophoan- CMAC Director General and H.E. Takahashi Fumiaki- the Ambassador of Japan in the Kingdom of Cambodia, under the witness of H. E. Sok An- Deputy Prime Minister, the Minister in charge of the Council of Ministers. The intended purpose of this project is to support humanitarian demining activities in the provinces of Kompong Thom, Oddar Meanchey and Preah Vihear during the period of one year from October 2005 with the total costs of USD 919,099.



Signing Ceremony on the Project for Supporting Humanitarian Demining Activities in the Provinces of Kompong Thom, Oddar Meanchey and Preah Vihear at the Council of Ministers on 25 October 2005

5. CMAC-JAPAN KUSANONE PROJECT IN DEMINING UNIT 5, PURSAT PROVINCE: The Project for Supporting Humanitarian Demining Activities in Pursat Province, Phase II

5.1. Project Background

This project has been supported by the Government of Japan under the Japanese Grant Assistance for the

Grass-root Project (KUSANONE) with amount of USD 829,693 to support one year demining operation implemented by CMAC Demining Unit 5, Pursat Province, which is one of the most mine/UXO affected provinces with a high casualty rate.



Demining Activities in minefields M.5742 at Pramoy Village, Pramaoy Commune, Veal Veng District, Pursat Province.

The project started from January to December 2005 with the following resources:

- 7 Mobile Platoons
 - 7 Security Guard for 7 Mobile platoons
 - 2 Technical Survey for Clearance Tasks
 - 2 Explosive Ordnance Disposal teams
 - 1 Mine Detecting Dog team
 - 5 Brush Cutter Teams
 - 2 Security Guard for Technical Brush Cutter Teams
- Total personnel funded by project: 277 persons.

5.2. Project Work plan and Deployment

The project resources of Demining Unit 5 were mainly deployed in high affected districts such as Kravanh, Kroker, Bakan and Veal Veng districts of Pursat province, and plans to clear 1,920,000m² of highly contaminated land.

5.3. The Project's Achievements

Cleared land of 3,218,866 m² was achieved +67.6% higher than the set target of 1,920,000m², 120,872 linear metres was marked, and 31,764 anti-personnel mines, 47 anti-tank mines and 11,968 UXO were found and destroyed.

Period	Productivity							
	Area Cleared (m ²)	AP Found	AT Found	UXO Found	Liner Marked (m)	Area Cut (m ²)	Berm soil (m ³)	Fragment Found
1 st Quarter	599,948	16,625	09	3,493	26,593	195,007	00	564,640
2 nd Quarter	908,493	13,513	33	3,409	21,582	112,795	5,864	537,160
3 rd Quarter	985,236	843	03	2,734	41,896	385,128	1,353	1,269,743
4 th Quarter	725,189	783	2	2,332	30,801	327,553	3,218	1,478,004
Total	3,218,866	31,764	47	11,968	120,872	1,020,483	10,435	3,849,547

5.4. Socio-Economic Benefits

44 minefields were completed and handed over to the local communities of 4,468 families and 64 students for below purposes:

Nº	No MF.	Purpose of Use	Beneficiaries	
			Families	Students
01	25	Resettlement & Agriculture	870	
02	02	Resettlement	12	
03	02	Road	1,136	
04	01	Resettlement, Agriculture & Road	15	
05	04	Agriculture	17	
06	01	Market	1,365	
07	01	Canal & Agriculture	75	
08	01	Resettlement, Agriculture & School	02	64
09	01	Resettlement & School	22	
10	02	Road & School	53	
11	01	School & Pagoda	183	
11	02	Pagoda	598	
12	01	Commune Office	120	
TOTAL	44		4,468	64



5.5. Effectiveness and Efficiency Analysis

The productivity of clearance shows a positive trend, 3,218,866 m² with a surplus of 1,298,866m² or +67.6%, compared to the target of 1,920,000m².

Productivity of the project during 12 months, in general, represents **19.3 %** of the CMAC Work Plan 2005

In humanitarian and socio-economic terms, the demolition of 31,364 anti-personnel mines and 11,968 UXO mines could be interpreted as saving an approximate 91,604 lives and limbs by preventing these mines and UXO from causing the accidents. In short, the grant of USD 829,693 during 12-month period could have saved 91,604 people's lives and release 3,218,866 m² of land for 4,468 families and 64 students, who were under the threat of landmines and UXO.

By simple mathematical calculation, the cost per square meter is **USD 0.25** (USD 829,693/3,218,866 m²) for the period 12 months. However, it should be highlighted that the cost per square meter indicated here also includes expenses on non-clearance activities.

6. CMAC – GERMANY PROJECT AT DEMINING UNIT 6 IN SIEM REAP AND ODDOR MEANCHEY PROVINCES: Humanitarian Demining in Siem Reap and Oddar Meanchey Provinces

6.1. Project Background

The project has been supported by the Federal Republic of Germany with an amount of USD 835,000 to support demining operation carried out by CMAC Demining Unit 6 Siem Reap for the period from 1 January 2005 to 31 December 2005 with the following resources:

▪ Project Manager	:	01 person
▪ Demining Unit 6 Headquarters	:	17 persons
▪ Demining Site# 13 – (Site support staff)	:	05 persons
▪ Demining Site# 14 - (Site support staff)	:	03 persons.
▪ 6 Normal Platoons (NP)	:	160 persons
▪ 2 Technical Survey Teams (TSC)	:	10 persons
▪ 2 Community Mine Marking Team (CMT)	:	10 persons
▪ Special Service Agreement Staff (SSA)	:	26 persons

Total personnel to June 2005 funded by the Federal Republic of Germany: 231 staff

The goal of the Project is to provide a safe land for the resettlement, infrastructure, Health Centers, Schools, and safety for tourists to access to the archeological temples, and to contribute to the mine/UXO casualty reduction.

6.2. Project Work Plan and Deployment

The aim of the project is to clear 1,932,404m² of highly mine and UXO affected communities during the year, benefiting 1,515 families and 3,262 school children for resettlement, agriculture and school construction and other public service facilities.

During the operational period from January to December 2005, the project resources of Demining Unit 6 funded by the Federal Republic of Germany were deployed in two different sites in Siem Reap and Oddar Meanchey provinces.

Siem Reap province



Signing Ceremony on the Project for Supporting Humanitarian Demining in Siem Reap and Oddar Meanchey Provinces at the Council of Ministers on 20 December 2004



- NP#37 and #38 and CMT#13 and #14 were deployed in Varin, Siem Reap, Puok and Angkor Chhom, Banteay Srey, Kralanh, Svay Leu, Prasat Bakong, Srey Snom, Sort Nikum districts.

Oddar Meanchey province

- NP#33, #34, #35 and #36 and TST#07 and #13 were deployed in four different districts such as Anlong Veng, Samrong, Banteay Ampil and Trapaing Prasat district.
- CMT#13 and #14 were also deployed to operate at Trapaing Prasat district, Oddar Meanchey province to respond the request for clearance from local authorities.

6.3. Project Activities and Achievements

In the 12 month period, 41 minefields or 2,337,753 m² were cleared and handed over to local communities. 1,487 anti-personnel mines, 13 anti-tank mines and 2,906 UXO were found and destroyed. Further, 57,410 linear meters have been marked for risk reduction.



6.4. Socio-Economic Benefits

In the 12 month period the cleared land of 2,337,753m² (35% surface cleared in Siem Reap, and the rest of 65% of cleared land in Oddar Meanchey) directly and indirectly benefited a total of 12,725 families in both provinces. The proportion of the cleared land was used as follows:

▪ Agriculture	45 %
▪ Resettlement	21%
▪ Resettlement & Agriculture	10%
▪ Roads	19 %
▪ School	2%
▪ Pond	1%
▪ Other	2%



The percentage of clearance for agriculture is higher in Oddar Meanchey: 63.42 % in Oddar Meanchey and 37.89 % in Siem Reap. Road clearance has a large impact on the population and constitutes more than 41 % of the work. 141 families will benefit from clearance for agriculture. 5,483 families will benefit from the infrastructure.

7. CMAC – JMAS PROJECT IN PREY VENG: UXO Clearance Activities

7.1. Project Background

This project was supported by the Japanese Mine Action Service (JMAS) with an amount of USD 139,414.62 to support EOD for the period of one year from 3 June 2004 to 4 June 2005. This project was renewed from 12 July 2005 to 11 July 2006 by adding engaging additional support of 12 District Focal Points of Community Based UXO Risk Reduction (CBURR). The funding support for this project term, therefore, is USD152,089.9 (USD114,001.90 for 6 EOD, and USD 38,088 for 12 CBURR district focal points). The goal of the project is to carry out UXO clearance activities in Kandal, Svay Reang, and Prey Veng Provinces.



7.2. Project Work Plan and Deployment

The project deployed resources in 21 different districts in three different provinces: 7 districts in Svay Rieng, 7 districts in Prey Veng Province and other 7 districts in Kandal Province.



7.3. Project Activities and Achievement

In the 12 month period from January to December 2005, 6 EOD Teams worked in 21 districts achieving the following results:

Area cleared	=	18,464 m ²
Anti-personnel mines (AP) found	=	4,315
Anti-tank mines (AT) found	=	57
UXO found	=	26,132
Bomb found	=	122
SAA	=	1,100 Kg



The table below show the activities of CBURR in 12 districts of the three provinces and its achievement during the reporting period.

N°	Province	District	Vil. Visited	Men	Women	Child	TOTAL	Request send by DFP				Intervened by EOD team			
								Req.	Mine	UXO	TOTAL	Req.	Mine	UXO	TOTAL
1	Kandal	Ang Snoul	75	671	796	823	2290	177		2210	2210	177		2210	2210
2		KDL Steung	29	404	83	226	713	55	1	724	725	55	1	724	725
3		Ksach Kdl	52	1250	386	371	2007	26	14	124	138	16	14	107	121
4		Lvea Em	88	2866	2918	1527	7311	16	1	58	59	5	1	46	47
5	Prey Veng	PreyVeng	213	498	524	604	1626	32	3	236	239	32	3	236	246
6		Ba Phnom	72	548	711	1219	2478	31		373	373	31		373	373
7		Kg. Trabek	95	1377	1304	1862	4543	62		101	101	60		101	101
8		Preah Sdach	123	1561	1241	1824	4626	97		211	211	97		197	197
9	Svay Rieng	Svay Chrum	132	566	678	623	1867	68	2	720	722	65	2	716	718
10		Kg. Ro	57	167	230	512	909	122	24	819	843	116	24	822	846
11		Svay Teap	99	631	644	701	1976	70	112	310	422	70	112	310	422
12		Rom Doul	153	817	861	266	1944	71	33	475	508	63	29	457	486
TOTAL		12 Districts	1,188	11,356	10,376	10,558	32,290	827	190	6,361	6,551	787	186	6,299	6,492

8. CMAC – UN/USA ADOPT-A-MINEFIELD PROJECT

8.1. Project Background

The Adopted-A-Minefield Program was funded by the United Nations Associations of the United States of America (UNA-USA) through UNDP. In 2005, CMAC has been provided with USD 252,788 to clear adopted minefields in four different provinces, Pursat, Battambang, Banteay Meanchey, and Kompong Thom Provinces.

8.2. Project Achievement

During the reporting period, 7 minefields were completely cleared with funding from UN/USA Adopt-A-Minefield Program, with the total surface area of 298,028 m². Furthermore, 374 anti-personnel mines, 1 Anti Tank Mines and 58 UXO were found and destroyed.



8.3. Socio-Economic Benefits

The socio-economic benefits gained as a result of the project activities include 138,443 m² for resettlement, 80,876,004 m² for resettlement & agriculture, 48,328 m² for road construction, and 30,381 m² for school construction.

9. CMAC- SAVE THE CHILDREN NORWAY PROJECT IN DEMINING UNIT 5, PURSAT: Mine Clearance and Risk Reduction in Kra Kor, Kra Vanh, Veal Veng Districts

9.1. Project Background

Mine Clearance and Risk Reduction Project has been jointly implemented by CMAC and Save the Children Norway (SCN). The project has been deployed in Kra Kor, Kra Vanh and Veal Veng districts, Pursat Province, where SCN development project- School Development Plan- will be taken place after clearance. SCN has contributed US\$ 224,787(\$164,787+\$60,000) to support CMAC mine clearance and risk reduction activities during the period from February to December 2005 with the following resources:

- 1 Mobile Demining Platoon
- 1 Mine Detection Dog team
- 3 Community Mine Marking Teams
- 2 District Focal Point teams of Community based mine risk reduction
- 2 Mine Risk Reduction Teams (Preah Vihear)



9.2. Project Goal and Objectives

The goal of this project is to bring about personal security to children, families, and communities living in mines affected area in Krakor, Kravanh and Veal Veng Districts, Pursat province, and Preah Vihear province as well in order to enable them to safely access to their schools threatened by mines and UXOs.

The objectives of the project are:

1. To reduce mine/UXO accident among children, families and communities in the target areas through mine/UXO clearance.
 - Deploying one mobile platoon to clear high priority land school building
 - Deploying one Mine Detection Dog Team to verify and confirm the suspected area
 - Conducting mine marking to protect children and local communities from access to dangerous areas
 - Collecting and destroying Unexploded Ordnance Disposal (UXO) scattered in disorder everywhere in the target areas
 - Conducting clearance high risk areas deemed to be crucial for children and local communities

2. To establish Community Based Mine Risk Reduction (CBMRR) network to sustain public mine/UXO risk education in the target areas.
 - Conducting assessment and survey in high risk villages in the target areas
 - Meeting with other partners to cope with the problem and respond to the community needs
 - Recruiting District Focal Point staff in the target areas
 - Training District Focal Point staff and volunteer network
 - Mapping mined areas to identify problem and community needs
 - Launching mine/UXO risk education to local vulnerable villagers by volunteer network and CMAC mobile mine awareness teams.

3. To support the Millennium Development Goals "EFA" by ensuring that all children in the rural/ geographical isolation areas have access to basic education by year 2015.

- Working closely and meeting with local authorities to be aware of high priority land identified by local communities
- Coordinating and cooperating with Save the Children Norway to conduct fund raising



9.3. Project Activities and Achievement

One Mobile platoon #124 was deployed in Veal Veng District to clear Minefields that this area is to be constructing school and school compound. One MDD team #05 was deployed in the minefield, Veal Veng Districts, which it will be constructing of school, and its terrain consists of heavy laterite soil; hard ground, and of metal fragments scattered in the ground. Three CMMTs; team #05, #06 and #12, were deployed to minefields in Kravanh and Krakor Districts, Pursat Province. Only 2 Mine Risk Reduction Teams were deployed in Preah Vihear in November 2005 and will finish in 06 January 2006. The productivities performed from February to September 2005 are highlighted below:

Period 2005	Productivity						
	Area Cleared (m ²)	AP Found	AT Found	UXO Found	Liner Marked (m)	Area Cut	Fragment Found
1 st quarter	149,190	67	00	50	500	00	60,379
2 nd quarter	172,730	130	01	230	2,053	00	189,112
3 rd quarter	153,499	75	00	350	1,264	00	71,073
4 th quarter	223,792	53	15	168	2,132	00	119,467
Total	699,211	325	16	798	5,949	00	440,031

Community Based Mine Risk Reduction (CBMRR): This component established 2 District Focal Point teams (DFP), supported from May 2005, and selected two districts affected

by mine and UXO. The 2 DFP teams have constructed voluntary networks on highly contaminated mines and UXO areas within 6 communes that consist of 16 villages, and have achieved public education to villagers as described on the table belows:

Target district	District level		Commune level		Village level		Total
	Male	Female	Male	Female	Male	Female	
Vealveng and Phnom Kravanh	4	0	10	2	15	17	48
	Mine/UXO risk education; 2,687 adults and 2,284 children						4,971
Total							5,019

9.4. Socio-Economic Benefits

During the reporting period, 26 minefields were completely cleared with the total surface area of 699,211 m² benefiting to 4,761 students who are waiting for new schools building.

10. FRANCE-UNDP TRUST FUND EARMARKED PROJECT TO SUPPORT DEMINING OF ARCHEOLOGICAL SITES, DEMINING UNIT 4- PREAH VIHEAR

10.1. Project Background

This project has been supported by the Government of the Republic of France through the UNDP Trust Fund with an amount of 808,050.00 Euros for period from 21 January 2002 to 21 January 2005 to support mine clearance for archeological sites of Koh Ker and Preah Vihear Temple in Preah Vihear province. USD 100,000 was then provided for a further 3 months period from November 2004 to support demining work at Preah Vihear Temple. In 2005, the French Government has also contributed USD 136,944 through UNDP to the demining activities of archeological sites of Preah Khan Temple starting from July to December 2005. The significant goal of the project is to provide safety for tourists to these archeological sites, thereby contributing to enhance the socio-economic opportunities of the people living in areas, and further to provide a safe environment for other national and international development agencies to carry out their development activities in the same areas.



10.2. Project Activities and Achievement

The resources of the project were deployed in and around the archeological site of Preah Khan to ensure the safety for tourists who come across and walk around the temple. The resources deployed in the project period include as follows:

- 2 Mine Risk Reduction Teams (MRT) consist of 32 deminers.
- 1 Mine Detection Dog team (MDD) consists of 9 deminers.
- 1 Technical Survey Team (TST) consists of 10 deminers.
- 1 Technical Survey Clearance Team (TSC) consists of 5 deminers.
- 1 Explosive Ordnance Disposal Team (EOD) consists of 3 deminers.

- 1 Mobile Platoon (M-Plt) consists of 30 deminers.
- 1 Community Mine Marking Team (CMT) consists of 5 deminers.

Note:

1- First Quarterly, July to September 2005, at that time project implementation executed by two Mine Risk Reduction team (MRT), one Mine Detection Dog (MDD), one Explosive Ordnance Disposal Team (EOD), Technical Survey Clearance (TSC) and one Technical Survey Team (TST) of Demining Unit-4 and then at the end of September 2005 based on limited budget of Project, one MDD, one EOD, and one TST were withdrawn to their units.

2- Second Quarterly, October to December 2005 and based on the budget situation the project was implemented by two Mine Risk Reduction Teams (MRTs), one Mobile Platoon (M-Plt), one Community Mine Marking team (CMT) and one Technical Survey Clearance Team (TSC) of Demining Unit-4.

During the reporting period, 448,659m² of contaminated land were cleared, destroying 8 anti personnel mines and 01 ant tank mine and 59 UXO was also found and demolished. To ensure the safety of tourist, marking is very important while the resources for clearance are inadequate. 19,780 meters was marked for next clearance and safety.

11. OTHER PROJECTS

Besides the projects already described, there are a few other projects carried out by the CMAC in partnership with respective donors to conduct mine action activities in various parts of Cambodia. These projects include:

1. **CMAC-Rotary International, District-2650, JAPAN:**

After finishing the Mine Risk Reduction Activities Project, which was jointly implemented by CMAC and Rotary International District-2650, JAPAN for period from March –August 2004 with the budget of USD 25,000, Rotary International, District 2650, Japan has decided to support 2 Community Mine Marking Teams in Demining Unit 1 Banteay Meanchey with amount of USD 25,000 during the period from 1st March to 31st December 2005.



2. **CMAC – PEACE BOAT**

- 2.1. Mine Clearance and School Construction Project was jointly implemented by CMAC and Peace Boat Japan. Peace Boat Japan has contributed USD 25,537 to CMAC to implement the project by clearing mine and then develop school construction with 3 rooms for children who have no proper school in Koh Ker village, Preah Vihear Province. The project has been starting from April to August 2005.



Mine/UXO Clearance and School Construction in Koh Ker Village supported by Peace Boat from April to August 2005

The first step is to clear contaminated land for school construction site. With the resources of one mobile platoon and one Technical Survey for Clearance Team, a safe land of 68,848m² was released to local authority for school construction, destroying 11 anti personnel and 2 UXO and marking 500 meters of contaminated land for safety of school children.

In the second step, 3 -room -school was built for 80 school children and benefits 116 families.

2.2. Another project supported by Peace Boat in 2005 was implemented by Demining Unit 1 based in Banteay Meanchey Province. The total project cost is USD111,623.63,

including mine/UXO clearance operations and two concrete schools construction with 10 rooms and two large ponds.

The first stage in relation to mine clearance operations, of course, started from September and finished in November 2005. With resources of one mobile platoon and two Mechanical Clearance Machines (Brush Cutters), the contaminated land of

54,641 m² was cleared and released for school construction. Further, 65 anti personnel mine and 26 UXO were found and destroyed in place. Two villages consist of 830 families and 585 students must be beneficiaries of this project.

In the second stage, the school constructions has been starting after the completion of mine clearance operations, and will be completed on 18 March 2006, and the opening ceremony will be held in April 2006.

3. CMAC – CARE Cambodia: Integrated Demining and Development Project (IDDP): This project has been supported by CARE International with amount of USD 183,018.82 to a support two-year (1 July 2002 - 30 June 2004) demining operation implemented by CMAC Demining Unit 2, Battambang Province. Given good result of the project implementation, CARE Cambodia agreed to inject a budget for the deployment of one platoon at Demining Unit 2 for 9 months (1st December 2004 - 31st August 2005) and extend the existing 2 CMMT for 10 months (1st November 2004 – 31st August 2005) for the Integrated Demining and Development Project in collaboration with CMAC, with the total agreed budget of USD 89,070.44. Given favorable exchange rate gains,



CARE has approved to provide CMAC with additional budget of USD18,000 for 2 months extension of the IDDP from 01 September 2005 to 31 October 2005.

4. **CMAC – UNICEF - NPA : CBMRR and Mine Awareness Projects:** The project has been jointly implemented by CMAC, UNICEF and NPA. Unicef supported CBMRR networks in Battambang and Pailin and MA deployed at Battambang, Pailin, and Oddar Meanchey Provinces, while NPA supported CBMRR and MA at Banteay Meanchey only. UNICEF has agreed to provide an additional financial support of USD 29,228 to support three district CBMRR expansion and two mobile mine awareness teams from 01 May to 31 December 2005, on top of the previously agreed amount of USD 100,000. Therefore, the total UNICEF contribution to CMAC in 2005 is USD 129,228.
5. **CMAC – Handicap International Belgium:** Mine/UXO Risk Reduction in North-West Cambodia- The project is a joint effort between CMAC and HIB in 2002 under ECHO's funding of 450,000 Euros. The project was finished by February 2005.



MINE ACTION ACHIEVEMENTS

1. OPERATIONAL DEPLOYMENT

In 2005, CMAC's field operational forces remained similar to the year of 2004, but there were changed number of field operational components. During this period, CMAC emphasized on the integration of operational toolboxes and deployed the following mine action teams:

MINE ACTION TEAM	Year 2006											
1-Demining site	4	4	2	2	2	2	2	2	2	2	2	2
2-Normal Demining Platoon (NP)	11	11	6	6	6	6	6	6	6	6	6	6
3-Mobile Demining Platoon (MP)	33	33	38	38	38	37	37	37	37	37	37	37
4-Explosive Ordnance Disposal Team (EOD)	21	21	21	21	21	21	21	21	21	21	21	21
5-Technical Survey for Clearance Task (TSC)	19	19	19	19	19	19	19	19	19	19	19	19
6-Community Mine Marking Team (CMT)	14	14	14	14	14	14	14	14	14	14	14	14
7-Mine Awareness Team (MAT)	6	6	6	6	6	6	6	6	6	6	6	6
8-Community-Based Mine Risk Reduction (CBMRR)	13	13	13	13	13	13	18	18	18	18	18	18
9-Community-Based UXO Risk Reduction (CBURR)	2	2	2	2	2	2	13	13	13	13	13	13
10-Mine Detection Dog Team (MDD)	8	8	8	8	8	9	9	11	12	12	12	12
11-Mechanical Brush Cutter (BC)	12	12	12	12	12	12	26	26	26	26	26	27
12-Technical Survey Team (TST)	4	4	4	4	4	4	4	4	4	4	4	4
13-Mine Risk Reduction Team (MRT)	6	6	6	6	6	4	4	4	4	4	4	4
14-Community-Based Demining (CBD) platoon	1	1	1	1	1	1	1	1	1	1	1	1

2. BILATERAL PROJECTS

There are currently 2 types of funding channeled to CMAC – the funding through the UNDP-managed General Trust Fund and the direct funding to CMAC through Bilateral Projects.

The direct funding through Bilateral Projects is earmarked for the agreed specific activities. During the reporting period, CMAC was implementing the following bilateral projects:

Project Title	Project Donor/Partner	Project Location
The Integrated Demining and Development Program	Netherlands/NPA Cambodia	DU1, Banteay Meanchey
The Project to Support Community Mine Marking Teams	Rotary International	DU1, Banteay Meanchey
The Project for Supporting Humanitarian Demining Activities in Battambang Province, Phase III	Japan	DU2, Battambang
Integrated Demining and Development Project	CARE Cambodia	DU2, Battambang

Humanitarian Min Action Project in Pailin and Samlot	The United States of America	DU3, Pailin
The Project for Supporting Humanitarian Demining Activities in the Provinces of Kompong Thom, Oddar Meanchey and Preah Vihear	Japan	DU4, Preah Vihear
Mine Clearance and School Construction Project	Peace Boat, Japan	DU4, Koh Ker, Preah Vihear
Mine Clearance and School Construction Project	Peace Boat, Japan	DU1, O Sampor II, Banteay Meanchey
The Project for Supporting Humanitarian Demining Activities in Pursat Province, Phase II	Japan	DU5, Pursat
Mine Clearance and Risk Reduction in Kra Kor, Kra Vanh and Veal Veng Districts	Save the Children Norway	DU5, Pursat
Humanitarian Demining in Siem Reap and Oddar Meanchey	Germany	DU6, Siem Reap & Oddor Meanchey
CMAC-JMAS Project for UXO Clearance Activities	JMAS	Prey Veng, Svay Rieng & Kandal
CMAC-JMAS Project for CBURR	JMAS	Prey Veng, Svay Rieng & Kandal
Mine Awareness and CBMRR Project	UNICEF, HIB and NPA	Battambang, Pailin, Banteay Meanchey

3. ALLOCATION OF MINE ACTION TEAMS

CMAC has been concentrating its mine action efforts in the high priority areas in order to reduce potential mine/UXO casualties and to support community development activities implemented by development agencies. Therefore, most of the CMAC's operational field teams were deployed in the Northwest Provinces where mine clearance is most needed.

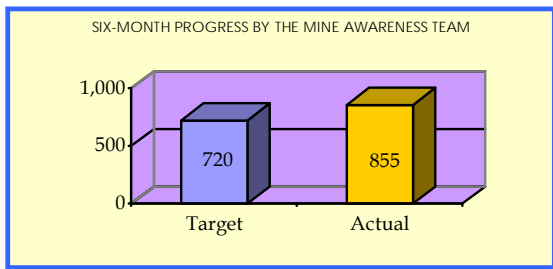
DU /Location	Mine Action Teams													
	SITE	NP	MP	EOD	TSC	CMT	MAT	CBMRR	CBURR	MDD	BC	TST	MRT	CBD
DU#1(Banteay Meanchey)			5	2	3	2	1	4		1	6	1		
DU#2(Battambang)			8	3	5	3	1	7		3	7	2		1
DU#3 (Pailin)			9	2	4	3	1	3		3	4	1		
DU#4 (Kompong Thom & Preah Vihear)			6	2	3	1	1			3	3		2	
DU#5 (Pursat)			9	2	2	3	1	2		2	5			
DU#6 (Siem Reap & Oddor Meanchey)	2	6		2	2	2	1	2			2			
Training Center (Kompong Chhnang)														
CMAC HQ (Phnom Penh/ Kompong. Speu)				2					1				2	
JMAS Prey Veng /Kandal/ Svay Rieng				6					12					
Total teams deployed as at June 2005	2	6	37	21	19	14	6	18	13	12	27	4	4	1

4. MINE ACTION PROGRESS

4.1. CORE ACTIVITY 1: MINE/UXO AWARENESS

4.1.1 Mine Awareness Teams (MAT)

From January to December 2005, CMAC deployed 6 mobile mine awareness teams (MAT) to present mine awareness education messages to people living in high risk areas/villages. The education of mine awareness messages was conducted through day and night presentations and household visits. During the reporting period, the MAT teams achieved **18.75%** over the target for the period.

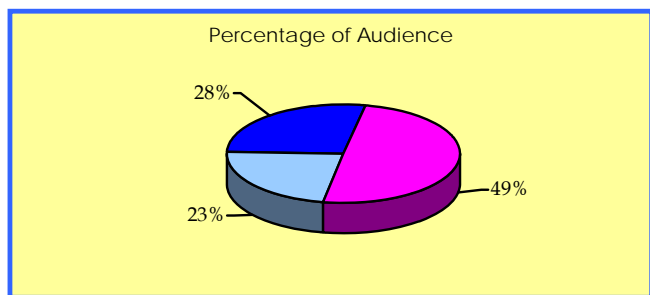


Number of presentations conducted	855
Villages reached	654
Total audience	147,545
<ul style="list-style-type: none"> • Men • Women • Children • Personal households visited 	33,507 40,709 73,329 73,836
Actions responded to villagers requested:	
<ul style="list-style-type: none"> • 1,053 actions • 438 mines • 5,201 UXO 	

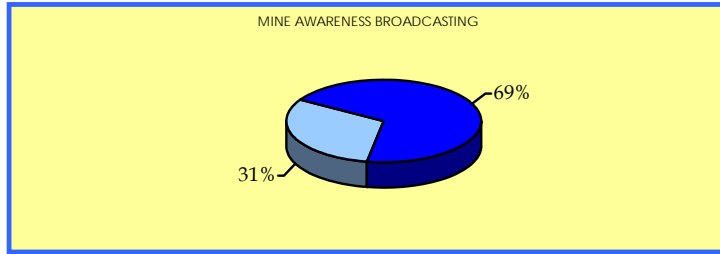
Mass Media Campaign

One of the effective ways of mine awareness education is broadcasting through TV, Radio and the distribution of mine awareness printed materials as this can reach a majority of the population. The short education spots are regularly broadcasted while the mine awareness printed materials are distributed to local people by the MAT teams, CBMRR and CBURR networks. During the reporting period, all the MAT teams achieved:

- Education/Broadcasting by TV: 800 times
- Education/Broadcasting by Radio: 1,800 times
- Production of mine awareness material
- 54,855 posters,
- 71,890 leaflets



- 33,552 notebooks
- 2500 story books
- 7,838 big T-shirts
- 5,322 small t-shirts
- 1 New TV Spot
- 1 New Radio Spot
- 4 Updated TV Spots
- 7 Compiling VCD
- 7 Compiling Video Tapes
- 5 Compiling Audio Tapes
- 280 VCD
- 200 Video tapes
- 200 Audio tapes
- 10 billboards updated
- 10 billboards are set up



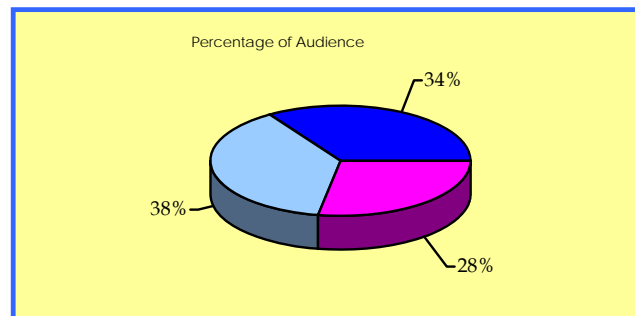
4.1.2. Community-Based Mine Risk Reduction (CBMRR)

During the period 12 months of year 2005, CMAC deployed CBMRR District Focal Points (DFP) in 15 highly affected districts in the provinces of Battambang, Pailin, Pursat and Banteay Meanchey. 422 CBMRR networks were established in 319 villages in 54 communes of the 18 target districts. The number of CBMRR networks did change comparing to the period of 12 months year 2005 due to some supportive project in the capacity building, which was planned to be enhanced. It should be noted that CBMRR in 4 target villages in Khan Pailin and Kamrieng district were phased out and handed over to the local authorities.



During the reporting period, the CBMRR program made the following achievements:

- Number of participants
 - 51,770 men
 - 46,485 women
 - 37,969 children
 - 52,833 personal household visited
- Actions responded to villagers requested:
 - 1,486 actions
 - 2,974 mines
 - 7,260 UXO
- 422 CBMRR voluntary networks attended a 4-month review meeting organized in each target district.



- CBMRR conducted a strategy workshop for its partnering organizations and agencies in order to enable them to have deep understanding of the program and encourage their involvement.
- 319 CBMRR target village maps were updated, with all information and achievements inserted, by each voluntary network in the villages under the facilitation by the DFP.
- 16 CBMRR voluntary networks were recruited to fill the vacant positions as a result of resignation, and training was provided to all the new recruits.
- 2 new CBMRR DFP's were recruited under the financial support from the Save the Children Norway to work in Veal Veng and Phnom Kravanh districts of Pursat Province.
- All staff involved in the CBMRR program (except the voluntary networks) attended a training course on facilitation skills in Community Development, which was organized and funded by NPA and UNICEF in Battambang and Pailin.
- 2,974 mines and 7,260 UXO's were reported by CBMRR to EOD teams for appropriate action.
- 16 emergency clearance tasks requested by CBMRR were cleared by CMT team, 23 by MRT team, 13 by Demining Platoon, 1 by CBD and 99 clearance and marking tasks requested by CBMRR were responded by TST and TSC teams.
- Under the CBMRR coordination and facilitation,
 - 146 disabled people in the target districts received rehabilitation services from ICRC.
 - 54 wheel-chairs from ICRC were provided to 54 disabled people.
 - 68 pairs of crutches from ICRC were provided to 68 disabled people.
 - 106 poorest families had received 47 pairs of slipper rubber shoes from ICRC.
 - 01 new walking stick and 1 optical eyes-glass has provided by FRA for 2 disabled people.
 - 81 pairs of stocking had provided by CRC to disabled people.
 - \$127 of sold some painting pictures was given by CBMRR 's Technical Advisor in order to provide to disabled people living in Lvear village, Beung Beng commune of Malai district.
 - CBMRR arranged with CARE to send 10 mine/UXO victims in Phnom Prek and Salakrao to emergency hospital at Battambang and Pailin.
 - 01 building of primary school within 4 rooms was built by local contributor, located in Svay Chek district, under facilitated of CBMRR's volunteer networks.
 - 5 families living in Slakram village received 1 cow each from SEADO.

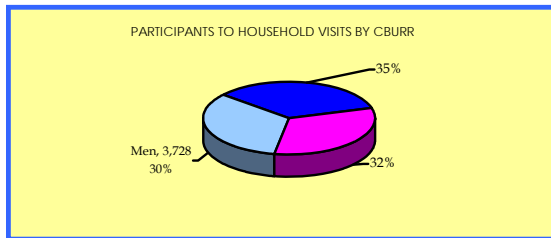


- 06 portions of laterite roads had coordinated by CBMRR to construct by SEILA program and Rural Development Department in Khan Salakrao with 12,796 meters length, located in Ou Krouch, Ou Doem Check, OuSamrel Leu and Ou Samrel Krom villages of Samlout district, and Phnom Koy village of Pailin municipality.
- 2 wooden-bridges had built by local community themselves located in Ou Traeng village, Tatoak commune and Samlout district.
- 1 creek with 1200 meters length was constructed by Rural Development Department of Salakrao, under facilitation by CBMRR.
- 26 drilling-wells had been dug by CRS and WVC (08 drilling wells in Moung Russei and 15 in Phnom Prouk district) of Battambang and 03 in Malai district of Banteay Meanchey provinces.
- 7 ponds were facilitated by CBMRR to construct by Seila program and local Cambodian contributors. Those ponds located in Lbeuk Svay, Slakram, Kvarv Lech, Damnak Kokas, Chamkakor villages, Svay Check district of Banteay Menachey province and Phnom Koy village, Salakrao commune, Pailin municipality.
- 91 cow banks had been provided by SEADO, Okendence, OEB and CFEDA organizations for 84 poorest and disabled families living in Malai, Svay Chek, Kamrieng and Phnom Preuk districts of Banteay Meanchey and Battambang provinces.
- 54 disabled and poorest families in Salakrao, Bovel, Phnom Preuk, Moung Russei and Kamrieng districts had received 78 pig banks from ADA and WVC organizations.
- 55 poorest and disabled families in Malai had received cereal banks from Srae Khmer org.
- 80 chickens had provided by WV for 08 disable families living in Chamkar Kaffee village, Tuol Lvear commune, Pailin municipality.
- A disabled family in Malai district had received a small house was built by JSC organization.
- 1 bicycle had provided by JSC for a disable girl living in Kibal Spean village, Poipaet, of Ou Chhrove district.

- 2 rice banks had built by SEADO for two poor families living in Sbeuk Svay and Slakram village, Svaychek commune of Svaycheck district.
- 334 poorest and disable families in Samlout, Thmar Puok, Kas Kralor and Kamrieng had received humanitarian presences from Department of Women Affairs of Battambang, CARE and Aus-care.
- 5,883,300 Baths was credited by ADA, Seila, TPC, SEADO, CABDIC and CARE for 58 poorest and disable families living in Klar Ngap village, Tuol Pongro commune, Malai district and another in Seila Khmer village, Ou Beichoan commune, Ou Chhrove district of Banteay Meanchey.

4.1.3. Community-Based UXO Risk Reduction (CBURR)

During the reporting period, 13 CBURR DFP’s were deployed in Kampong Speu, Kandal, Prey Veng, and Svay Rieng Provinces to cover heavily UXO contaminated districts. They provided UXO awareness education to vulnerable groups and individual villagers and visited households to discuss and identify needs for UXO action. These teams have achieved some result as bellowing:



- Target communes 169
- Target villages 1,551
- Total households in target villages 235,214
- Village population 1,185,919
- Sessions reached 1,209
- Households visited 8,787
- Number of participants
 - 15,412 men
 - 15,877 women
 - 14,832 children

Actions responded to villagers’ request 1,156 times (529 mines, 12,078 UXO)

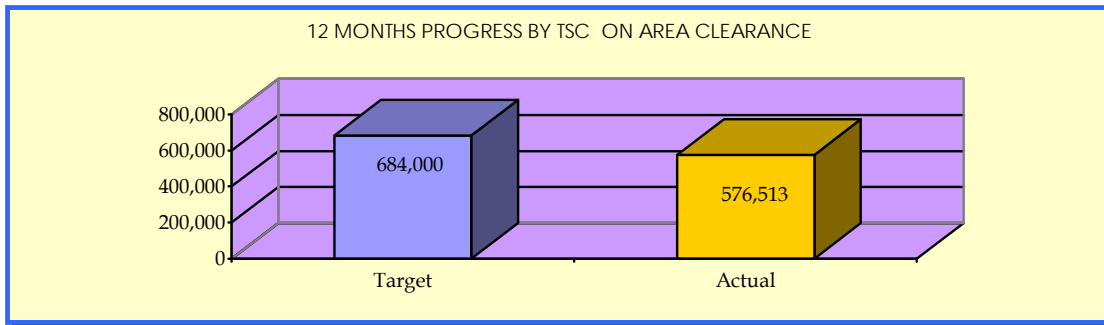
4.2. CORE ACTIVITY 2: MINEFIELD INFORMATION AND SURVEY

4.2.1. Technical Survey Clearance Teams (TSC)

By January 2005 Mine Marking Teams (MMT) were completely converted to be TSC teams. During the reporting period, CMAC deployed 19 TSC teams throughout the 6 demining units. The teams were deployed to map, survey, and mark minefields in preparation for clearance by demining platoons and MDD teams as the following results:

- Area cleared **576,513m²**
- AP mines found & destroyed **163**
- AT mines found & destroyed **6**
- UXO mines found & destroyed **122**
- Liner meter marked **914,307 meters**
- Minefields surveyed **202 MF**
- Fragment unearthed **235,589**

The TSC teams achieved their target in term of the landmines clearance by **84.29%**.



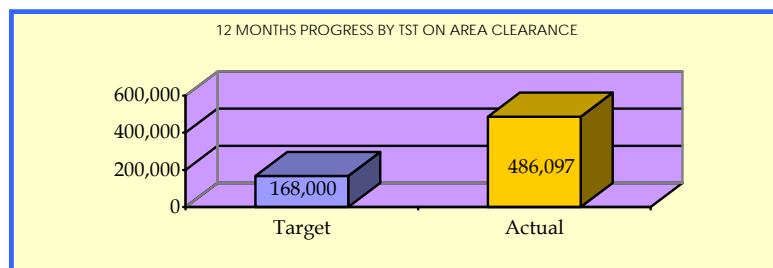
4.2.2. Technical Survey Teams (TST)

During this reporting period TST, 1 team was deployed in DU1 Banteay Meanchey, 2 teams in DU2 Battambang, and 1 team in DU3 Pailin. During these 12 months, 7 villages were surveyed, and 4 among them have the highest casualties, therefore those villages CMAC were selected for TST teams.



- Area cleared **486,097m²**
- AP mines found & destroyed **482**
- AT mines found & destroyed **4**
- UXO mines found & destroyed **4,068**
- Liner meters marked **449,570 meters**
- Area Reduction **3,503 hectares**
- Surveyed **8,830m²**
- Fragment unearthed **139,861**

Thanks to the effort made the teams and the appropriate selection of the tasks, the TST teams achieved their target in term of the landmines clearance by **289.34%**.



Additional to achievement of landmines clearance, TST and TSC teams had reduced the sized minefields area from the highest rating of huge operational clearance needed down to small operational clearance requiring because they were conducted reduction area of minefields confirmed by National survey level 1.

4.3. CORE ACTIVITY 3: MINE/UXO CLEARANCE

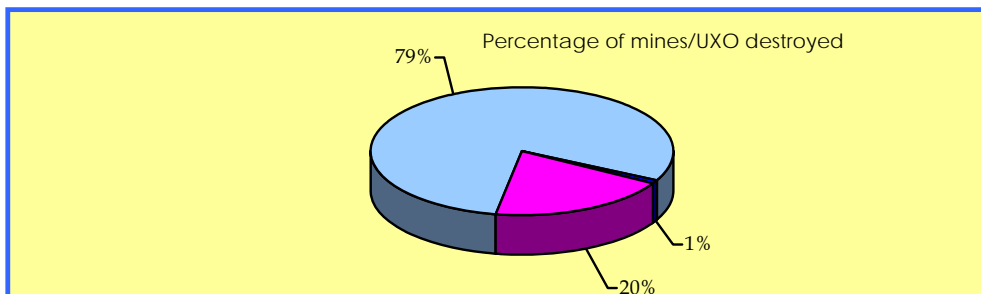
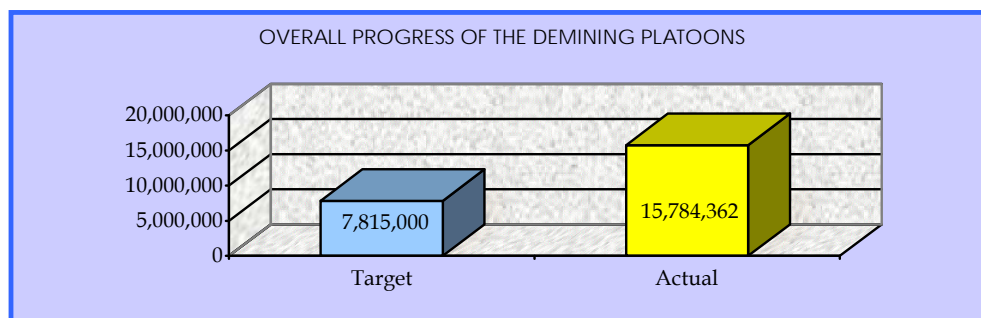
4.3.1. Demining Platoons (Normal & Mobile)

During the period 12 months of year 2005, CMAC deployed 43 demining platoons; 06 normal and 37 mobile, in the 6 Demining Units with 60% of the platoons deployed in 3 provinces of Battambang, Pailin and Banteay Meanchey. The remaining resources were deployed in the provinces of Pursat, Kompong Thom, Preh Vihear, Kompong Cham, Siem Reap and Oddor Meanchey.



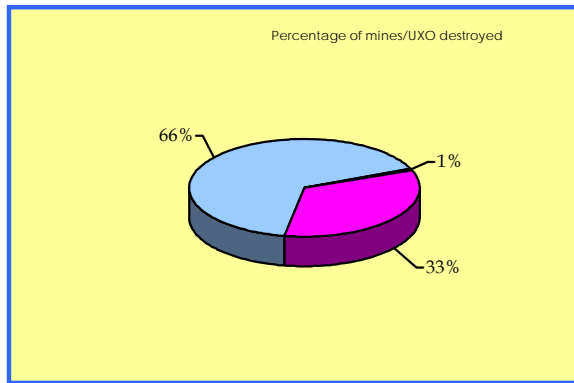
Thanks to the effective integration of toolboxes, improvement in demining drill, effective vegetation cutting and some internal restructuring of the demining platoons, the progress made by the demining platoons during the period of 12 months is remarkably high, achieving **201.98%** of the clearance target.

Area cleared	15,784,362m²
AP mines found & destroyed	35,717
AT mines found & destroyed	284
UXO found & destroyed	8,735
Fragments unearthed	20,506,896

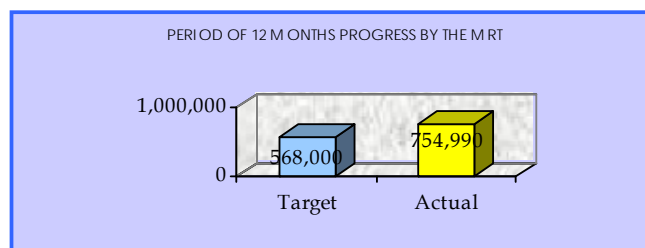


4.3.2. Mine Risk Reduction Teams (MRT)

From January to May 2005, CMAC deployed 6 MRT teams in 3 Demining Units: 2 teams in DU1, 2 teams in DU2 and 2 teams in DU3. By June 2005, CMAC reduced the number of MRT teams from 6 to 4, due to the funding shortfall. In total during the period 12 months of year 2005, the MRT teams achieved **132.92%** of their target. It should be noted that in addition to clearance and marking, the MRT teams were involved in conducting survey in 13 villages in order to define high risk areas and determine appropriate mine action tools.



• Area cleared	754,990m²
• AP mines found & destroyed	1,733
• AT mines found & destroyed	15
• UXO mines found & destroyed	880
• Liner meter marked	29,697 meters
• Fragment unearthed	739,478
Village Survey Activity	
• Village surveyed	13
• AP mines found & destroyed	0
• AT mines found & destroyed	0
• UXO found & destroyed	1
• Total families assessed	1,233
• Families without mine affected	1,217
• Families affected by landmine	16

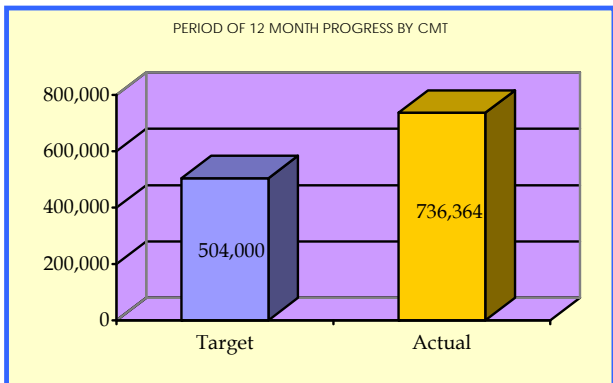
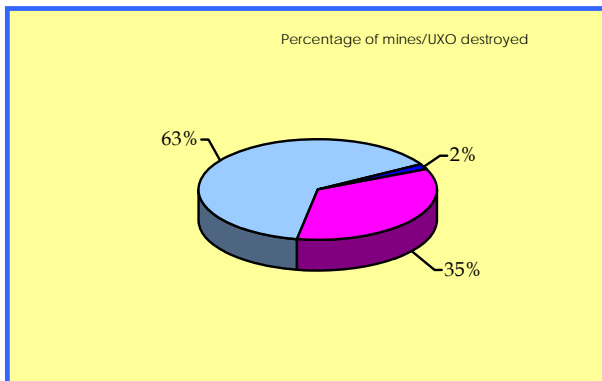


4. 3. 3. Community Mine Marking Teams (CMT)

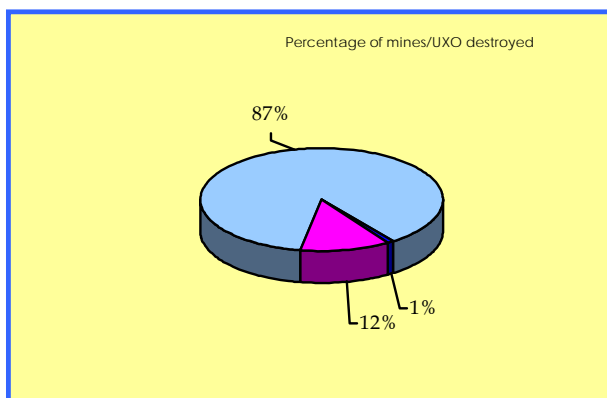
During the reporting period, CMAC deployed 14 CMT teams to respond to small-scale high priority clearance tasks requested by local communities. In respond to these emergency tasks the CMT teams made a remarkable achievement of **146.10%** of their target.



- Area cleared **736,364m²**
- AP mines found & destroyed **1,191**
- AT mines found & destroyed **30**
- UXO mines found & destroyed **644**
- Liner meter marked **43,550 meters**
- Fragment unearthed **336,372**



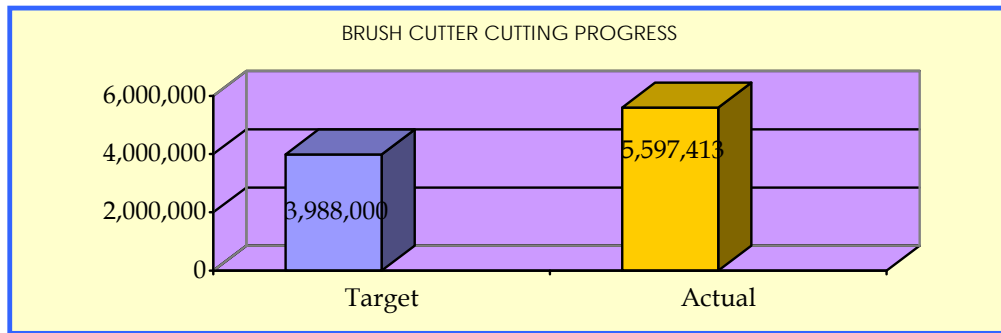
4. 3. 4. Mechanical Brush Cutters (BC)



This vegetation cutting system has been a very useful tool for CMAC in the last few years, making mine clearance faster and more efficient. During the reporting period, CMAC deployed 12 Brush Cutters by June, and then 14 Brush cutters more donated by the Government of Japan, deployed by July, and then one more brush cutter donated by the Government of Japan in November, deployed by December, in total 27 Brush cutters were deployed in all demining units. In April 2005, the Brush Cutter team structure was reviewed and revised to meet operational needs and conditions of minefields. The Brush Cutter machines were also given an additional task of mine/UXO clearance on top of their traditional vegetation removal task. As an overall progress, the BC teams achieved **140.36%** of their cutting target and **52.73%** of clearance target. Additional to vegetation removable, BC teams were involved in excavating beams soil in suspected minefields, and 2 BC teams were relocated to the Training Centre for the training of new BC Operator/Maintainer in expectation of an additional 14 new brush cutters which were due to arrive in July 2005 and another one more arrive in November 2005.



- Vegetation cutting **5,597,413m²**
- Area cleared **1,763,918m²**
- AP mines found & destroyed **3,847**
- AT mines found & destroyed **33**
- UXO mines found & destroyed **524**
- Mound of soil cleared **155,615 m³**



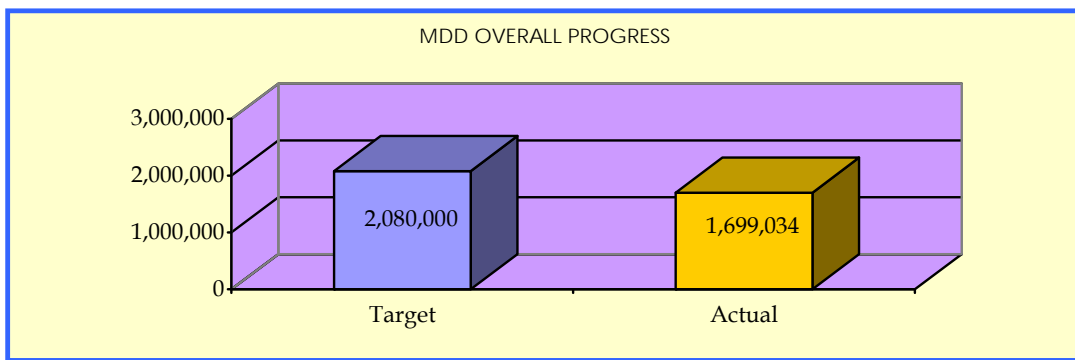
4. 3. 5. Mine Detection Dog Team (MDD)



The MDD structure was revised from a 6- dog team to 4- dog team (short leash team, 9 staff) and 2-dog team (long leash team, 3 staff). In the period 12 months of 2005, the MDD program conducted trial on long leash dogs. In addition to the introduction of the long leash dog program, CMAC also signed a cooperation agreement with MAG whereby CMAC leases on 2-dog teams to MAG to support its field operations.

During this reporting period, CMAC deployed 10 MDD teams – 4 team in DU#2, 3 team in DU#3, 3 team in DU#4, and 2 teams in DU#5. Overall all the MDD teams achieved **81.68%** of their target, but one reason was affected achievement of the MDD team's target compares to actual operational result, because of number MDD teams were less than expected. In addition to increase MDD operational field productivity CMAC is continually making efforts to improve the MDD skills, management and training.

- Area cleared **1,699,034 m²**
- AP mines found & destroyed **178**
- AT mines found & destroyed **0**
- UXO mines found & destroyed **418**

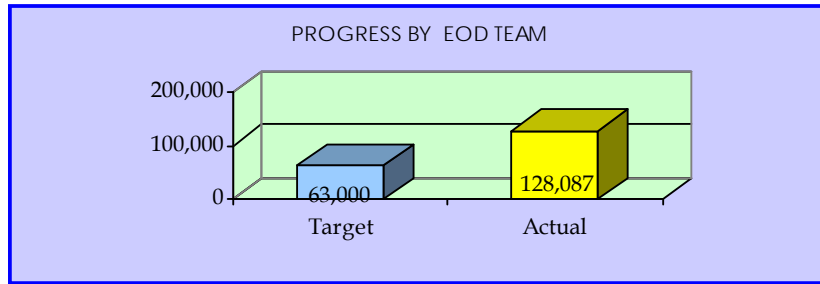


4.3.6. Explosive Ordnance Disposal Teams (EOD)

From January to December 2005, CMAC deployed 21 EOD teams, which achieved **190.00%** of their overall target. Thanks to the deployment of CBURR in the four provinces, the number of UXO incidents in the target districts remarkable decreased. However, it should be noted that the overall UXO accidents remain on the increase line and the number of accidents is higher that caused by landmines due to poverty, behavior and attractive price of metal. Despite efforts and past achievements, the number of UXO accidents remains very high and the UXO clearance requests are abundant and hard to timely address. CMAC planned to increase its EOD capacity, but with financial constraints this has not been possible.



- Area cleared **71,494m²**
- Number of tasks **8,203**
- AP mines destroyed **29,546**
- AT mines destroyed **471**
- UXO destroyed **113,416**
- **Total items destroyed by EOD** **143,433**
- Small calibers **21,800Kgs**



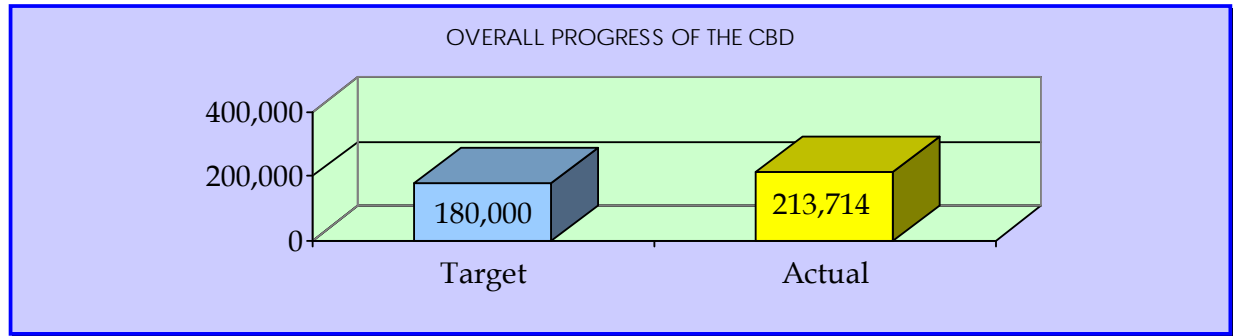
4. 3. 7. Community Based Demining teams (CBD)

CMAC is proud to have an up and running CBD program which has proved to be very successful and produced far-reaching socio-economic impacts. CMAC has been deploying one CBD platoon (divided into 2 CBD teams) to clear landmines at Kamrieng district, Battambang province. In addition, CMAC established a second CBD platoon in the second half of this year in Preah Vihear under the Grassroot support. The majority of the tasks of the CBD are to respond to the needs of their own communities affected by the landmines. For the reporting period, the CBD achieved **118.73%** comparing to their clearance target.



• Area cleared	213,714m²
• AP mines destroyed	1,308
• AT mines destroyed	8
• UXO destroyed	58
• Fragments unearthed	948,282





4.4. TRAINING AND RESEARCH IN MINE ACTION

4.4.1 CMAC's Training Centre

CMAC's Training Centre (TC) based in Kompong Chhnang Province constitutes the main component and facility for improvement and enhancement of skills, expertise and experience, both in field operations and first line and middle management, the MDD program and for development research in mine action. The demining courses conducted by CMAC's TC are of high quality and standard in mine action. During the 12 months period of year 2005, the Training Centre conducted 50 training courses participated by 1,685 trainees.

In addition to training its own staff, CMAC's TC also provides training to external demining organizations. For instance, on this period 10 months of 2005, deminers of the RCAF, who were expected to be sent to participate in humanitarian demining in Sudan, received training conducted by CMAC TC's instructors.

CMAC's TC is currently housing the Explosive Harvesting program (still at research and development stage) that is supported by the US Government. Facilities have been constructed and equipped and work in underway to extract explosives from UXO and reshape for subsequent uses. If this research and development program is successful, there will be no need to import the costly explosives from overseas to support CMAC's demining and EOD operations.

In addition to this, CMAC's TC also houses trials of different demining tools, including mine detectors



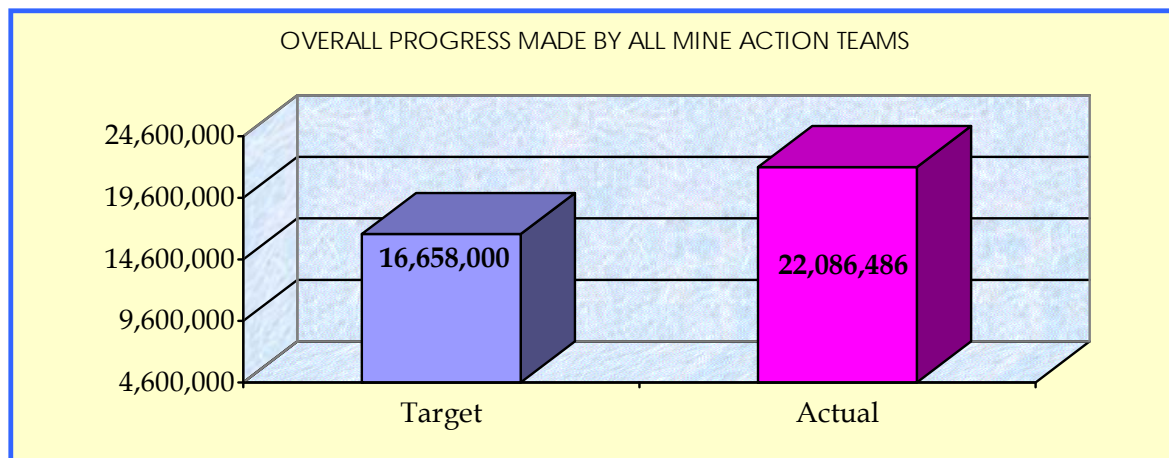
Progressive course of training to date

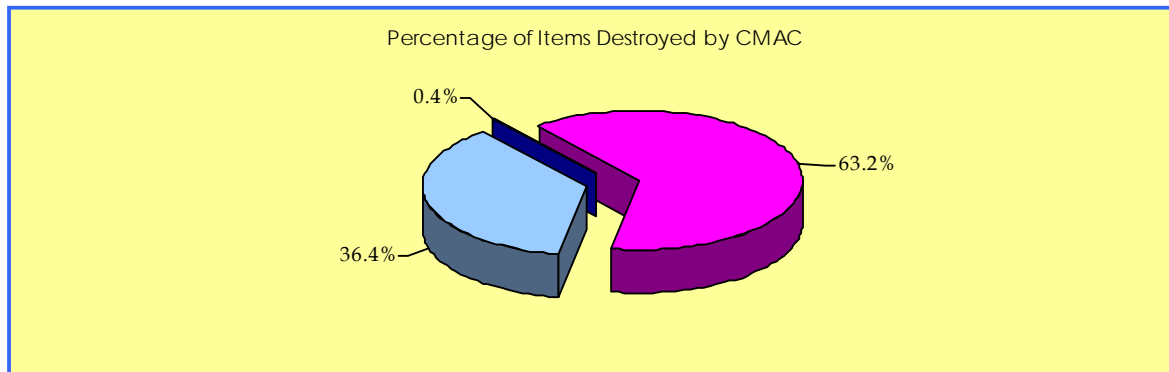
N	Course Title	Course number	Location	Trainees source	Trainee number	Start Date	Finish Date
1	MDD refresher	19	TC	MDD	20	17-Jan-05	28-Jan-05
2	Ebex 421 refresher	1	DU3	DU3	56	27-Jan-05	27-Jan-05
3	UPEX 740	2	DU2	DU2	30	15-Feb-05	17-Feb-05
4	UPEX 740	3	DU1	DU1	20	22-Mar-05	24-Mar-05
5	MDD refresher	20	TC	DU1	18	28-Mar-05	08-Apr-05
6	Demining refresher	56	Odong	Enginr	135	29-Mar-05	01-Apr-05
7	Basic close marker	7	TC	DUs	31	04-Apr-05	08-Apr-05
8	Basic demining	117	Brid 70	Soldiers	41	04-Apr-05	06-May-05
9	MDD refresher	21	TC	DUs	18	18-Apr-05	03-May-05
10	Reinforcement	1	TC	CMT,MRT	28	27-Apr-05	28-Apr-05
11	Basic brush cutter	4	TC	Selected	25	03-May-05	24-Jun-05
12	SOP 109 training	1	DU1	DU, DU6	14	03-May-05	03-May-05
13	SOP 109 training	2	DU3	DU3	10	04-May-05	04-May-05
14	SOP 109 training	3	DU2	DU2	14	05-May-05	05-May-05
15	SOP 109 training	4	Sub-DU2	Sub-DU2, DU4	14	06-May-05	06-May-05
16	Truck trailer	1	TC	Selected	6	09-May-05	02-Jun-05
17	Demining refresher	57	Brid 70	Soldiers	233	09-May-05	03-Jun-05
18	Minefield Mangt	1	DU3	DUs, TC	30	16-May-05	16-Jun-05
19	Helicopter zone construction	1	DU3	DUs, TC	30	16-May-05	01-Jun-05
20	basic & Advance medical	1	TC, DU3	DUs	20	17-May-05	9-Jun-05
21	GPS 12 XL map	7	Brid 70	Soldiers	60	23-May-05	23-Jun-05
22	Pre-education step2 DH basic	2	TC	MDD	8	23-May-05	02-Agu-05
23	MDD team refresher	22	TC	MDD	16	30-May-05	10-Jun-05
24	Handover new MDD refresher	1	TC	MDD	6	30-May-04	25-Jul-04
25	Minefield Management	2	DU3	DUs, TC	30	06-Jun-05	17-Jun-05
26	helicopter zone construction	2	DU3	DUs, TC	30	06-Jun-05	17-Jun-05
27	Basic demining	118	TC	DUs	22	21-Jun-05	29-Jul-04
28	Basic demining	119	Brid.70	Soldiers	45	23-Jun-05	21-Jul-05
29	MDD team refresher	23	TC	MDD	18	28-Jun-05	08-Jul-05
30	Bulldozer	1	HQ, Kg Speu	Selected	5	30-Jun-05	08-Jul-05
31	Basic demining	120	Brid. 70	Soldiers	54	25-Jul-05	19-Aug-05
32	CBMRR	4	TC/DU3	Local	5	01-Jul-05	12-Aug-05
33	UPEX 740 /Mine lab UXO	4	DU6	DU6	17	16-Agu-05	18-Aug-05
34	UPEX 740 /Mine lab UXO	5	DU3	DU3	30	22-Agu-05	26-Aug-05
35	EOD refresher	16	TC	DUs	31	22-Agu-05	26-Aug-05

36	Basic demining	121	Brid.70	Soldiers	70	22-Agu-05	16-Sept-05
37	EOD refresher	17	TC	DUs	40	29-Agu-05	02-Sept-05
38	MDD team refresher	24	TC	DUs	10	05-Sept-05	16-Sept-05
39	Basic demining	122	Brid. 70	Soldiers	66	05-Sept-05	30-Sept-05
40	UXO awareness	1	TC	Police	104	10-Oct-05	21-Oct-05
41	MDD team refresher	25	TC	DUs	12	10-Oct-05	21-Oct-05
42	Navigation MDD SOP	1	TC	DUs	20	17-Oct-05	28-Oct-05
43	Druck Trailer	2	TC	DU6	1	18-Oct-05	24-Oct-05
44	Brush Cutter	5	Kp	Dus	4	22-Nov-05	1-Dec-05
45	UXO Awareness (Police)	2	TC	Police	75	21-Nov-05	2-Dec-05
46	Mdd team refresher	26	TC	Dus	18	21-Nov-05	2-Dec-05
47	MDD Dog handler Basic Course	6	TC	Recr	15	21-Nov-05	21-Mar-06
48	Basic Demining Course CBD	123	TC	Du4/Du2	43	5-Dec-05	19-Jan-06
49	MDD Refresher Course	27	TC	Dus	18	13-Dec-05	23-Dec-05
50	Navigation Maping GPS	7	TC	Dus	20	19-Dec-05	30-Dec-05
TOTAL TRAINEES					1,685		

5. OVERALL CLEARANCE PRODUCTIVITY

During the 12 months period, all CMAC's field operational teams involved in mine clearance totally cleared 22,086,486m² of high priority areas. These operations found and destroyed 74,165 anti-personnel mines, 851 anti-tank mines, 128,865 UXO's and small calibers 21,800Kgs. Furthermore, 1,437,124 liner meters were marked for risk reduction, and 3,503 hectare of area reduction conducted by TST teams was made for specific clearance in the next stage. The global performance target for all the teams for the reporting period was 16,658,000m². This reflects a 32.58% achievement over the target and a significant improvement in the effectiveness and efficiency of the overall mine action operations of CMAC following continual improvements to its mine action tools, practice and management.





6. SOCIO-ECONOMIC IMPACT OF CMAC'S OPERATIONS

Demining reduces potential accidents, provides land for agriculture, settlement and infrastructure development, and provides opportunity for development agencies to implement their activities in a safe environment. Without demining, most development activities cannot be implemented due to the contamination of land mined in the project areas.

CMAC is not concentration on clearance of minefields, but as well as the socio-economic assessment is very importance and necessary to carry out prior to assess those lands after clearance are beneficial for risk reduction and community development. The purpose is to ensure that land to be cleared is having high socio-economic impact for the intended beneficiaries. These activities are not only meet donors and community requirements, and also realize to the Government's Policy of Poverty Reduction.



The responsibility for selection of minefields for clearance has been decentralized to Demining Units who work closely with provincial authority, development NGOs and more importantly with the local communities. The communities present a list of minefields requiring clearance to MAPU, and MAPU together with CMAC and other demining agencies conduct field assessment to ensure that the land to be cleared will be used by intended beneficiaries for the right purposes.

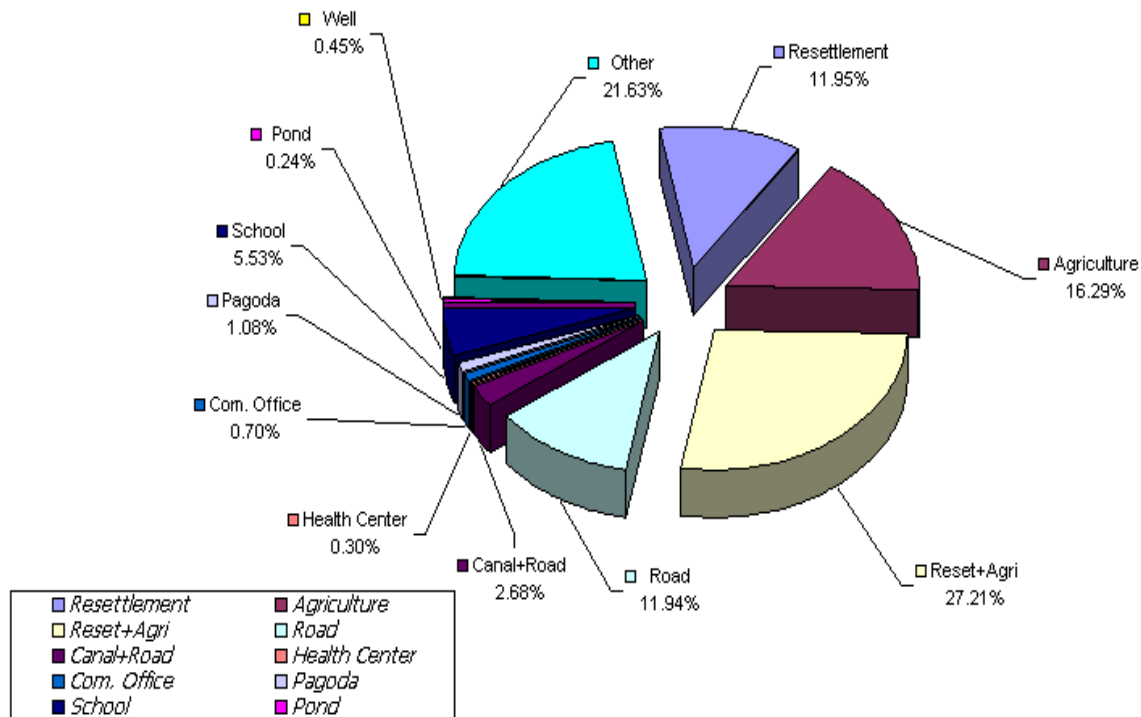
Type of Beneficiary	
Direct beneficiaries (families)	9,117
Indirect beneficiaries(families)	59,604
Students (person)	29,279
Beneficiary villages (villages)	266
Minefields cleared and handed over	541



Socio-Economic Impact on Cleared land handed over to local authorities

Description	DEVELOPMENT CATEGORY	Total (m ²)	Total (Ha)	Total %
ECONOMIC DEVELOPMENT	Resettlement	2,639,072	263.91	11.95%
	Agriculture	3,597,949	359.79	16.29%
	Resettlement plus Agriculture	6,009,610	600.96	27.21%
	Wells (Clean water supply)	99,600	9.96	0.45%
	Pond (dug pond for family household use)	53,193	5.32	0.24%
	Irrigation, canal, road access	591,300	59.13	2.68%
	Road portion (infrastructure development)	2,638,069	263.81	11.94%
SOCIAL DEVELOPMENT	School	1,221,065	122.11	5.53%
	Pagoda	239,056	23.91	1.08%
	Health Center	65,700	6.57	0.30%
	Governmental office	154,300	15.43	0.70%
	* Others Uses	4,777,572	477.76	21.63%
TOTAL		22,086,486	2,208.65	100.00%

ANALYSIS THE DEMINED LAND FOR SOCIO-ECONOMIC DEVELOPMENT FROM JANUARY TO DECEMBER 2005



7. OTHER ACHIEVEMENTS

In addition to the survey, marking, mine/UXO clearance, mine risk education and training in mine action achievements, the Operations & Planning Department also made the following achievements:

- Conducted operational trial of long leash MDD in live minefields to study the impact of the minefield conditions.
- Reviewed the MDD SOP to reflect the changes in the practical operations of MDD in the minefields.
- Conducted operational trial of manual demining – Two-men One-lane drill.
- Conducted operational trial of Brush Cutter employed as a demining machine.
- Conducted the demining operational trial of the Community Mine Marking Team (CMT) in DU1 for 3-month to study the impact of the minefield conditions, and to improve the operational methodology to increase the efficiency and effectiveness to provide quick response to the requests for risk reduction and small scale development by the affected communities, and to reduce the cost reduction effectiveness and efficiency. After a successful trial of CMT, a the Community Mine Clearance team (CMC) was established to replace the Community Mine Marking Teams (CMT) and Mine Risk Reduction Teams (MRT),

taking into account past experience, nature of problems and task, mobility, appropriateness of team structure, and other factors in the late of December 2005.

- A new initiative and innovative strategy of integrating the mine awareness teams (MAT) and EOD was developed and approach in mine and UXO awareness program namely Mine/UXO Risk Education and Reduction (MRER) through a more multiple skilled functioning in both provision of mine/UXO risk education and carrying out EOD and limited clearance tasks in risk reduction efforts by responding to clearance request made by the affected communities.
- Operations & Planning Department attended ISO 9001:2000 Introductory & Awareness training in Quality Management, System Documentation & Implementation and Internal Quality Audit on 30 May - 02 June 2005.

8. Challenges and CMAC Staff Incidents

Demining is a tough and critical job for CMAC staff because demining always takes place in the jungle where diseases and others incidents challenged our deminers, for example, malaria, typhoid fever, Diarrhea and mine/UXO accidents.

Based on medical report between January and December 2005, there were 104 cases which fall in malaria, 252 cases of typhoid infection, 15 cases of HIV infection...

Furthermore, CMAC faced 13 cases of mine/UXO accident between January and December 2005. One of those cases was dead of UXO explosion during the operations. Another deminer lost both eyes because of UXO during the operations. The rest was just a slight injury, some on legs or hand, face and eyes.



Mr. SA KEA, EOD Team Leader died during operations in Banteay Mean Chey Province

VOICE OF LANDMINE SURVIVORS

Daughter amputated one leg and Mother got wounded by stepping on a landmine

A poverty condition enforced a widow and a girl to get injured while they were walking into the forest to pick PRICH leaves (PRICH is a kind of natural tree leaf which can use as a vegetable) and to catch red ants (Red ants can use as a food). This tragedy happened on March 06, 2005 at 8:40 am in the areas of K5 along Cambodia-Thai border near Preychan Village, Obeychoan Commune, Ochrov District, Banteay Meanchey Province.

Long Toeng is 10 years old. Her legs and right hand were injured, and her left leg was amputated above the knee by the physicians of Mongkul Borey Reference Hospital. Her mother, Long Tha, 52, was seriously wounded at her hand and leg.

Long Tha recalled that prior accident she and her daughter went to pick PRICH leaves and red ants in the forest nearby her home to earn a living.

She continued that "At that time, she told her daughter to wait on the road side, and she went down to pick a nest of red ants nearby the road. Suddenly



her daughter ran towards her, stepping on a landmine. The dark smokes and heavy din of explosion rose up, her daughter then shouted hurtfully." At the same time, she fell over there, and her hand and leg were wounded, covering with blood. As for her daughter, she was surrounded by dark smokes and her leg was torn in rags. We both were evacuated to the Mongkul Borey Reference Hospital.

It is noted that Cambodia -Thai border at K5 areas caused a major number of landmine casualties which happen almost every week. The

victims are usually poor people who take risk to earn their daily living in the landmine threat areas.

Landmine Survivors appeal for Help

O' Sra Lao is one of the newly established villages in Banteay Meanchey. O' Sra Lao was started its new life in 1997 after Resistant Khmer Rouge forces integrated to the Government in 1997. O' Sra Lao is located in the west of this province along the Cambodian-Thai border. This village is in O' Sra Lao commune, Malay District. This area is covered with thick forest and opened fields as well as bamboo areas around 75 Km from Banteay Mean Chey town.

This village is situated along a road built in 1996 with 7 km long. The shelters are made by small woods heightening floors with thatched roofs and walls. The floors are built by different kind of pieces of bamboos depending on the enjoyment of each family. The village authority provided to people the plots of land that are used for resettlement and agriculture.

Now, O' Sra Lao has the population of 68 families with 350 people included 150 women, 10 window families and 3 parentless children. The total size of the whole area is approximately 238 acres. The land that can be possibly used as agriculture is about 100 acres. The rest is landmine area.

After 1980, this area was heaviest fighting battle fields between the government forces and the Khmer Rouge resistant groups. After the treaty of peace agreement in Paris, the resistant forces of Kampuchea Democracy attempted to occupy the whole area by launching several attacks. During the war, both factions littered multi types of mines and UXOs: POMZ2, PMN, PMN2, PMD6, 72A, 72B, improvised mines and Anti-tank mines, and all kinds of trap.



Minefield in O' Sra Lao village

Ms. San Yoeun is 44 year olds, the Vice village chief said, "There had been no people living in this area since 1989 because heavy and steamy attacks between the government forces and the Khmer Rouge were still going on. In the early 1997 the Khmer Rouge integrated to the government and the fighting was finished. Since then, poor people who had fled away during the war had come to this area subsequently including the returnees and some demobilized soldiers and the families of the former Khmer Rouge".

She added, "even though the civil war is finished, another horror and unknown war has followed. The casualties of mines and UXOs have occurred causing people being killed, injured, amputated and blind continually. There are 11 disables, 10 widows and 3 parentless children, and 20 animals were killed. The tragedies of mines and UXOs are still continuously happening nowadays, causing death and disablement. The earning of a living, doing agriculture are so thoroughly spoilt by the mines and UXOs which have been laid almost every where that the lives of people in this village falls in the highest risk. Particularly, mines and UXOs have affected seriously to the social economy and living condition of the people. Poverty has threatened mainly the cripples making their families miserable".

Keav Sey, male aged 56, Chief of O' Sra Lao described about his accident by mine buried near his house. "I had born in Svay Chrum village, Ou commune, Phnom Srouch district, Kampong Speu province. My wife named Mean Sang, 50 years old. We had 8 children, 4 sons and 4 daughters. In 1979 we fled to live in Kao Lan Camp in Trat Province, Thailand, when Vietnamese troops came fighting in Cambodia. In 1997 my whole family moved into this village. I thought our life would be better and hoped that the condition in the new place would be good for my family. But actually, my family has been terrified and worried almost every day for the area consists of mines leading incident to most of the people. The villager gets the accident every subsequently - losing arms or legs, or death as they walk in the forest to look for wild vegetable, vine, bamboo shoots, to pick wild fruits or to access to the water. Some of them lost their husbands, wives or children or became cripple themselves. They left the village and possibly sought their fortunes in other places. But some bear to continue living although they are aware that this area is dangerous. A step in the forest is a risk to their lives; but they are still walking about carrying knives, hoes or axes to earn living for their families".



Keav Sey and his daughters

"One day in 1998" he said, "I cleared away the grasses growing over my rice plant by using a hoe, a knife and a sickle. After I had worked for a while, I saw a well-growing plant of grass. I did not use the hoe to chop it away but I tried to pull it out. As soon as the grass was pulled off the ground, a mine was exploded. I fell backward to the ground unconscious. My wife told me that the whole village was alarmed and the people went out to see what happened, as they were sure that there would be another accident. They were right. When they got close to the scene they found me lying. My blood was bleeding from my right leg and right eye. My wife was so terrified, she cried for help. A few men about my age came in and carried me from that place and laid me on an old bamboo bed near the house. Then I was carried in a hammock to hitchhike a motorbike. Finally I was at a health center in Malay district. My right leg and eyeball were so damaged. When I was conscious I was very disappointed because I lost my right foot and my right eyeball. After spending 4 weeks at the center for the treatment, I went back home with sorrow. Mines and UXOs are the most dangerous things to the people's lives and they are interrupting the development process and bring the poverty to the people".



Keav Sey told about his story

Neak Huch, male, aged 39 a landmine survivor living in O' Sra Lao village said, "I had born in Ang Khchao village, Kampeng commune, Kirivong district, Takeo province. I moved to O' Sra Lao along with my wife and 4 children in late 1999. My eldest daughter is 13, the second is 11, the third is 5 years old and my youngest son is 1 year old. One day while I was clearing



Neak Huch is talking about his accident

the grasses around my cottage, I found an object lying horizontally. I was so happy; I thought that I could make some money by selling this scrap metal. I brought it home and placed it under the house waiting for scrap buyer. But my friend named Seng, about my age, came round and accidentally he found that object. He was very frightened and told me that it was an UXO. "Why you brought it home? What are you going to do with it?" He asked me frightfully. I was trembling when I was told about the danger of that exploded object. But fortunately, that UXO was safe as it had no fuse".

He added, "In another day of early rainy season of the year 2003, I went to the forest with other 5 villagers looking for bamboo shoots. When we walked about 150m east of our village we found thick bushes of bamboo, we were glad as seeing a lot of bamboo shoots. We thought that we would make a lot of money while we were digging and pulling out the bamboo shoots. Suddenly one of my friends found mines in cluster and cried out to alarm the others. All of

us so much scared. We were in minefield and I told my friends to stay where they were. We could do nothing but stood still. Then I asked my friends to look back to try to recognize their individual feet's prints and follow them out. All of us put our hands on our head walking carefully wishing the God to keep us safe. It took about 3 hours to get out of the mined area. We went back home without any bamboo shoots".

Huch continued with grim face "It is true that every one would not be clucky all the time and so do I. One day in early of year 2004, I went to clear grasses in my land for growing some seeds, suddenly I stepped on landmine that made me becoming a handicap man. Since I was became a cripple man, my living condition was very bad. The earning of the living fell totally onto my wife. The need of stomach was very important so my children had to stop studying and helping to earn money for supporting the family. They sold their labors in local or in Thailand, such as collect corn, green bean, or cutting sugarcane etc". He said with hopeless, "nowadays the living condition of my family was getting worse from day to day".



Neak Huch and his family members

Today, Neak Huch and other villagers are living in the mined area with high risk. They are so worried about their future, mainly the future of their children. So they would like to call for the National and International Agencies to support the de-mining operations in the area and to develop all fields in the village in order to improve the living condition in the community in order to reduce the poverty of the people in the village.



Neak Huch's wife is preparing to cook rice for her children

A CASE: SOCIO ECONOMIC IMPACT OF DEMINING

CASE STUDY

PHTEAH RUNG (CAM-043, 044, 045, 047 & 048)

Phteah Rung was an old village covered with forest, lying along the bank of Preah Punley Lake, in Phteah Rung commune, Phnom Krovanh District, 35 Km at the Southwest of Pursat Provincial town.

After 1979, that area was a place where the Government's armed forces stationed, camped to prevent Khmer Rouge from attack. Later it became a strategic zone of a battlefield where the government troops fought against the Khmer Rouge. The two fighting factions laid mines together with invented mines of many types to protect their locations and cut off the enemy's transportation and penetration. They laid mines at the important points, as along the canals, in the ponds, and ditches.

From 1989-1993, the people in this village escaped the war to live in the distant places. During 1993-1998 the people came back to resettle and rebuild their houses after the end of the civil war. When the people came to live in this area, first it was noticed that there were 3 men wounded by mine and 7 were killed by mine explosion as well. Also, landmines killed 50 cows and buffaloes.

The minefields designated CAM-043, 044, 045, 047 and CAM-048 were a big part of minefield in Phteah Rung village. The donors to the UNA-USA's Adopt-A-Minefield adopted these sites subsequently. Clearance of this hot battlefield was conducted by one platoon of the Cambodian Mine Action Centre (CMAC) and took place from August 22, 2002 to October 22, 2003. Within 58.72 acres area of the above cleared sites, CMAC found and destroyed 83 anti-personnel mines and 11 UXOs.



Picture 1: CAM-045 clearance signed board

After the cleared sites were handed over to the Local Authority, the land that once been polluted by mines became home to an abundance of development that aid 25 families from various areas.

Mr. Sok Chamroeun 46 years old, the Chief of Phteah Rung village (picture 2) reported, "Before clearance, just 35 Km from town, but my village looked like a forest desert, no out side people or businessmen came here and our villagers suffered since mines menaced the poverty of every day life. When the



Picture 2: Mr. Sok Chamroeun Chief of Phteah Rung village informed the situation of his village

wet season coming it may easily to get danger of mines around the house, farmland, nearby water

source, access road to school, pagoda, health center etc. because the soil was soft". He continued "After CMAC cleared these extreme mine/UXO areas, I allocated these sites to poor people from various areas for resettlement and doing agriculture. Now, the people in my village were increased from 158 to 172 families with 967 persons. Those people are not afraid of landmines in their house plots or farmland anymore, their lives are free in living, they get out of the prison without wall; they enlarge their paddy field and farmland to increase the productivity. No one thinks about the lost of himself or loves ones or animals like before. My village has 297.5 acres of paddy field that could provide income to people around US\$44,600 per year and there are 10 rice-mills in my village. Out of this, people can grow watermelon, peanut, bean and potato. Watermelon (picture 3) is a good plant, around 70 days of growing villagers can earn around US\$750 per 2.5 acres of land and we can grow it after the harvest season. So people can grow both rice and watermelon during one year. Besides growing rice and plants, people grow domestic animals. We have 160 buffaloes, 137 cows, hundreds pigs and thousands chicken, ducks. 145 families have oxcarts and 3 families have tractor, the cost of plowing is \$15 per 2.5 acres. Out of agriculture, some people make business or produce charcoal. These activities improve more the lives living condition of my villagers. Though the people house still surrounded by forest, but each house has black and white TVs that make our villagers know everything all over the country, we are not the frogs in the well anymore". He looked at the green watermelon and continued, "the cleared sites



Picture 3: Water melon farm in Phteah Rung village



Picture 4: Phteah Rung Primary school built by Peace Boat Japan

are not only benefited to people for resettlement and agriculture, but they affected to the other infrastructure development in the whole village as well. Now we have road, concrete schools (picture 4) constructed by Peace Boat and Social Funds and RACHA organization is coming to support poor villagers in growing domestic animals and doing small business. A new Pagoda was built for our monasticism. Presently, we still have some more development plans such as construct more laterite roads, dig the wells and extract the benefit from our Preah Punley lake by make this big lake to be a tourism site and growing fishes community. I hope one day the Donors will come here to enjoy the lunch with the big fishes under

the cold shade of big trees at the bank of lake and looking at people fishing". He gave me a smile and continued, "without CMAC and Adopt-A-Minefield as marked on the clearance signed board, these things could not happen and we do not have any new development ideas. Now everything is changed, when the first rain starts the green plants grow up instead of hearing the sound of explosion mixed with the cry of people".

Four years later

While traveling through Phteah Rung village, I met a family who lived in a clearance site since it was mined.

The dog barked me when I stepped to a house on a small hill where Ek Young family living. Ek Young and his wife smiled at me and called me to come in his house, they still recognized me when I interviewed him 4 years ago. They gave me a seat and drinking water.

Ek Young sweated from head to feet, he talked to me "I am sorry, I just come from my watermelon farm, to clear grasses and take out the worms". The pigs cried behind the house and Young's wife said "sorry, these pigs are always hungry, I just give them food a few hours, now they cry for food again". She looked at her youngest son and ordered "Boy! Bring our cows to get water at the lake and be careful they might eat people's plants around there".

They looked like very busy, but after welcomed me, Young, a talkative man started to remind his bad story (picture 5), "I am from here, in 1980 my mother died by landmine explosion in this land. In September 1986, I myself got danger of landmine and lost one left foot. In 1988, my brother died by mine as same as my mother". He added, "That time my family had greatly suffered from poor living condition, we had to face the shortage of food as I had six children. My house and garden-land were in the former battlefield, rich of mines, improvised mines and unexploded ordnance of all types scattered throughout this area". Ek Young said,



Picture 5: Four years ago Ek Young told about his mine accident

"In June 1993, I drove and ox-cart stepping over mine once more time without risk of life, just making my ox-cart damaged". Young's wife added, "I was so much afraid of landmines and worried all the times. When I stayed home, I worried about my husband in the farmland, and when my husband and I work together in the farm, we worried about our small kids at home. When, we all stayed home, we worried about our cows and pigs. When I lost my cows or pigs, I dared not to look for them, just wait to hear the sound of explosion".



Picture 6: New life of Ek Young's family after demining

"So, what happens right now?" I asked Young's wife. Young laughed and replied instead of his wife (picture 6), "Now! You CMAC remove all those mines and I get from Village Chief 2.5 acres of cleared land. It becomes green by watermelon, we have rice seed for next wet season, we have pigs and one of my cows just gave birth to her baby last week. We have enough income to send our elder son to study in Phnom Penh while others are learning here. My wife's mind is better, she does not worry about landmine accident anymore and in

the night time we are well sleeping after watching TV".

FINANCIAL REPORT

Period: **01. 01. 2005 to 31. 12. 2005**

Currency: USD

	UNDP	BIL	CMAC	TOTAL
I. Income				
1. Contribution	3,083,760.49	5,867,767.76	229,288.10	9,180,816.35
2. Interest Received	4.88	173.91	185.73	364.52
3. Others				0.00
Total Income	3,083,765.37	5,867,941.67	229,473.83	9,181,180.87
				0.00
II. Expenditure				0.00
4. Salaries	1,704,263.89	2,612,067.45	25,247.00	4,341,578.34
5. Accommodation	132,448.18	296,667.84	8,766.42	437,882.44
6. Non-Expendable Equipment	66,307.00	48,107.00	0.00	114,414.00
7. Expendable Equipment	213,356.46	617,527.19	51,667.22	882,550.87
8. Equipment Maintenance	206,690.85	432,958.40	13,341.50	652,990.75
9. Transportation	613,271.32	727,996.51	20,708.32	1,361,976.15
10. Support	327,751.00	388,198.49	2,875.25	718,824.74
11. Administration	69,694.66	138,469.78	60,360.51	268,524.95
Sub-total-1	3,333,783.36	5,261,992.66	\$182,966.22	8,778,742.24
Balance	(250,017.99)	605,949.01	46,507.61	402,438.63

SPECIAL THANKS TO THE FOLLOWING DONORS AND DEVELOPMENT PARTNERS



Australia



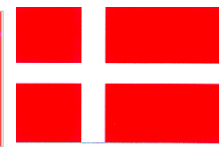
Belgium



Cambodia



Canada



Denmark



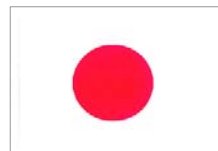
EU



France



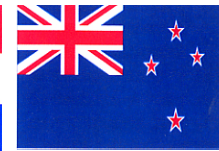
Germany



Japan



Netherlands



New Zealand



Norway



Sweden



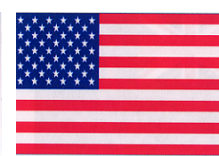
Switzerland



UK



UN



USA

- AUSCARE
- CARE International
- CMAA
- ECHO
- HI (HIB)
- GICHD
- JMAS
- Local Authorities
- Peace Boat
- NPA
- Rotary International District 2650
- Save the Children Norway
- UNDP
- UNHCR
- UNICEF
- UNMAS
- UNOPS
- NGOs
- Privates



CMAC DEPLOYMENT MAP

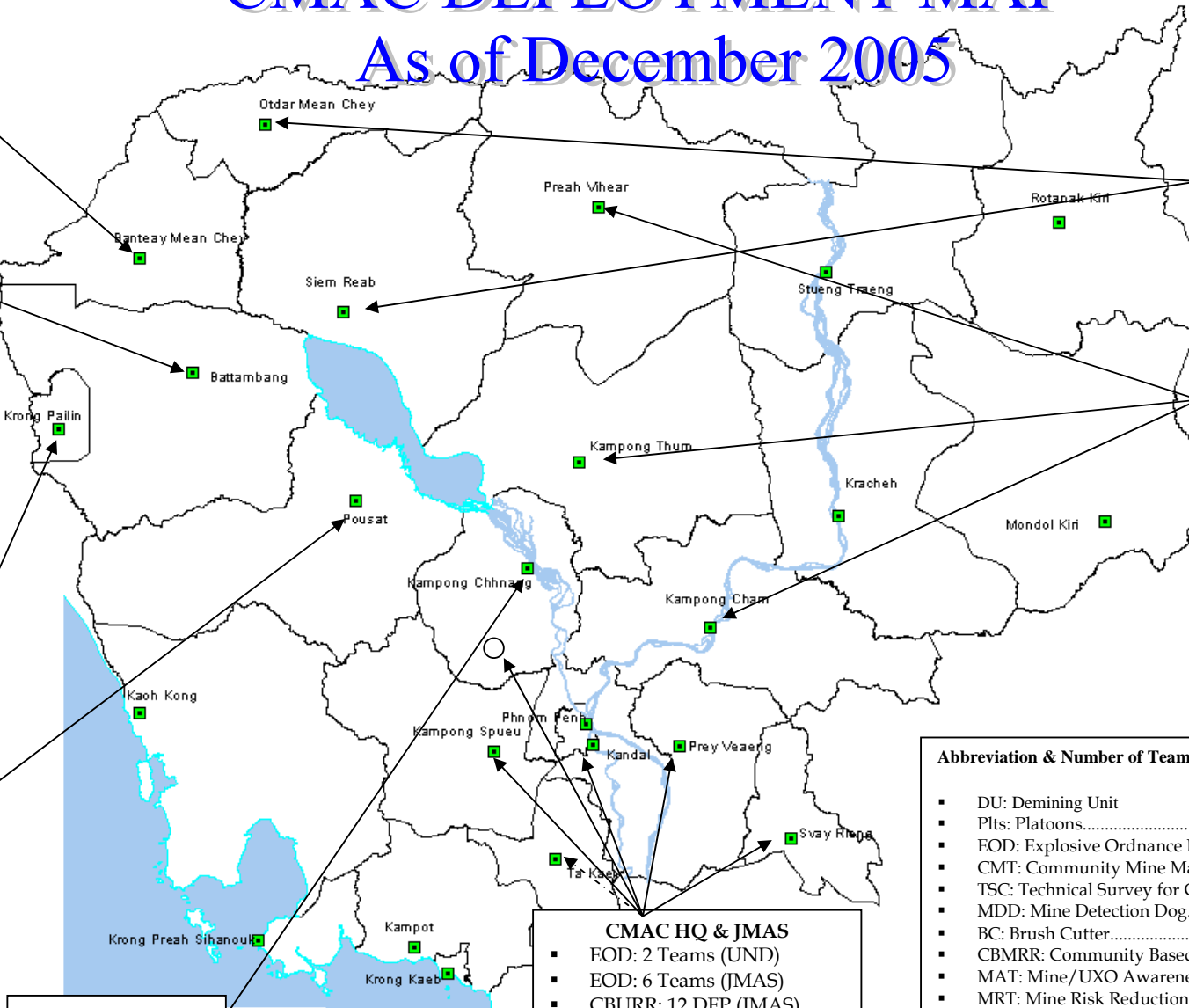
As of December 2005

- Demining Unit #1**
- Deminer: 5 Plts
 - EOD: 2 Teams
 - TSC: 3 Teams
 - CMT: 2 Teams
 - TST: 1 Team
 - BC: 5 Machines
 - MAT: 1 Team
 - CBMRR: 4 DFP
- Note:**

- Demining Unit #2**
- Deminer: 8 Plts
 - EOD: 2 Teams
 - TSC: 5 Teams
 - CMT: 3 Teams
 - TST: 2 Team
 - BC: 7 Machines
 - MDD: 4 Teams
 - CBD: 2 teams
 - MAT: 1Team
 - CBMRR: 7 DFP
- Note:** 1MDD Team#02 work for MAG

- Demining Unit #3**
- Deminer: 9 Plts
 - EOD: 2 Teams
 - TSC: 4 Teams
 - CMT: 3 Teams
 - BC: 4 Machines
 - MDD: 3 Teams
 - TST: 1 Team
 - MAT: 1 Team
 - CBMRR: 3 DFP

- Demining Unit #5**
- Deminer: 9 Plts
 - EOD: 2 Teams
 - TSC: 2 Teams
 - CMT: 3 Teams
 - BC: 5 Machines
 - MDD: 2 Teams
 - MAT: 1 Team
 - CBMRR: 2 DFP



- Demining Unit #6**
- Site: 2 sites
 - Deminer: 6 Plts
 - EOD: 2 Team
 - TSC: 2 Teams
 - CMT: 2 Teams
 - BC: 2 Machines
 - MAT: 1 Team
 - CBMRR: 2 DFP

- Demining Unit #4**
- Deminer: 6 Plts
 - EOD: 2 Teams
 - TSC: 3 Teams
 - CMT: 1 Team
 - BC: 3 Machines
 - MRT: 2 Teams
 - MDD: 3 Teams
 - MAT: 1 Team
- Note:** But 2 MDD worked for CMAC and 1 MDD was contract to MAG from 9 Aug 2005 so far

- CMAC HQ & JMAS**
- EOD: 2 Teams (UND)
 - EOD: 6 Teams (JMAS)
 - CBURR: 12 DFP (JMAS)
 - CBURR: 1 DFP (UND)
 - MRT: 2 Teams (UND)

- Training Centre**
- EOD: 1 Team

Abbreviation & Number of Teams

DU: Demining Unit	= 43
Plts: Platoons	= 14
EOD: Explosive Ordnance Disposal	= 21
CMT: Community Mine Marking Team	= 14
TSC: Technical Survey for Clearance Task	= 19
MDD: Mine Detection Dog	= 12
BC: Brush Cutter	= 26
CBMRR: Community Based Mine Risk Reduction	= 18
MAT: Mine/UXO Awareness Team	= 6
MRT: Mine Risk Reduction Team	= 4
TST: Technical Survey Team	= 4
CBURR: Community Based UXO Risk Reduction	= 13
CBD: Community Based Demining	= 2

GLOSSARY

CBMRR	Community Based Mine Risk Reduction
CBURR	Community Based UXO Risk Reduction
CBD	Community Based Demining Team
CMAC	Cambodian Mine Action Centre
CMT (CMMT)	Community Mine Marking Team
EOD	Explosive Ordnance Disposal
LUPU	Land Use Planning Unit
MAT	Mine Awareness Team
MDD	Mine Detection Dog
MMT	Mine Marking Team
MRT (MRRT)	Mine/UXO Risk Reduction Team
NGO	Non-Governmental Organization
TST	Technical Survey Team
UNDP	United Nations Development Program
UXO	Unexploded Ordnance

Saving Lives and Supporting Development for Cambodia



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