ព្រះពខាសាចគ្រកម្ពុខា

ខាត សាសនា ព្រះមហាតុគ្រ





SIX MONTH REPORT January - June 2011

An Anti Tank Mine found by mobile platoon 109, CMAC Demining Unit 2, Battambang Province



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Six-Month Report 2011 About CMAC



ABOUT CMAC

The **Cambodian Mine Action Centre (CMAC)** is Cambodia's leading demining organization, working in the key areas of Survey and Land Release, Mine and UXO Clearance, Mine and UXO Risk Education and Training, Research and Development. CMAC currently has 1,715 staff across Cambodia, including a national office in Phnom Penh, six provincial demining units and a Training Centre in Kampong Chhnang, working towards the mission of *'Saving lives and Supporting Development for Cambodia'*

CMAC was established during the United Nations Transitional Authority in Cambodia (UNTAC) in 1992, in order to assist the safe return of thousands of refugees to their homelands across the country. Recognizing that the large number of landmines and UXO across Cambodia was a significant threat to post conflict reconstruction and continuing development, CMAC became an autonomous national organization in 2000 and remained the four key areas as stated above to achieve the safe transition to peace and security for the people of Cambodia.

Name: Cambodian Mine Action Centre (CMAC)

Established: 1992

Headquarters: Phnom Penh

Training Centre: Kampong Chhnang Central Workshop: Battambang

Demining Units: Banteay Meanchey; Battambang; Pailin and Preah Vihear; Siem Reap (including Kampong Thom & Preah Vihear), Kampong Cham and Siem Reap (including Oddar Meanchey &

Preah Vihear)

Number of staff : 1,715 Number of female staff : 113

CMAC Office locations:

Cambodian Mine Action Centre Headquarters - PHNOM PENH

CMAC Building, Road Duong Ngeap, Sangkat Teuk Thla Khan Sen Sok, Phnom Penh, Cambodia, PO Box 116 Phnom Penh, 12202

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Tel: +855-12 208 046, Email: du3admin@cmac.gov.kh, Website: www.cmac.gov.kh

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Demining Unit 5 – Kampong Cham

National Road No 11, Toul Treachong Village, Chub Commune Tbong Khmom District, Kampong Cham Province, Cambodia.

Tel: +855-12 800 104, Email: du5admin@cmac.gov.kh, Website: www.cmac.gov.kh

Demining Unit 6 – Siem Reap

Treang Village, Sangkat Slorkram, Siem Reap Province, Cambodia.

Tel: +855-63 963 489, Email: du6admin@cmac.gov.kh, Website: www.cmac.gov.kh

Training Centre – Kampong Chhnang

Mong Barang Village, Ph-er Commune, Kampong Chhnang District Kampong Chhnang Province, Cambodia

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Six-Month Report 2011 **Foreword**

FOREWORD

The Cambodian Mine Action Centre (CMAC) remains committed to our mission of "Saving Lives and Supporting Development for Cambodia".

This is an important year for Cambodia. Later this year CMAC will be supporting the Royal Government of Cambodia and the Cambodian Mine Action and Victim Assistance Authority (CMAA) in hosting the 11th Annual Meeting of States Parties to the Anti-Personnel Mine Ban Convention. During this time we will be welcoming the international community to our shores to celebrate the progress made around the world in mine action and to showcase the techniques and approaches that have been pioneered in Cambodia. The following report outlines our progress in these areas during the first six-month of 2011.

From an operational perspective the first half of 2011 proved extremely challenging for CMAC. Due to a lack of, and delayed, funding many CMAC field staff were ordered to temporarily stand down. In addition, the use of cluster munitions in Preah Vihear Province has hampered existing operations in the area and necessitated the diversion of additional resources. Despite these significant challenges we have continued to make real progress on a number of fronts. From January to June 2011, 30 projects were implemented, of which 10 were completed and 20 are currently operational. Through these projects CMAC has found and destroyed over 48, 222 unexploded ordnance (UXO) items of all cluster munitions, 33 of which were cleared in Preah Vihear. This has resulted in a total of 23,471,732m² released to everyday Cambodian people.

In addition to our standard operational activities we are engaged with communities in a number of other ways. CMAC has committed, with the support of the Japan Mine Action Service (JMAS), to implement the Safety Village Construction (SVC) project, aimed at targeted clearance and support in order to facilitate the construction and development of key infrastructure such as: school building, road construction, road repair and through the digging of ponds, wells, culverts and waterways. We are empowering communities, through Mine Risk Education (MRE) and the Community Based Demining (CBD) project, to become involved in the spread of awareness and the teaching of proper demining techniques.

In particular, Cambodia is proud of having the Program for Integrated Mine Action and Landmine Victim Assistance (The Peace -building Project) under Japan's Grant Aid for Conflict Prevention and Peace-building which is a 3-year program starting in January 2010. The project aims to accelerate the removal and destruction of landmines and improve the living conditions of local people who live in landmine contaminated areas. This will be achieved through community assistance and the promotion of productive land use in the rural mine affected areas after mine clearance.

We continue to pioneer new methods, developing Standard Operating Procedures (SOPs) for Underwater Clearance of Explosive Remnants of War (ERW), Free Running Dogs and Dog Breeding programs.

Six-Month Report 2011 **Foreword**

Working in partnership and the sharing of best practice continue to play an important part in the work of CMAC. In June we held the third, and final, Colombian-Cambodian Country Training on Strengthening the Presidential Program for Comprehensive Action against Antipersonnel Mines (PAICMA). Looking forward to the latter half of the year, we will be hosting a Land Release Workshop, to showcase the excellent progress made in this area, as well preparations for a UXO/Mine Action Sector Workshop between Lao PDR and Cambodia facilitated by Japan International Cooperation Agency (JICA).

Of course all of the above would not be possible without the support of the international community and our key partners, the Royal Government of Cambodia, Cambodian Mine Action and Victim Assistance Authority (CMAA), Provincial Mine Action Committees (PMAC), Mine Action Planning Units (MAPU), local authorities and all of our generous donors. I would like to extend my deepest thanks to these partners for their continued support.

Finally, I would like to take this opportunity to sincerely thank all of the staff at CMAC for their ongoing dedication and commitment towards the goal of a mine free Cambodia.

H.E. Khem Sophoan Advisor to the Prime Minister **Delegated Chairman CMAC Governing Council**

H.E. Heng Ratana Advisor to the Prime Minister Director General, CMAC

GLOSSARY

| 2IC | Second in Command |
|---------|--|
| ALIS | Advanced Landmine Imaging System |
| AP Mine | Anti Personnel Mine |
| APMBC | Anti Personnel Mine Ban Convention (Ottawa Convention) |
| AT Mine | Anti Tank Mine |
| AXO | Abandoned Explosive Ordnance |
| BAC | Battle Area Clearance |
| BAT | Battle Area Clearance team |
| BAV | Battle Area Clearance by Village team (pro-active BAC) |
| BC | Brush Cutters |
| BLS | Baseline Survey |
| BLS-FS | Baseline Survey – Field Supervisor |
| CBAT | Community-Based Battle Area Clearance Team |
| CBD | Community-Based Demining Platoon |
| CBMRR | Community Based Mine Risk Reduction |
| CBURR | Community Based UXO Risk Reduction |
| CCM | Convention on Cluster Munitions |
| CDPO | Cambodian Disabled People's Organisation |
| CL | Community Liaisons |
| CMAA | Cambodian Mine Action and Victim Assistance Authority |
| CMAC | Cambodian Mine Action Centre |
| CMAS | Cambodian Mine Action Standards |
| CMC | Community Mine Clearance |
| CMDG | Cambodia's Millennium Development Goals |
| CMVIS | Cambodian Mine Victim Information System |
| CPF | Counterpart Fund |
| DFP | District Focal Point |
| DM | Demining Machine |
| DU | CMAC Demining Units |
| EC | European Commission |
| ECOSORN | Economic and Social Re-launch of Northwest Provinces in Cambodia |
| EDD | Explosive Detection Dog |
| EOD | Explosive Ordinance Disposal |
| ERC | Explosive Remnants of War Clearance Teams |
| ERI | Explosive Remnants of War Intervention Teams |
| ERW | Explosive Remnants of War |
| FATS | Fixed Asset Tracking System |
| GEJ | Good Earth Japan |
| GICHD | Geneva International Centre for Humanitarian Demining |
| GPR | Ground Penetrating Radar |



| GPS | Global Positioning System |
|------------|---|
| HALO | Hazardous Areas Life-Support Organisation (HALO Trust) |
| HEAT | High Explosive Antitank |
| HI-B | Handicap International – Belgium |
| HQ | Headquarters |
| HSTAMIDS | Handheld Standoff Mine Detection System |
| ICP | Integrated Clearance Mobile Platoon |
| IDPs | Internally Displaced People |
| IED | Improvised Explosive Device |
| IMAS | International Mine Action Standards |
| IMP | Integrated Multi-task Platoon |
| ITEP | International Test and Evaluation Program for Humanitarian Demining |
| IWP | Integrated Work Plan |
| JICA | Japan International Corporation Agency |
| JICS | Japan international Cooperation System |
| JMAS | Japan Mine Action Service |
| L1S | National Level One Survey |
| LLD | Long Leash Dog |
| LR | Land Release |
| MA | Mine Action |
| MAG | Mines Advisory Group |
| MAPU | Mine Action Planning Unit |
| MDD | Mine Detection Dog/Short Leash Dog |
| MDG | Millennium Development Goals |
| MF | Minefield |
| MoEYS | Ministry for Education Youth and Sport |
| MP | Mobile Platoon |
| MRE | Mine Risk Education |
| MRE-VA-PCD | Department of Mine Risk Education, Victim Assistance and Post Clearance |
| | Development |
| MUC | Mine and UXO Committee |
| NGO | Non-Governmental Organization |
| NMAS | National Mine Action Standards |
| NPA | Norwegian People's Aid |
| NTS | Non-Technical Survey |
| PAICMA | Programa Presidencial para la Accion Integral Contra Minas Antipersonal |
| PC | Provincial Coordinator |
| PDRD | Provincial Department of Rural Development |
| PLA | Participatory Learning and Action |
| PMAC | Provincial Mine Action Committee |
| QA | Quality Assurance |
| QC | Quality Control |
| R&D | Research and Development |

| 2 |
|---|
|---|

| RCAF | Royal Cambodian Armed Forces | | | | | | |
|--------|---|--|--|--|--|--|--|
| RFP | Request for Proposal | | | | | | |
| RGC | Royal Government of Cambodia | | | | | | |
| SHA | Suspected Hazard Areas | | | | | | |
| SLD | Short Leash Mine Detection Dog or see MDD/SLD | | | | | | |
| SOP | Standards Operating Procedures | | | | | | |
| SOS | Spirit of Soccer | | | | | | |
| SSA | Short Service Agreement | | | | | | |
| SVC | Safety Village Construction | | | | | | |
| TC | Training Centre | | | | | | |
| TMO | Training and Monitoring Officer | | | | | | |
| TOR | Terms of Reference | | | | | | |
| TOT | Training of Trainer | | | | | | |
| TS | Technical Survey | | | | | | |
| TSC | Technical Survey for Clearance team | | | | | | |
| UN | United Nations | | | | | | |
| UNDP | United Nations Development Program | | | | | | |
| UNICEF | United Nations Children's Fund | | | | | | |
| UNTAC | United Nations Transitional Authority in Cambodia | | | | | | |
| URSMD | UXO Risk Reduction through Scrap Metal Dealers | | | | | | |
| UXO | Unexploded Ordnance | | | | | | |
| WB | World Bank | | | | | | |

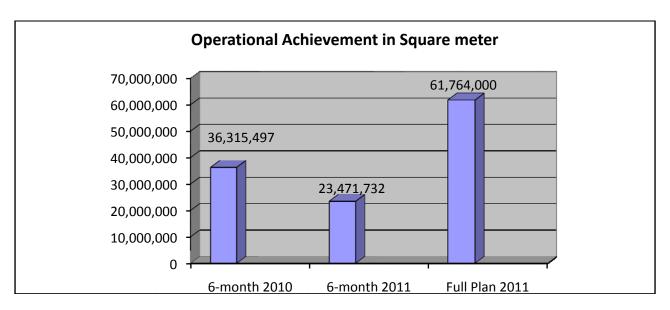
1. **JANUARY-JUNE 2011 OVERVIEW**

The first six months of 2011 was marked with both achievements and issues. Achievements were noted through increased team's productivity thanks to the fact that CMAC started to implement the land release methodology on the full scale, especially for the Clearing for Results project; the successful delivery of Cambodia-Colombia third country training on strengthening the PAICMA (Phase 3); and the approval by the Government of Japan of the equipment grant aid phase 6 for the Project for "Improvement of Equipment for Demining Activities" worth over 16 millions USD. On the more challenging side, CMAC was faced with a critical funding shortfall as several projects were concluded or suspended due to funding issues.

1.1 **Operational Output**

| Land Release: | | |
|---------------------------------|--------------------------------------|------------------------------------|
| | o Released (Minefields & UXO Fields) | : 23,471,732 m ² |
| | Through full Clearance (Minefields) | : 12,451,190 m ² |
| - | Through full Clearance (UXO Fields) | : 7,561,859 m ² |
| - | Through Technical Survey | : 3,139,351 m ² |
| | o Found and destroyed: | |
| | Anti-Personnel Mines Found | : 7,147 |
| - | Anti-Tank Mines Found | : 229 |
| | Improvised Mines | : 87 |
| | ERW Found | : 48,222 |
| | Small Arm | : 4,351 Kg |
| | Fragments | : 3,435,419 |
| | Responded to: | : 4,619 tasks |

Progress compared with plan:



Despites the land release effort to speedily release land for productive use, the progress in the first six months is very low comparing to the same period in 2010 and the annual target for 2011. The loss and delay of fund was the main cause for low productivity, and the secondary cause was attributed to the insecurity of the western, north and north-western region along the Thai-Cambodian border.

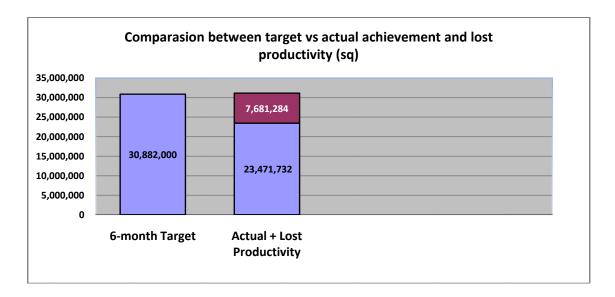
As shown the graph above, the annual target is 61,764,000 m², which translates to 30,882,000 m² for six months. If we compare the actual progress with the planned target of six months, CMAC is 7,410,268 m² short of the target.

The table below shows the projects that ended without substitutes or were suspended due to funding issues and the amount of productivity lost.

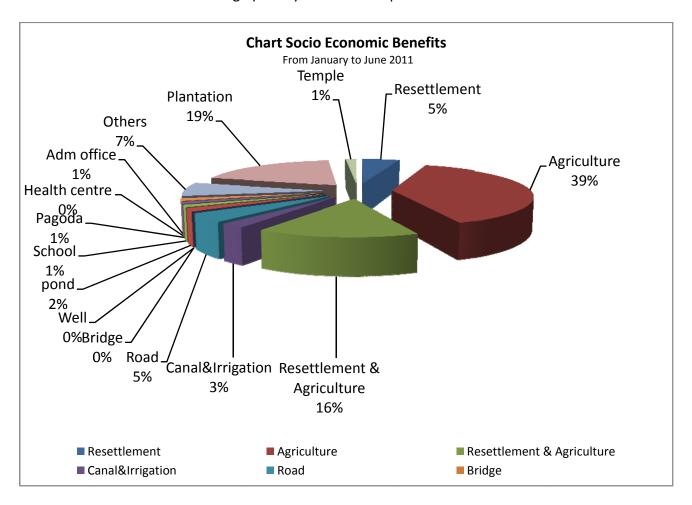
| No | Project | Closing Month | No. of staff | Lost Productivity (m²) | Remark |
|----|-------------------------------------|------------------|-----------------|------------------------|--------------------------------------|
| 1 | CMAC-HIB project - DU5 | March | 41 | 1,121,350 | No substitute or renewal |
| 2 | CMAC-US project - DU3-DU5 | March | 263 | 4,717,330 | 4 months lost |
| 3 | Grassroot project – DU4 | April | 113 | 420,769 | No substitute or renewal |
| 4 | CFR – DU1, 2, 4 | April | 254 | 607,389 | Gap for 1 month, resumed in May 2011 |
| 5 | Choam Kravien – DU5 (World Bank) | May | 62 | 424,446 | No substitute or renewal |
| 6 | One Mobile Platoon | January | 26 | 390,000 | Demobilized, funding issue |
| | | Total Produc | tivity Lost: | 7,681,284 | |
| | Prog | ress + Lost Pr | oductivity: | 31,423,016 | |
| | | 1 | Difference: | 541,016 | |

According to the table above, the lost productivity amounts to 7,681,282 m² for the first six months. If we add this lost productivity with the actual progress, CMAC would have achieved a total of 31,115,016 m², which was 541,016 above the target. The lost productivity has been calculated based on actual average productivity of the projects during the reporting period before they were closed. It is therefore concluded that if CMAC had not lost any projects during the reporting period, CMAC would have achieved the target as planned.

In general observation, there were also other factors which affected the productivity. During the February and April of the reporting period, Cambodia and Thailand were engaged in several military clashes along the Thai-Cambodia border. Even though flexible planning would have allowed the teams to move to safer places, the urgent situations during that time inevitably affected the demining performance of several teams. This also puts further constraints on the overall outputs, which would have been much higher with the implementation of the land release methodology had CMAC not faced with these affecting circumstances.



Socio-Economic Benefits: the largest portion of clearance was devo ted for agriculture and agriculture & resettlement of the people. As the Royal Government's policy is to promote agriculture activities, this is reflected in the way landmine and ERW clearance has been conducted to meet this high priority of the development sector.



1.2 Highlights from January to June 2011

Managing Challenges

 Closed projects and staff suspension: the first half of 2011 saw a remarkable downsize of operations due to the closure and suspension of several projects due to the funding issues or other reasons. This led to many negative impacts on the overall performance of CMAC, staff retention and staff morale.

- As of 30 June 2011, CMAC has 1,715 active staff, and there are 216 staff suspended from employment (stood down). The closures of these projects without new projects to substitute them affected the overall operational productivity as well as the moral of the affected staff in general. As a consequence, 76 staff resigned from the organization and another 11 staff abandoned their employment with CMAC.
- The project closures, suspensions and gaps had other adverse impacts on project management, human resource management, asset control and management, training, work plan and other socio-economic impacts on the people living in the affected areas.
- Border conflict during the reporting period resulted in stop and go of clearance operations along the northern Cambodia and Thai border, leading to a significant reduction of clearance productivity.
- The border conflicts also left hundreds of square kilometers affected with new ERW and cluster munitions. While CMAC was undergoing a difficult time due to closure of some projects, resulting in reduction of the number of EOD and other response teams, CMAC was making utmost efforts to provide emergency intervention in term of ERW and cluster munitions risk education, surveys and clearance in the affected areas along the borders. These new cluster munitions will continue to pose long term hazards for the people in the affected areas.

Other Highlights

- Clearing for Results 1 (CFR) was extended from December 2010 to March 2011, making the CFR 1 a 15-month project. After a gap in April, the CFR 2 started in May, with CMAC awarded two projects through the tender managed by CMAA: CFR in Banteay Meanchey and CFR in Battambang. CMAC gained a substantial experience in the bidding process and is ready to continue to successfully bid for new projects in the coming years.
- CMAC started to implement the land release concept and operations on a full scale, especially with the CFR project. This has produced positive results and impressions and will put CMAC ahead of many demining organizations in term of implementing land release. This is seen to be a good start for Cambodia to achieve its commitment and mandate under the Ottawa Convention to complete the clearance of anti-personnel landmines by 2019 as the international community approved Cambodia's Article 5 Extension Request in 2010.
- CMAC launched (with NPA and GICHD) a cluster munitions survey project in the eastern provinces to better understand the characteristics of suspected hazardous area affected by

UXO and cluster munitions to add information to the landmine contamination information and increase knowledge of contamination issue in Cambodia.

- In March, CMAC jointly chaired with JICA and NRA/UXO Lao a joint workshop in Vientiane, Laos, on technical cooperation between CMAC and Laos. This was a first of a series of workshops with JICA and Lao on the technical cooperation arrangements. This will lead to future training and exchange workshops between the two countries in the area of landmine and UXO clearance. A second workshop is being held in early July in Phnom Penh to continue with the discussion process and this second workshop is expected to yield concrete action plans how the future cooperation will be shaped.
- In June, CMAC successfully conducted mine action training for the PAICMA phase III -the last phase of a tripartite training between Cambodia and Colombia supported by JICA. The successful completion of the three training phases reconfirms CMAC's capacity as an organization as well as individual experts to provide training in mine clearance and management activities.
- CMAC has actively participated with CMAA in the preparations for the upcoming 11th MSP meeting in Phnom Penh in November 2011. CMAC senior staff and officers are members of different organizing sub-committees and are assisting with the preparations toward this very important international event. CMAC is also organizing a partnership side event for the 11th MSP with several other partners and is actively working on concept, organization plan and action plans for this side event. This will be a partnership side event participated by other partners in the sector and showcase mine action achievements and partnership as well as give participants a chance to enjoy the cultural touch and harmonization. This side event will be held in CMAC's Headquarters.
- CMAA as part of the leading up activities toward the 11th MSP is also organizing an international workshop in September in Siem Reap on Enhancing Operational Approaches through the Application of Land Release Methodology in partnership with CMAC, GICHD and NPA. CMAC will play a key role in the organization of this workshop. This will be an important event to show how far Cambodia (especially CMAC) has progressed in the development and application of land release methodology and this will give a good opportunity for participating countries to learn from each other this important methodology for future application and improvements. Since CMAC will be the main player in the organization on behalf of CMAA, CMAC has spent a great deal of time and resources to prepare for this workshop.
- Underwater clearance operations: In February, March and May this year, CMAC in partnership with Golden West conducted both research and development and real operations of underwater clearance in two locations along Tonle Sap river in Kampong Chhnang province. This has both uncovered and recovered more than ten tons of UXO/AXO and helped CMAC develop new tools and techniques (sonar scanning technology) as well as experience in underwater operations. CMAC is also working with Golden West to develop new tools for future underwater applications.
- The comeback of NPA to support CMAC in 2011 symbolized the renewed interest in mine action in the country as well as emphasized the continued need for further mine action efforts. This also stressed the strategic partnership between CMAC and NPA as a very longtime partner for many years in the past. NPA resumed support to CMAC through the support of BLS operations and then moved on to support ERW/cluster munitions survey. From the

second quarter of 2011, NPA was also committed to expanding its support to the MDD/EDD operations, and this support is expected to be of a three to four-year timeframe.

- Phase 6 Equipment Grant Aid from Japan: Despite the worst earthquake and tsunami that hit Japan in March this year, the Government of Japan approved an equipment grant aid project phase 6 worth 1.298 billion yen (approx. 16.8 million USD) to support the Project for Improvement of Equipment for Demining Activities. The Exchange of Notes was signed on 15 March between the Royal Government of Cambodia and the Government of Japan, just a few days after the worst earthquake and tsunami. This project aims to procure 8 new brush cutters, 115 vehicles, 492 mine and UXO detectors, 117 GPS sets, 205 VHF handhelds and other demining related equipment and spare parts for vehicles and brush cutters. This is a very phase of equipment grant aid, which will replace some of the old demining equipment and vehicles to support and further improve demining operations in Cambodia. This grant aid support also symbolizes Japan's continued support to mine action in Cambodia.
- In April, the Japanese Board of Auditors visited CMAC and observed demining operations to evaluate the relevance, effectiveness and efficiency of CMAC's demining activities. This was a very important evaluation as part of the overall Japanese grant aid evaluation. The Japanese national auditors were satisfied with the progress and performance of CMAC.

1.3 **Key Events**

- National mine awareness day 24 February in Kampong Cham, presided over by HE Prak Sokhonn, Minister attached to the Prime Minister, Vice President of the CMAA and Personal Advisor to Samdech Prime Minister, participated by local people, local authorities, national youth Red Cross, international development partners. The event featured a friendly youth football match and presentation of honorary medals to deminers.
- International mine awareness day, 4th April in Siem Reap. The event was hosted by CMAA coupled with the interactive display and event at the Jesuit Refugee Services lead by Sister Denise Coghlan. It was also an official launch of 11th Meeting of State Parties that is going to take place in Cambodia in November 2011.
- Land Allocation after Clearance by CMAC supported by JMAS at Kilo and Chea Montrey Villages, Treng commune, Ratanak Mondul District, Battambang Province, presided over by H.E Im Chhun Lim, Senior Minister of Land Management, Urban Planning & Construction on 15 June 2011
- Launched (with NPA and GICHD) cluster survey project to better understand characteristic of suspected hazardous area affected by UXO and cluster munitions- add information to the landmine contamination information- increase knowledge of contamination issue in Cambodia: landmine and ERW.
- Third phase of international training PAICMA phase III the last phase of a tripartite training between Cambodia and Colombia. The successful completion of the three training phases reconfirm CMAC's capacity as an organisation as well as individual expert to training local and international mine clearance activities.



2. **ACTIVITIES AND OUTPUTS**

2.1. Survey and Land Release

CMAC's allocated mine action activities are planned and implemented safely, effectively and efficiently. It also ensures mine action tools and methodologies are relevantly designed and developed in line with the mine action environment in Cambodia; their employment yields optimum sustained impact. With this mandate, CMAC endeavours to focus its activities on the general routine tasks of planning and managing operations, but also actively engage in the change management process in enhancing existing operational practice to reflect the changing environment in mine action- Land Release Context.

2.1.1. Survey

Survey remains an important aspect of demining. The survey section provides guidance to field survey teams, this past six months in particular supporting implementation of Baseline Survey and Land Release. As CMAC is setting itself to fully apply the new Land Release methodology, the survey section was in a critical position to make sure field staff are provided with adequate Land Release knowledge. With the recent border conflict with Thailand whereby Thai Army has used cluster munitions on Cambodia, this section was called upon to develop cluster munitions survey SOP. By the end of June 2011, seven of the CMAC 16 original Baseline survey teams



A cluster found in the thicket of bamboo at the edge of Preah Vihear Mountain on 12 February 2011

demobilized (April 2011); their team members were integrated into other CMAC clearance tools (MP, MDD and BC) to provide survey capability for those teams to effectively engage land release process.

From January to June, the survey section together with field survey teams has achieved the following productivities:

- √ 432 villages surveyed
- √ 523 minefields identified and classified
- ✓ 719,735,894 m² recorded as contaminated



Note that CMAC survey teams have been participating in the baseline survey since 2009 resulting in:

- √ 33 districts surveyed,
- √ 4,628 minefields identified and classified
- ✓ 582,573,490 m² recorded as contaminated area

The six ERW survey teams have conducted a surveyed of area affected by the recent Thai-Cambodia conflict. The survey has resulted:

- ✓ 49 "B1.2" identified and classified as contaminated fields
- ✓ 182,859,491 m² recorded as contaminated area
- ✓ At the same time the survey teams performed Cluster Visual Search on 3 locations with total area: 820,888 m²; found and destroyed 33 cluster munitions (M85, M42) and 2 UXO.



ERW- cluster munitions survey activities at Preah Vihear area s

2.1. 2. Achievement focused on Land Release

There has been an extremely challenging six months operation as many CMAC field staff were ordered to stand down due to the lack and delayed funding. The border conflict at Preah Vihear area between Thailand and Cambodia was also a serious problem for CMAC in deploying its scarce resources to intervene cluster munitions issue which were launched by Thai military during the fighting between 4 -7 February 2011. Despite these challenges and difficulties, CMAC still achieved its significant results in mine action operations.



Full Clearance (Minefields)

Full Clearance (UXO Fields)

Technical Survey

Area Cleared without Sketch



: 23,471,732 m²

: 12,451,190 m²

: 7,561,859 m²

: 3,139,351 m²

: 319,332 m2

Six-Month Report 2011 **Activities and Outputs**

> Anti-Personnel Mines Found : 7,147

Anti-Tank Mines Found : 229

Improvised Mines : 87

ERW Found : 48,222

Small Arm : 4,351 Kg

Fragments : 3,435,419

Task responded : 4,619 tasks



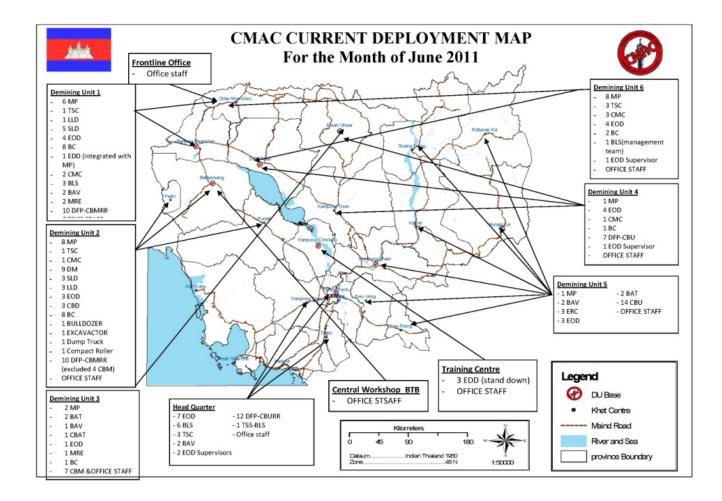


2.1.3. Achievement Analysis

Mine/ERW contamination in Western, North and Northwestern parts of the country still poses as a major thread. It is there where most of the CMAC clearance assets were deployed (Demining Unit [DU] 1, DU2, DU3, DU4, DU6). In Eastern parts of the country (DU3 and DU5) where the thread came mostly from ERW contamination, CMAC operations has suffered from severe cut back due to delayed funding from the United States. DU4 whose activities support clearance of north and central parts of the country has also experienced funding difficulty and resulting to limited operations. Contract demining has assisted in employing some small demining assets. Their works were to support infrastructure and development projects.

In general, this first six months of 2011 has been the worse six months for operations since its funding crisis experienced in year 2000.

However, despite of this funding difficulty, CMAC has made reasonable effort to spread its assets to response to the needs of the national and local government, and the mine/ERW affected communities (please see deployment map below).



At the start of the 2011 IWP, a number of team was planned for deployment (IWP 2011, p21-22). Using number of team/month for each tool, the first six months deployment result was recorded as far less than plan, another word each of CMAC operation teams were deployed in less time than originally planned; except the TSC. Chart 1 below (Planned versus actual team deployed) shows a comparison between planned team/month and actual deployed team/month. This low performance was attributed to lack and delayed funding.

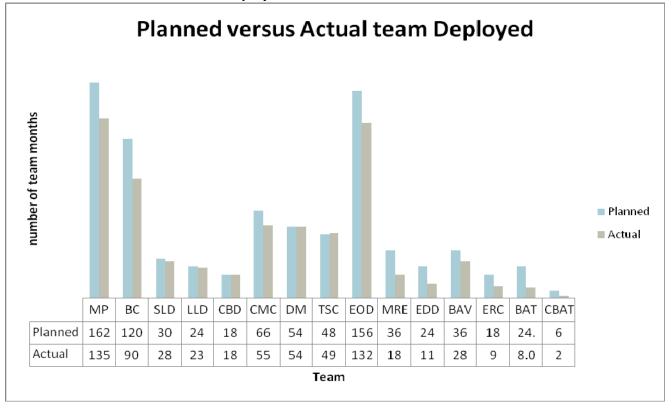
Table 1: Planned vs actual team deployed

| Team/ Month | | DEMINING TOOLS | | | | | | | | | | | | | | |
|----------------|-----|----------------|-----|----|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| | MP | BC | SLD | ПГ | CBD | СМС | DM | TSC | BLS | EOD | MRE | EDD | BAV | ERC | BAT | CBAT |
| Planned | 162 | 120 | 30 | 24 | 18 | 66 | 54 | 48 | 96 | 156 | 36 | 24 | 36 | 18 | 24 | 6 |
| Actual | 135 | 90 | 28 | 23 | 18 | 55 | 54 | 49 | 70 | 132 | 18 | 11 | 28 | 9 | 8 | 2 |
| Variance | -27 | -30 | -2 | -1 | 0 | -11 | 0 | 1 | -26 | -24 | -18 | -13 | -8 | -9 | -16 | -4 |

Note that during the period CMAC has contracted 3 SLD teams to MAG. Their times and productivity were not accounted for in this report.

Six-Month Report 2011 **Activities and Outputs**

Chart 1: Planned vs actual team deployed



Survey

Baseline Survey (BLS) activities which has started since the mid- 2009 have been very successful. Funding to support survey operation came from bi-lateral and UNDP funding scheme. By the end of the first quarter 2011, funding from UNDP, USA, German ceased and the bulk of CMAC BLS activity have been reduced; however, with assistance from NPA CMAC turns six of its survey teams to focus on the long overdue ERW survey. This survey activity will complement the national BLS effort. The focus is to survey on the Eastern provinces and will continue well into 2012. The result of this survey has been limited as the teams were in training and participating in cluster munitions related clearance.







Clearance - Land Release

Land Release (LR) historically was considered as part of the survey. It will eventually be grouped with clearance. This methodology is in full compliance with the Cambodian Mine Action Standard (CMAS 15); it allows CMAC to release land through Non-Technical Survey, Technical survey and clearance.

At the beginning of the year (2011), CMAC aimed to fully implement LR in all of its projects. This effort has however faced many difficulties.

Firstly, there was a delay in implementing the project formerly known as UNDP Clearing for Result (CFR) which calls for full application of LR process resulting in team standing down.

Secondly, after CFR agreement has been made with the CMAA, a large amount of funding have not been awarded to CMAC. This also resulting in team standing down and team restructured and rearranged which require more training.

Thirdly, projects other than the CFR require more training on the LR process.

By June 2011, only teams assigned to the CFR projects and some teams supported under the Counterpart project have implemented LR; the result of the first six month reflects these constraints.

Introducing new methodology is a change which must be properly managed to ensure there will be a change in the ways the clearance and survey works will get done. Team leaders and members as well as the management team need to have good confidence in the new way. The application of LR is a change management in the process and will take time to mature. The initial result of LR application was satisfactory and was acceptable by the CMAA and positively commented by the GICHD.

Effort to bring other teams in line was slow due to competing demand; however, many orientations have been initiated through training and workshops organized by the Planning and Operation Department.

In term of productivity achieved, the IWP (2011, p.21-22) has set a new average target for land release for each of the CMAC clearance tool. In general, actual productivity combine for this first six months was lower comparing to plan. This was obvious due to many teams were not deployed (Chart 2 Productivity: Plan V/S Actual). The border conflict with Thailand has also impacted on team productivity especially those assigned to operate along the northern border.

To be more specific

- March 2011: CMAC-HIB project at DU5 with 41 staff was placed on stand down
- March 2011: CMAC-US project at DU3 and DU5 with 263 staff was placed on stand down



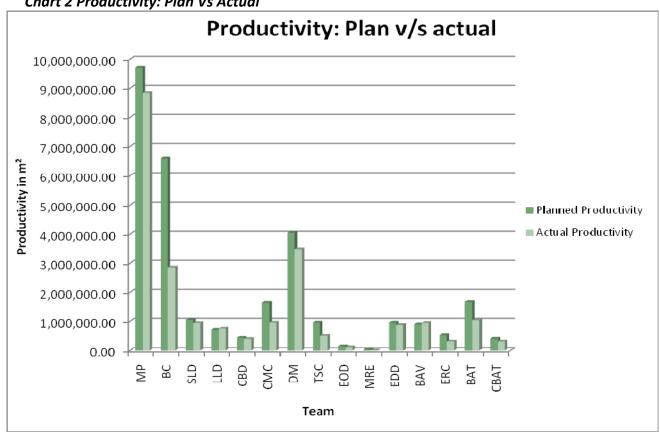
- April 2011: Grassroot project at DU4 with 113 staff placed on stand down
- April 2011: CFR at DU1, 2, 4 along with BLS team with 254 staff was place on stand down
- May 2011: World Bank project at DU5 with 62 staff was placed on stand down

The table and chart below illustrating the land release productivity from January to June 2011.

Table 2: Productivity: Plan Vs Actual

| | | DEMINING TOOLS | | | | | | | | | | | | | |
|----------------------|--------|----------------|--------|-------|-------|--------|--------|--------|-------|------|-------|-------|--------|--------|-------|
| Productivity (ha) | MP | ВС | SLD | LLD | CBD | CMC | DM | TSC | EOD | MRE | EDD | BAV | ERC | ВАТ | СВАТ |
| Planned | 972.00 | 660.00 | 105.00 | 72.00 | 45.00 | 165.00 | 405.00 | 96.00 | 15.60 | 3.60 | 96.00 | 90.00 | 54.00 | 168.00 | 42.00 |
| Actual | 884.74 | 285.69 | 94.28 | 76.24 | 41.34 | 96.1 | 347.44 | 51.87 | 13.06 | 9.4 | 88.19 | 94.84 | 32.28 | 104.18 | 32.56 |
| Variance | -87.26 | -374.31 | -10.72 | 4.24 | -3.66 | -68.90 | -57.56 | -44.13 | -2.54 | 5.80 | -7.81 | 4.84 | -21.72 | -63.82 | -9.44 |

Chart 2 Productivity: Plan Vs Actual



However, comparing to the average productivity per team/month (Chart 3: Average productivity: Planned V/S Actual), land release under the landmine category has been about



the same for some tools, but lower for others. Under the BAC clearance, the actual productivity was far better than the plan.

This low average productivity can be attributed to the stop and go operations due to insecurity at the border area. It could be also be from other technical attribution. Areas where key concerns are BC, CMC and DM team productivity. Attempt will be made in the second six months to assess the causes of low productivity and make effort to improve them.

Table and Chart 3 below provide an illustration of the average productivity per team per month comparing to the target productivities set under the IWP 2011.

Note that BAC tools (BAV, ERC, BAT, CBAT) have performed far better than planned targets. An assessment would have to be done so to reflect into next year target productivities.



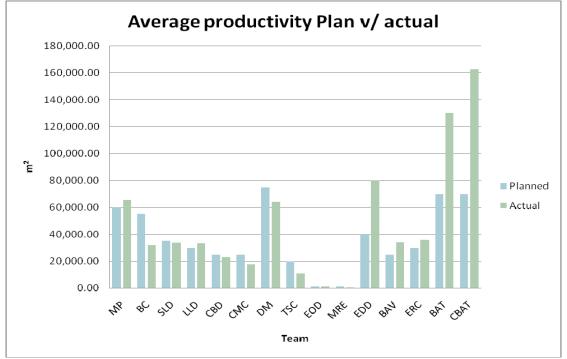




Table 3: Average productivity: Planned Vs Actual

| Average Productivity (ha) | | DEMINING TOOLS | | | | | | | | | | | | | |
|---------------------------------|------|----------------|-------|------|-------|-------|-------|-------|------|-------|------|-------|------|-------|-------|
| | MP | BC | SLD | LLD | CBD | CMC | DM | TSC | EOD | MRE | EDD | BAV | ERC | ВАТ | CBAT |
| Planned | 6.00 | 5.50 | 3.50 | 3.00 | 2.50 | 2.50 | 7.50 | 2.00 | .10 | .10 | 4.00 | 2.50. | 3.00 | 7.00 | 7.00 |
| Actual | 6.25 | 3.17 | 3.36 | 3.31 | 2.29 | 1.74 | 6.43 | 1.05 | .10 | .05 | 8.01 | 3.38 | 3.58 | 13.02 | 16.28 |
| Variance | 0.25 | -2.33 | -0.14 | 0.31 | -0.21 | -0.76 | -1.07 | -0.95 | 0.00 | -0.05 | 4.01 | 0.88 | 0.58 | 6.02 | 9.28 |

Chart 3: Average productivity: Planned Vs Actual



During this reporting period many demining tools have been integrated to better response to the going minefield environment with the aim to improve productivity. Integrations were seen when team such as MDD combine with BC, BC with MP, MP with MDD, TSC with other tools, etc.

In term of project management, the Planning and Operations Department has managed to oversee 35 small and large projects. Table 5 Summarizes project management matrix.



Comparison to last year

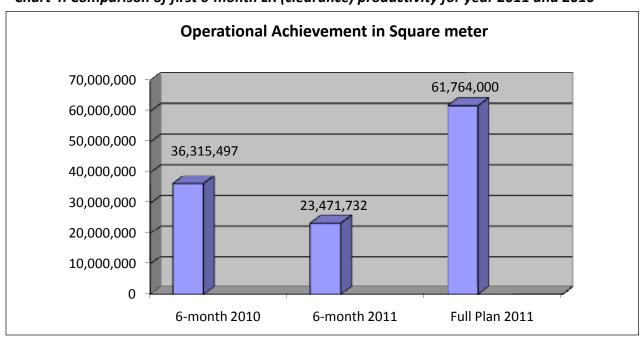
Despite of Land Release effort to speedily release land for productive use, the progress in the first six months is very low comparing to the same period in 2010.

According to the 2011 Work Plan (full year work plan), CMAC aimed to clear 61,764,000m2 of both prioritized areas in minefields and BAC fields through the PMAC/MAPU process and other development requirement. Of this projected clearance, 51,300,000m² was set to target mine contaminated area and 10,464,000m² was set to target BAC area. It also envisaged to response to 10,000 EOD calls requested by the communities. Table 2 below provides the comparison.

Table 4: Comparison of first 6-month LR (clearance) productivity for year 2011 and 2010:

| Items | 2010 | 2011 |
|---|-------------|-------------|
| | Achievement | Achievement |
| Overall Achievements (m²) | 36,315,497 | 23,471,732 |
| Minefield clearance productivity (m²) | 11,745,465 | 12,451,190 |
| UXO field clearance productivity (m ²) | 10,053,282 | 7,561,859 |
| Land released through Technical Survey and | 11,755,671 | 3,139,351 |
| integrated tools (m²) | | |
| Other clearance (m ²) | 2,761,079 | 319,332 |
| Anti Personal Mine (AP) | 9,299 | 7,147 |
| Anti Tank Mine (AT) | 258 | 229 |
| UXO | 69,004 | 48,222 |
| Improvised Explosive Device (IED | 105 | 87 |
| Small arms/Small calibers (kg) | 4,695 | 4,351 |
| Fragments | 7,377,189 | 3,435,419 |
| Tasks Responded by EOD & MRE | 6,106 | 4,619 |
| Other achievements | | |
| Cutting the Brush (m ²) by Brush Cutter | 3,681,353 | 2,824,688 |
| Liner Marking of the minefields (m) | 1,375,261 | 231,629 |

Chart 4: Comparison of first 6-month LR (clearance) productivity for year 2011 and 2010



Six-Month Report 2011 **Activities and Outputs**



Table 5: SUMMARY PROJECT MANAGEMENT MATRIX IN 2011

| s/ | Donor/Dev. | Duniont Title | | Project Period | | Landina | S | tatus |
|----|-------------------------------|---|-----------|----------------|----------------|-------------|---------|-----------|
| N | Partner | Project Title | Period | From | То | Location | Ongoing | Completed |
| 1 | Japan Counterpart Funds | HUMANITERIAN DEMINING | 1 Year | 1-Nov-10 | 31-Oct-11 | DU 1 | ٧ | |
| 2 | Japan (PB) | PEACE BOAT | 5 Months | 1-May-11 | 15-Nov-11 | DU 4 | ٧ | |
| 3 | Japan (JMAS CBD-DU2) | COMMUNITY BASED DEMINING | 1 Year | 15-Jul-10 | 14-Jul-11 | DU 2 | ٧ | |
| 4 | Japan (JMAS- MoFA) | SAFETY VILLAGE CONSTRUCTION | 1 Year | 15-Jul-10 | 14-Jul-11 | DU 2 | ٧ | |
| 5 | Japan (JMAS- EOD) | UXO CLEARANCE (EOD/CBURR) | 1 Year | 8-Oct-10 | 7-Oct-11 | HQ/DU 4 | ٧ | |
| 6 | Japan (SVC Komatsu) | SAFETY VILLAGE CONSTRUCTION | 1 Year | 1-Apr-11 | 31-Mar-12 | DU 2 | ٧ | |
| 7 | | PEACE BUILDING PROJECT | 2 Year | 15-Jan-10 | 14-Jan-13 | DU 2 | ٧ | |
| 8 | Japan (JICS) | PEACE BUILDING INFRUSTRUCTURE DEVELOPMENT | 6 Months | 1-Feb-11 | 31-Aug-11 | DU 2 | ٧ | |
| 9 | | PEACE BUILDING LAND RECLAIMED | 3 Months | 1-Mar-11 | 31 Jun 2011 | DU 2 | ٧ | |
| 9 | | PEACE BUILDING LAND RECLAIMED | 2 Months | 1-Jul-11 | 31-Aug-11 | DU 2 | ٧ | |
| 10 | | CLEARING FOR RESULT I | 15 Months | 1-Jan-10 | 31-Mar-11 | DU 1,2,4 &5 | | |
| 11 | UNDP/CMAA | CLEARING FOR RESULT (CFR II- BMC) | 5 Months | 1-May-11 | 31 Sep 2011 | DU 1 | ٧ | |
| 12 | | CLEARING FOR RESULT (CFR II- BTB) | 5 Months | 1-May-11 | 31 Sep 2011 | DU 2 | ٧ | |
| 13 | NPA | ERW/ Cluster Munitions Survey | 1 Year | 1-Jan-10 | 31-Dec-11 | HQ | ٧ | |
| 14 | Germany | HUMANITERIAN DEMINING | 1 Year | 1-Jan-11 | 31-Dec-11 | DU 6 | ٧ | |
| 15 | | | 14 Months | 1-May-10 | 30-Aug-11 | DU 1 | ٧ | |
| 16 | MAG | HUMANITARIAN (MINE DETECTION DOG) | 30 Months | 1-Feb-10 | 31-Jul-13 | DU 1 | ٧ | |
| 17 | | · | 1 Year | 1-Nov-10 | 31-Oct-11 | DU 2 | ٧ | |
| 18 | NPA | EXPLOSIVE DETECTION DOG | 5 months | 1-Aug-11 | 31-Dec-11 | TC/DU5 | ٧ | |
| 19 | UNICEF | MINE RISK EDUCATION | 11 Months | 1-May-11 | 1-Mar-12 | HQ/DU 1 | ٧ | |
| 20 | РРМС | PRAIRIE PACIFIC MINING CORPORATION | 9 Months | 1-Jan-11 | 30-Sep-11 | DU 2 | ٧ | |
| 21 | GEJ | REHABILITATION LATERITE RAOD | 9 Months | 1-Jan-11 | 30-Sep-11 | DU 2 | ٧ | |
| 22 | UNA Sweden | Mine Clearance & Victim Assistance | 12 month | Jan 2011 | Dec 2011 | DU1, DU2 | ٧ | |
| 23 | USA | UNITED STAT OF AMERICA | 3 Months | 1-Jan-11 | 31-Mar-11 | DU 5 | | ٧ |
| 24 | НІВ | PRO-ACTIVE BATTLE AREA CLEARANCE | 14 Months | 15-Dec-09 | 28-Feb-11 | DU 5 | | ٧ |
| 25 | WB | LAND ALLOCATION FOR SOCIAL ECONOMIC DEVELOPMENT | 10 Months | 1-Aug-10 | 31-May-11 | DU 5 | | ٧ |



| 26 | Grass-Root | HUMANITARIAN DEMINING TO SUPPORT DEMINING ACTIVITY in Preah Vihear, Kampong Thom, Oddar Meanchey | 12 months | 10-Mar-10 | 9-Mar-11 | DU 4 | | ٧ |
|-----|--|---|---------------|-----------|-----------|---------|---|---|
| 27 | Peace Boat | Mine/ERW Clearance in Sna Pha Ek, Srayong, Preah Vihear | 7 months | 1-May-11 | 30-Nov-11 | DU 4 | ٧ | |
| 28 | RGC | MINE/UXO CLEARANCE | 6.5 Months | 15-Jun-11 | 31-Dec-11 | DU 4 | | |
| CON | ITRACTUAL SERVI | CES | | | | | | |
| 29 | DAIHO Corporation | CONDUCT MINE/UXO CLEARANCE | 10 days | 29-Mar-11 | 7-Apr-11 | CMACHQ | | ٧ |
| 30 | Prairie Pacific Mining Corporation (PPMC) | SURVEY, SURFACE AND BORE HOLE CLERANCE | 9 months | 1-Jan-11 | 30-Sep-11 | CMAC HQ | | ٧ |
| 31 | Prairie Pacific Mining Corporation | SURVEY, SURFACE AND BORE HOLE CLERANCE | 4 months | 19-May-11 | 19-Sep-11 | CMAC HQ | | ٧ |
| 32 | Asia Air Survey | PATH FINDING, SURVEY, SUB- SURFACE AND SUB SURFACE CLEARANCE | 15 days | 1-May-11 | 15-May-11 | CMAC HQ | | ٧ |
| 33 | SOM (MINEBEA) | SURVEY, SUB-SURFACE AND DEPTH SEARCH CLEARANCE | 24 days | 6-May-11 | 27-May-11 | CMAC HQ | | ٧ |
| 34 | Khmer Aggregates CO, LTD | SURVEY, SURFACE AND BORE HOLE CLERANCE | 1. 5 Month | 20-Dec-10 | 31-Jan-11 | CMAC HQ | 0 | ٧ |
| 35 | PPSEZ | SURVEY, SURFACE AND BORE HOLE CLERANCE | | 8-Jun-11 | D/TBC | CMAC HQ | | |

Six-Month Report 2011 Activities and Outputs

2. ACTIVITIES AND OUTPUTS

2.2. Mine Risk Education and Victim Assistance

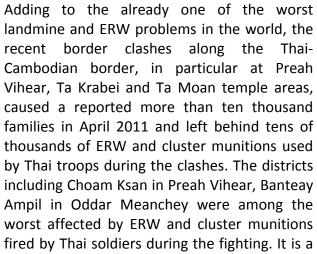
Mine Risk Education (MRE) has played an important role in CMAC's humanitarian demining programs for many years, using community consultation and participantion approach as well as community and school education programs, carried out to reduce the number of casualties in landmine and explosive remnants of war (ERW) in affected communities and to contribute to the reconstruction of communities in both safe and productive ways.



new chellenge for Cambodian Mine Action Sector and mine risk education teams to play its important role in providing risk awareness and reduction program for displaced people at the camps and in their affected communities.

2.2.1. Mine Risk Education

CMAC has 83 MRE staff and 760 volunteer networks engaged in CMAC's Mine Risk Education and Reduction program in 2011, operating in the most mine and UXO affected areas in Cambodia.





| 0 | MRE Director and officers | 3 |
|---|--|-----|
| 0 | MRE Provincial Coordinator | 5 |
| 0 | District Focal Point, CBMRR | 29 |
| 0 | District Focal Point, CBURR | 33 |
| 0 | Mine Risk Education and Reduction team | 13 |
| 0 | Mine and UXO committee (Volunteer) | 760 |

Six-Month Report 2011 Activities and Outputs



There has been a slight decrease in the number of mine risk education staff comparing to 2010 and first quarter 2011 due to: (1) the suspension of US-supported DU3-DU5 Project, (2) Completion of Grass-root DU4 Project and World Bank Project, and (3) changing in nature of the project (UNICEF, CFR project). The suspension of the US-funded DU3-DU5 project resulted in 2 Provincial Coordinators, 5 Community-based Mine Risk Reduction (CBMRR-DFP) and 14 Community-based UXO Risk Reduction (CBURR-DFP) being stood down. The UNICEF project reduced its funding from 3 MRE teams to only one starting from May 2011. As a result, 2 MRE Teams were demobilized. The completion of Grass-root DU4 and World Bank projects and the changing in nature of UNDP's Clearing for Results project, with more emphasis placed on clearing the mine and UXO contaminated land, further caused the reduction of mine risk education staff.





CMAC Mine and Cluster Munitions Education Activities at Refugee Camp during the border conflict at Preah Vihear areas between Cambodia and Thailand

| Description | | Staff | | | | | |
|---------------------------|------|---------------|-----------|--|--|--|--|
| Description | 2010 | February 2011 | June 2011 | | | | |
| MRE Team | 24 | 13 | 13 | | | | |
| Provincial Coordinator-PC | 5 | 5 | 2 | | | | |
| CBMRR-DFP | 30 | 29 | 17 | | | | |
| CBURR-DFP | 33 | 33 | 19 | | | | |

2.2.2. Depoyment

Mine Risk Education (MRE) Teams

Three MRE teams were deployed in 9 districts during this reporting period, including Thmor Pouk District of Banteay Meanchey Province, Samrong and Banteay Ampil Districts of Oddar Meanchey Province, Choam Ksan and Kulen of Preah Vihear Province, Tbuongkmoum, Ponhea Kraek, Dambae and Memot of Kampong Cham Province. These three teams were deployed under funding scheme of UNICEF, World Bank and Counterpart Fund Project.

Community-based Mine/UXO Risk Reduction (CBMRR and CBURR)

The Community-Based Mine Risk Reduction Program (CBMRR) was implemented in 29 most highly mine/UXO affected districts of the 6 provinces, including Pursat, Battambang, Pailin,

ISO 9001:2008

Banteay Meanchey, Oddar Meanchey and Preah Vihear, with the support of UNDP, USA, Grass-root, Counterpart Fund, and Peace-building projects.

The Community-Based UXO Risk Reduction Program (CBURR) was implemented in 33 most highly UXO affected districts of the 8 provinces, including Kampong Speu, Takeo, Prey Veng, Kampong Cham, Kraties, Stung Treng, Ratanak Kiri and Seam Reap provinces, supported by JMAS and US projects.

2.2.3. Achievements

Mine Risk Education

In the first semester of 2011, CMAC Mine Risk Education teams conducted consultations for behaviour change through 17,101 household/field (working sites) visits and 6,411 mine risk education presentations to groups of people at risk, including children at school and out-of-school, with a focus on dangerous avoidance and reporting channels for mine and UXO disposal. The mine risk education activities were conducted in 5,013 villages of the 17 provinces, and this activity reached 155,565 people, of which 35% were children, 34% men and 31% women. Of these,



10,858 audiences were displaced people in Kulen and Samrong districts, who came from conflict areas along the Thai-Cambodian border. The achievement made by the team was presented below.

| Team | | Loc | ation | | Cours | Course Audience, people | | |) | нн | |
|-------|-------|-------|-------|---------|-------|-------------------------|--------|--------|--------|---------|---------|
| Team | Prov. | Dist. | Com. | Village | DT | NT | Men | Women | Child. | Total | visited |
| MRER | 4 | 12 | 19 | 118 | 182 | 15 | 10,657 | 12,278 | 11,039 | 33,974 | 3,648 |
| CBMRR | 6 | 29 | 100 | 904 | 1,423 | - | 12,967 | 13,002 | 11,347 | 37,316 | 5,215 |
| CBURR | 8 | 33 | 207 | 3,243 | 3,769 | 61 | 17,473 | 14,037 | 23,110 | 54,619 | 7,618 |
| OTHER | 8 | 19 | 161 | 748 | 955 | 6 | 11,377 | 8,860 | 9,418 | 29,656 | 620 |
| សរុប | 26 | 93 | 487 | 5,013 | 6,329 | 82 | 52,474 | 48,177 | 54,914 | 155,565 | 17,101 |

(Note: DT=Day Time, NT=Night time, HH=Household)

CMAC in collaboration with the Ministry of Education, Youth and Sport, UNICEF, Preah Vihear Authority, and Preah Vihear's Department of Education, Youth and Sports held Mine Awareness Day in Kulen district, Preah Vihear province on the 23rd February 2011 by conducting mine awareness campaign to 8,769 displaced people, 4,692 of which were men, 3,517 women and 560 children.

Six-Month Report 2011 Activities and Outputs

The 2011 National Mine Awareness Day was organized at CMAC Demining Unit 5 compound,

Kampong Cham province on February 24, 2011, by CMAA in cooperation with CMAC and supported by other mine risk education operators and partners. The event was presided over by **H.E Prak Sokhonn,** Minister attached to the Prime Minister and Vice-President of the Cambodian Mine Action and Victim Assistance. Different activities were carried out and on display to portray mine risk education and community participation, especially by school children.



During the International Mine Awareness Day, April 4, 2011, CMAC hosted a display at Metta Karuna Compound in Siem Reap province to demonstrate CMAC demining activities to the mine action groups



CMAC demining activities and Clusters Munitions Displays on 04 April 2011 at Metta Karuna Compound, Siem Reap Province

Mines risk education materials including T-shirt, notes book, poster, leaflet, flyer and VCD were used to support mine risk education activities. The detail materials used by team are presented in the below table.

| | Materials Utilization | | | | | | | | | |
|-------|-----------------------|----------------------------|---------------|--------|-------|---------|-----|--|--|--|
| Team | T-Shirt (big size) | T-Shirt (Small size) | Notes Book | Poster | Flyer | Leaflet | VCD | | | |
| MRER | 277 | 347 | 1,007 | 2,221 | 2,117 | 100 | 3 | | | |
| CBMRR | 9 | - | - | 381 | 39 | 15 | - | | | |
| CBURR | 529 | 842 | 3,764 | 3,561 | 2,506 | 3,561 | - | | | |
| HQ | 795 | 214 | 170 | 300 | 200 | 200 | 37 | | | |
| Total | 1,610 | 1,403 | 4,941 | 6,463 | 4,862 | 3,876 | 40 | | | |



In addition, CMAC also provided mine risk education training to government and nongovernment organizations working in the mine and UXO risk areas such as the UN staff at the ECCC and Food Hunger Cambodia.

Emergency Response

In the first semester 2011, CMAC's MRE component coordinated and facilitated 3,902 requests for intervention from the local authorities and mine/UXO affected communities. As a result 16,734 mines and UXO were collected and destroyed. The detail information on the request and response was shown in table below.

| Team | | Mine/UXO reported | | | | Mine/UXO collected and Destroyed | | | | |
|-------|---------|-------------------|----|--------|-----------------|----------------------------------|-------|----|--------|-----------------|
| | Request | AP | АТ | uxo | Caliber (kg) | Response | AP | АТ | uxo | Caliber (kg) |
| MRER | 157 | 138 | 8 | 1,389 | | 142 | 84 | _ | 1.268 | |
| | | 801 | | , | | | | 44 | , | |
| CBMRR | 427 | 801 | 46 | 2,537 | 19 | 351 | /52 | 44 | 2,537 | 19 |
| CBURR | 3,277 | 197 | 4 | 11,931 | 259 | 3,196 | 224 | 4 | 11,684 | 271 |
| OTHER | 41 | 5 | - | 189 | - | 41 | - | - | 137 | - |
| Total | 3,902 | 1,141 | 58 | 16,046 | 278 | 3,730 | 1,060 | 48 | 15,626 | 290 |

Victim Assistance

CMAC has conducted fund mobilization to support not only demining operations but also landmine survivors. In 2011, with funding support from UNA Sweden, CMAC has entrusted Operation Enfants du Cambodge (OEC) to implement the project entitled "Building Sustainable Livelihood for Landmine People Survivors." The project is 9-month starting from March 2011 and will benefit 25 landmine survivors and 75 children in Ratanak Mondul district of Battambang province.

Mine and UXO Committees (Volunteer networks) of the Community-Based Mine Risk Reduction Program coordinated and facilitated people with disability (PWD) access to victim assistance services, including physical rehabilitation, medical care and social reintegration. In the first semester 2011, 390 disabled people including landmine survivors received support services from government and non-government organizations.

CMAC also assisted 10 people with disability (PWD) to receive annual health insurance for 2011-2012. 7 PWD already received this annual health insurance in 2010-2011 and have been renewed for 2011-2012. This program has been financially supported through the fund raised from the half-marathon in Phnom Penh, which was organized on the 18th June 2011. CMAC sent 10 staff, one ambulance and 3 pick up to assist this event arrangement.

Six-Month Report 2011 Activities and Outputs

Case Study: What a Pity Life "Mao Sopheap"

Mao Sopheap was born in 1979 in Soksan camp close to the border of Thailand. During her stay in the refugee camp, she got a general education background. She was then moved to live in Thvat village, Andeok Heb commune, Ratanak Mondul district of the Battambang province in 1992. Rattanak Mondul district of the Battambang province was former hot battlefield between Cambodian government forces and Khmer Rouge forces for long period during the armed conflict. As a result, many different types of landmines were used as a non-sleeping watchdog, and thus changed Rattanak Mondul district to be a most highly risk zone of landmine and ERW in Cambodia. Mrs. Mao Sopheap underwent mine accident in May 1995 during her work on clearance land for farming. She lost the right leg below her knee. This accident has added extra works and difficulties, and demands her family to pay for treatment and health care etc. Due to the internal conflict in 1997, she was moved to live in Treng commune, Ratanak Mondul district of Battambang province. She was married to Mr. Chorm Ya in 1999 at Treng commune and returned to live in Thvat village and now she has 6 children (4 sons and 2 daughters). Her elder daughter is 9 years old studying in primary school (grade

3), while the youngest son is 16 months old.

Mao Sopheap said I am living in a very pity life condition; with 6 young children under the small shelter across the bridge of Prey Ampor village, Andeok Heb commune. In the pass, I worked with Metakarona organization as a teacher at remote area in my village and got salary US\$35 per month, while my husband does farming on the small plot of land. At present, my family depends only on farming (corn, bean, potato and sesame plantation) and off-farm activities collecting wood and produce charcoal to earn some more income to support the family. From these activities, I could earn approximately US\$1 a day.

She added that when I go to the farm and forest, I keep my small son and other 5 with my elder daughter to take care them. I am worries about their safety because there are many poisonous snakes in my terraces. I have never got any support from other organizations, because I live in

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the remote village and inaccessible road during raining season.

Sopheap smiled and said I am now very happy after I was selected by OEC to be one of the project target group and through this project I expect that my children can go to school, I can do a small grocery at home and take care of my children, and my family life will be better.



2. ACTIVITIES AND OUTPUTS

2.3. Training, Research and Development

Training, research and development has been one of the key functions and focuses of CMAC as part of its commitment to continual improvements and innovations. This core function has remarkably contributed to CMAC's enhanced capacity, innovative approach to demining, efficiency and quality.

However, the first six months of 2011 has seen a drawback for CMAC, especially in term of training. Due to the funding situation and projects being suspended, some training courses could not be conducted as planned, and the number of training courses was significantly dropped.

Further research and technical trial of mine/UXO clearance tools and other equipment continued. Reasearch activities including ALIS clutter rejection and integrated operations, underwater operations and free running dogs were conducted in order to support and enhance operational efficiency.

2.3.1. Training Activities

During the first six-months of 2011, 15 training courses were conducted at different locations, including CMAC Headquarters, the Training Centre and other Demining Units. In total, there were 217 trainees from all demining units, including 15 participants from Colombia attending the third country training course supported by JICA for PAICMA-Colombia. Some of the key training courses include:

| No | Course Name | Start | End | Trainees |
|----|--|-------------|-------------|----------|
| 1 | Integrated Clearance Platoon | 12-Jan-2011 | 16-Jan-2011 | 26 |
| 2 | Baseline Survey Refresher | 18-Jan-2011 | 21-Jan-2011 | 32 |
| 3 | Safety Village Mine Clearance | 17-Jan-2011 | 28-Jan-2011 | 23 |
| 4 | Battle Area Clearance by Village (BAV) #02 | 17-Jan-2011 | 17-Feb-2011 | 7 |
| 5 | DGPS Training | 15-Feb-2011 | 17-Feb-2011 | 10 |
| 6 | Baseline Survey SOP Training | 06-Apr-2011 | 07-Apr-2011 | 13 |
| 7 | MDD LLD#109 (1st Qtr) Refresher Course | 01-Jan-2011 | 01-Mar-2011 | 6 |
| 8 | MDD SLD#110 (1st Qtr) Refresher Course | 01-Jan-2011 | 01-Mar-2011 | 10 |
| 9 | EDD#111 (1st Qtr) Refresher Course | 01-Jan-2011 | 01-Mar-2011 | 9 |
| 10 | MDD LLD3-4 (2nd Qtr) Refresher Course | 25-Apr-2011 | 29-Jun-2011 | 6 |
| 11 | MDD SLD2-3 (2nd Qtr) Refresher Course | 25-Apr-2011 | 09-May-2011 | 10 |
| 12 | MDD SLD6-11 (2nd Qtr) Refresher Course | 25-Apr-2011 | 09-May-2011 | 10 |
| 13 | MDD SLD01-10 (2ndQtr) Refresher Course | 25-Apr-2011 | 09-May-2011 | 10 |
| 14 | Free Running Dog Training | 01-Mar-2011 | 31-Aug-2011 | 10 |
| 15 | PAICMA Phase 3 | 06-Jun-2011 | 17-Jun-2011 | 15 |
| 16 | CMAC-JMAS EOD LEVEL.03 | 08-Jun-2011 | 08-Jul-2011 | 20 |
| | | | | 217 |



2.3.1.1. Integrated Clearance Platoon (ICP) Training

To further speed up demining activities, CMAC took an initiative to integrate certain clutter rejection tools, such as mine detectors and mine detection dogs, into the clearance platoon. These clutter rejection tools, including ALIS and HSTAMIDS detectors and mine/UXO detection dogs, play a key role in reducing false alarms to allow deminers focus on real mines. Training was provided to a mobile platoon for a week as a trial for the new method. Subsequent the traing, the field trial was conducted with ALIS detector integrated with a mobile platoon to evualate the suitablity and efficiency of the new technique.

2.3.1.2. Baseline Survey Refresher

This training concept is to refresh baseline survey team members with technical practice, especially in the weak areas of report writing and minefield site sketching.

It was found that following the training, trainees were able to demonstrate that they absorbed knowledge and understood how to practically apply skills in technical survey, minefield box procedures, as part of the technical survey process.

Baseline Survey Training Activities

The training program also focused on using a GPS to perform minefield marking and transfer data into a computer system via GIS (ArcMap) and drawing minefield site sketch via the GIS (ArcMap) program.

2.3.1.3. Battle Area Clearances by Village (BAV) #2

The training focused on technical survey, coordination, and information collection so that all trainees were provided with knowledge and skills to ensure they could collect information, write reports and facilitate with community. The latter being very important due to the nature of the close contact project personnel had with the local communities. Training was provided on the following topics:



- Communication, Community participation and Community resource usage
- o Community sustainability, adaptation to the community and community facilitation
- o Participatory information collection and mine and UXO awareness
- o BAV concept via SOP: 1300, 1301, 1302, 1303, 1304, 1305 and 1306
- o The use of GPS Map 60csX, compass, map reading and location



Communication Training Course Activities

2.3.1.4. MDD/EDD Refresher Courses

There were 7 MDD/EDD refresher courses conducted in the first six months. This MDD/EDD refresher course were conducted to give MDD/EDD team members with the opportunity to improve their knowledge on new techniques, and is conducted annually so that personnel get out to the field and can apply new knowledge and practical skills.





MDD Training Activities

Topics taught at the CMAC Training Centre included deep and shallow smell, obedience training and dog care principles.



2.3.1.5. Free Running Dog Training

This is a new concept related to dog utilization in mine action. This training is a trial initiative because of the number of dogs available at the Training Centre, as well as the irregular geographical situation of mine clearance. The purpose of this training is to build the capacity of MDD personnel on how to use skills appropriately to deploy a free running dog team in a given geographical area in the most efficient and safe way, thus saving operational costs. This trial lasts for 6 months, commencing March 2011 and concluding in August 2011.

2.3.1.6. Third Country Training Course – PAICMA Phase 3

This is the third phase international training for 15 Colombian personnel, which was held at CMAC from 6 June to 17 June 2011.

PAICMA is a Colombian presidential program working on anti-personnel mine action. CMAC reached an agreement to organize a training program for the future bilateral cooperation between Colombia and Cambodia, under a Tripartite Arrangement with JICA, in order to have this international training program.

Training Activities for Colombian trainees

Colombian trainees in the minefield



This international training program consists of the following four important modules.

Module 1, Introduction to Mine Action Policy and Management, focuses on introduction to general mine action management concept and framework.

Module 2, *Integrated Mine Action Approach*, focuses on mine risk education, victim assistance and community development.

Module 3, *Survey and Clearance Management*, focuses on all on operational and technical aspects of mine action including survey and land release, demining tools and technologies, planning and prioritization, and other operational aspects.

Module 4, *Information and Database Management*, focuses on mine action database, victim assistance system and information management system.

This training was conducted in cooperation with CMAA, provincial mine action unit (PMAC) and other victim assistance orgations. It both involved in-class training and field visits.

The training was conducted smoothly and demonstrated that CMAC continues to be an national institution with lots of experiences and human resources in mine action sector to support development of its country and other mine and UXO afftected countries accross the world.

2.3.2. Research and Developement Activities

In the first six months, CMAC carried out a number of research and development activities in order to continue improving and innovating mine action safety, efficiency and quality. The following table shows the research and development projects implemented during the reporting period:

| Task | Status |
|---|-----------------|
| ALIS Trial in Integrated Clearance Operations | On-going |
| Explosive Harvesting Program | On-going |
| Minelap D-size 4.5ah rechargable battery trial and evaluation | On-going |
| Underwater operations in partnership with Golden West | March, May 2011 |



2.3.2.1. ALIS Trial in Integrated Clearance Operations

CMAC has reviewed the structure of its mobile platoons so they can become multi-skilled, with the hope of achieving more outcomes by approximately 200 per cent, but safely.

Using Advanced Learning Imaging System (ALIS) is to enable multi-skill mobile platoon to produce more operational outcomes, by reducing soil digging. This can be done, because ALIS is able to judge the safety of the object (whether mine or not via its screening system).

The ALIS trial was based on two phases. The first phase involved deminers using both a normal mine detector (F3) and ALIS to investigate indications. This was to build up more experience and confidence. After the first phase (3 months) the deminers could make decision whether or not to investigate alarm indicated by ALIS. The table below shows the results of the trial.

ALIS Operation in minefield M14837







The results of ALIS trial for 6 months in 2011

| ALIS-PG | G-01 | | | | | | | | | | Operator Judgment | | | |
|---------|--------------|------|--------|-----------|--------|-------|---------------|------|-----------|-------|-------------------|------|-------|------|
| Period | F3 detection | | | ALIS scan | | | F3 excavation | | | | TRUE | | FALSE | |
| Month | Area | Blue | Time | Red | Yellow | Time | Mine | Frag | No dig up | Time | Mine | Frag | Mine | Frag |
| Jan | 1615m² | 38 | 10:23 | 5 | 33 | 2:16 | 0 | 38 | 0 | 1:45 | 0 | 33 | 0 | 5 |
| Feb | 820m² | 7 | 6:08 | 1 | 6 | 0:33 | 0 | 7 | 0 | 0:40 | 0 | 6 | 0 | 1 |
| Mar | 3700m² | 40 | 27:04 | 7 | 33 | 3:31 | 0 | 40 | 0 | 4:13 | 0 | 33 | 0 | 7 |
| Apr | 4495m² | 57 | 31:10 | 5 | 52 | 5:07 | 0 | 57 | 22 | 3:37 | 0 | 52 | 0 | 5 |
| May | 7905m² | 101 | 41:18 | 18 | 83 | 4:37 | 2 | 99 | 47 | 3:05 | 2 | 83 | 0 | 16 |
| Jun | 10724m² | 117 | 43:45 | 14 | 103 | 12:03 | 0 117 96 1:31 | | | 0 | 103 | 0 | 14 | |
| | 29,259m² | 360 | 159:48 | 50 | 310 | 28:07 | 2 | 358 | 165 | 14:51 | 2 | 310 | 0 | 48 |

| ALIS-PG | -02 | | | | | | | | | | Operator Judgment | | | |
|---------|----------------|------|--------|-----------|--------|-------|---------------|------|-----------|-------|-------------------|------|-------|------|
| Period | d F3 detection | | | ALIS scan | | | F3 excavation | | | | TRUE | | FALSE | |
| Month | Area | Blue | Time | Red | Yellow | Time | Mine | Frag | No dig up | Time | Mine | Frag | Mine | Frag |
| Jan | 1,461m² | 29 | 8:30 | 5 | 24 | 1:41 | 0 | 29 | 0 | 1:45 | 0 | 24 | 0 | 5 |
| Feb | 760m² | 21 | 5:37 | 2 | 19 | 2:26 | 0 | 21 | 0 | 4:44 | 0 | 19 | 0 | 2 |
| Mar | 3,700m² | 47 | 29:32 | 7 | 40 | 4:23 | 0 | 47 | 0 | 1:44 | 0 | 40 | 0 | 7 |
| Apr | 4,930m² | 67 | 33:37 | 6 | 61 | 5:03 | 0 | 67 | 32 | 2:51 | 0 | 61 | 0 | 6 |
| May | 8,020m² | 92 | 41:01 | 19 | 73 | 8:32 | 0 | 92 | 44 | 2:34 | 0 | 73 | 0 | 19 |
| Jun | 10,740m² | 132 | 43:43 | 27 | 105 | 10:32 | 0 132 93 3:09 | | | 3:09 | 0 | 105 | 0 | 27 |
| | 29,611m² | 388 | 162:00 | 66 | 322 | 32:37 | 0 | | 169 | 16:47 | 0 | 322 | 0 | 66 |

In general, ALIS proved to be a promising technology for future application, with some further improvements.

2.3.2.2. Explosive Harvesting Program

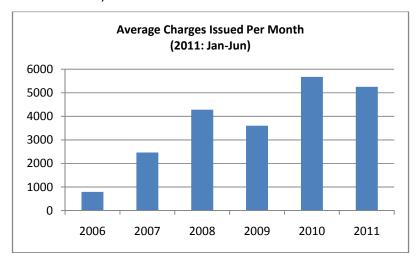
CMAC has been working in partnership with Golden West Humanitarian Foundation sponsored by US Department of Defence o n the Explosive Harvesting program since 2005. This research and development program has been implemented with the objectives to (1) safely remove the explosives from bombs, anti-tank mines, large caliber artillery projectiles, and other ordnance, (2) efficiently recycle the recovered explosives



into disposal charges for the demining and EOD teams, and (3) create high quality training aids to i mprove Demining and EOD Knowledge in Cambodia. These objectives have been



successful accomplished above expectations. A lot of work has been done in this program and the research and development work has yielded positive results with tons of explosives extracted and shaped charges produced to support demining operations in Cambodia. Explosive charges produced under this research and development program support the demining operations of CMAC, Halo Trust and MAG.



Progress report: Explosive Harvesting Program

| | Before | | | | | | | Jan-Jun | TOTAL TO |
|------------------|----------|---------|---------|---------|--------|---------|--------|-----------|------------|
| Description | 2011 | Jan | Feb | Mar | Apr | May | Jun | 2011 | DATE |
| Ordnance | | | | | | | | | |
| Processed (ea) | 6937 | 553 | 147 | 678 | 159 | 469 | 451 | 2,457.00 | 9,394.00 |
| Charges | 1 | 4 | 6 | 5 | | | | | |
| Distributed (ea) | 87353 | 000 | 000 | 500 | 500 | 000 | 500 | 31,500.00 | 218,853.00 |
| Explosive | | | | | | | | | |
| Recovered (kg) | 18884.11 | 560.76 | 907.55 | 1628.2 | 248.46 | 916.06 | 714.44 | 4,975.47 | 23,859.58 |
| FFE Metal | | | | | | | | | |
| Recovered (kg) | 46924.16 | 2099.81 | 2740.26 | 4333.78 | 774.56 | 2474.85 | 899.71 | 15,322.97 | 62,247.13 |

2.3.2.3. Underwater Operations

In addtion to an underwater operations in 2007 in Lvea Em district, CMAC in partnershop with Golden West Foundation again conducted two important pilot survey missions (Tonle Sap River in March and Mekong River in May) to carry out underwater operations to trial new underwater equipment and recover projectiles from the sunken boats in the riverbed.

On March 15th and 16th 2011 operational field trials of underwater detection system were carried out on the Tonle Sap River in Kampong Chhnang province. Three sites were investigated during the field trials. On May 24th through May

Snapshots

CMAC retrieves 765 UXOs from sunken ship

THE Cambodian Mine Action Centre said yesterday it had collected 765 unexploded pieces of ordnance, totalling more than four tonnes of explosives, discovered in a sunken boat in the Tonle Sap in Kampong Chhnang province late last week. The artillery and mortar shells discovered ranged from 105mm to 60mm in size and were found by a team of CMAC underwater Explosive Ordnance Disposal members scouring the river bed since June 2, after receiving information from a local fisherman who had discovered the boat. CMAC officials said they expected to recover more UXOs in the coming days. CHEANG SOKHA



26th 2011 operational field trials of the same prototype system were carried out on the

Mekong River in Kandal and Prey Veng provinces. Two sites were investigated during the field trials. During these field trials, CMAC gained lot of understanding and knowledge underwater operations and this built up the confidence for CMAC's staff for future under water operations. In addtion, the two operations also recovered over ten tons of explosives from the sunken boats in the river bed.





| S/N | UXO Type | Qty Recovered | Weight (kg) | |
|------------------|------------------------|---------------|-------------|--|
| Mekong R | iver Mission | | | |
| 1 | Bomb | 4.00 | 908.00 | |
| 2 | Artillery 105 mm HE | 76.00 | 1,375.60 | |
| 3 | Artillery 105 mm Illum | 2.00 | 35.60 | |
| 4 | Grenade Launcher M79 | 2,305.00 | 507.10 | |
| 5 | Mortar 60 mm | 462.00 | 679.34 | |
| 6 | Rocket 2. 75 inch | 269.00 | 1,671.70 | |
| 7 | Fuzes | 60.00 | 30.00 | |
| | Sub-Total | 3,178.00 | 5,207.34 | |
| Tonle Sap | Mission | | | |
| 1 | Artillery 105 mm HE | 294.00 | 5,321.40 | |
| 2 | mortar 81 mm | 376.00 | 1,594.24 | |
| 3 | Mortar 60 mm | 247.00 | 363.09 | |
| 4 | Recoilless 75 mm | 23.00 | 230.00 | |
| | Sub-Total | 940.00 | 7,508.73 | |
| | Grand Total: | 4,118.00 | 12,716.07 | |



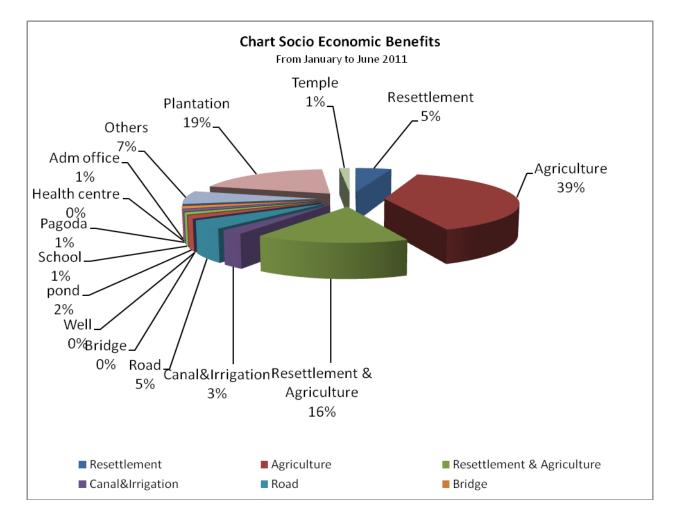
ACTIVITIES AND OUTPUTS 2.

2.4. Socio Economic Benefit

CMAC mine action activities contribute significantly to mine/UXO casualty rate reduction throughout the country. It also contributes to the enhancement of livelihood, socio-economic and infrastructure development within the affected communities after clearance.

Similar to previous years, socio-economic benefits gained in the first six months of 2011 were significant. In total, landmine and ERW clearance the first six months of 2011 benefited 1,599 families directly (direct beneficiaries), 55,856 families indirectly (indirect beneficiaries) as well as approximately 5,688 students.

A large portion of the land cleared is used to support development activities, and a smaller portion goes to humanitarian and emergency purposes. There are 11 categories of land use after land clearance in the first six months of 2011, and the cleared land allocation in square meters and percentage by category is shown in chart below.





2. ACTIVITIES AND OUTPUTS

2.5. Integrated Mine Clearance and Development

CMAC has long been a proponent of integrating sustainable development activities into its demining operations. Partnering with international NGOs and other international organizations, and private companies, CMAC has established a holistic approach to community and victim support by implementing projects with a strong community development focus after its demining activities. Some projects have its development packages to sustain rehabilitation in the local area, if not CMAC will approach other NGO's and private companies or individual to provide development assistance.

Development-orientated mine action does not simply clear landmine/UXO but also promotes the development of local communities by enabling them to use the land after clearance has taken place. Furthermore, local empowerment is enhanced by including members of affected communities in the mine action planning process.

2.5.1 Development Activities and Projects Facilitated by CBMRR staff

Mine and UXO committees (Volunteer networks) of the Community-Based Mine Risk Reduction Program (CBMRR) have built strong relationships with development partners to bring development into their communities. projects These development projects include rehabilitation and construction of rural roads to a total length of 94,404 meters (laterite, earth roads and new track roads); 11,910 meters of farm canal; 6 schools; 15 water wells-hand pumped; 6 community ponds; water supply within 185 villages, which have benefited up to 17,973 families.



2.5.2. Good Earth Japan (GEJ)

CMAC has collaborated with Good Earth Japan (GEJ), a Japanese non-profit organization since 2007 to promote post-mine clearance development of the affected communities, in order to improve the living standard of the people and support the socio-economic development of Cambodia. In the first semester 2011, CMAC, in partnership with GEJ, and in collaboration with the Provincial Department of Rural Development (PDRD) and Provincial Department of Agriculture



Signing Contract between CMAC and GEJ at CMAC Headquarters on 07 April 2011



(PDA) of Battambang implemented a post-mine clearance development project in Ratanak Mondul, Banan and Bavel districts of the Battambang province. The main achievements of this project are as follows:

2.5.2.1. Road Construction

- o 4,265 meters of laterite road, 5 meter top wide, was rehabilitated by CMAC's civil engineering team lined from O'Slabang to Prey Preal village to link transportation and economic activities of the three districts namely Banan, Ratanak Mondul and Bavel of the Battambang province. 9 pipe culverts including 2 single pipe culverts and 7 double pipe culverts were constructed along this road.
- 1,686 metres of laterite road, 5 meter top wide, was rehabilitated by CMAC's civil engineering team in O'Slabang village, Takream commune, Banan district of the Battambang province.



2.5.2.2. Construction of Community Ponds

Nine (9) community ponds were constructed by CMAC's civil engineering team in Kork Chor, Raksmey Sangha and Andoeuk 11 villages of the Sdao commune, Ratanak Mondul district. The size the community ponds varies from 30x40x4m to 40x40x4m based on the requirement of the community and the availability of land for pond construction. These 9 ponds benefit 1,885 families of the 3 villages mentioned above.



2.5.2.3. Agriculture Training

The Good Earth Japan in partnership with CMAC has entrusted Battambang Provincial Department of Agriculture to implement agriculture training in the post mine clearance areas in Ratanak Mondul and Bavel districts of the Battambang province. The agriculture training focused on rice cultivation, corn, mushroom, vegetable and chicken raising aiming to improve the living standard of the mines and UXO affected communities through income generation.

During this reporting period, 990 farmers received agriculture training, in which 300 farmers were trained in rice cultivation (System Rice Intensification), 180 farmers trained on corn production, 180 trained on mushroom growing, 180 trained on vegetable production and 150 trained on chicken raising.









Among the total trainees, 150 farmers were from Kork Chor village, 390 farmers from Raksmey Sangha village, 300 from Andouek 11 village, 60 farmers from Prey Preal village, 60 farmers from Tumnup Takuon village and 30 farmers from Tuol Snoul. The farmers from Prey Preal, Tunub Ta Kuon and Tuol Snoul villages, Kdol Tahen commune, Bavel district of the Battambang province received their first course in rice cultivation (SRI), while Kork Chor, Raksmey Sangha and Andoeuk 11 of the Sdao commune, Ratanak Mondul district, Battambang province received all courses mentioned above.

| Village | | Nur | mber of Farmers | Trained | |
|----------------|------------|------|-----------------|-----------|---------|
| village | Rice (SRI) | Corn | Mushroom | Vegetable | Chicken |
| Kork Chor | 30 | 30 | 30 | 30 | 30 |
| Raksmey Sangha | 60 | 90 | 90 | 90 | 60 |
| Andoeuk 11 | 60 | 60 | 60 | 60 | 60 |
| Prey Preal | 60 | | | | |
| Tunub Ta Kuon | 60 | | | | |
| Tuol Snoul | 30 | | | | |
| Total | 300 | 180 | 180 | 180 | 150 |

2.5.3. Mine Clearance in Battambang (MCB) Project

The Mine Clearance in Battambang (MCB) project combines two component projects: Community Based Demining (CBD) and Safety Village Construction (SVC), which not only focuses on demining but also on community development. It aims to bring about the personal security and safety of the people and community living in mine affected areas in Kilo & Chea Montrey village, Treng commune, Ratanak Mondul district, Battambang province, and to improve their economic and





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social opportunity through community infrastructure rehabilitation and development. This project covers a period of April 2010 to July 2011.

The project was implemented by CMAC in partnership with Japan Mine Action Service (JMAS) in Kilo and Chea Montrei villages, Traeng commune. The project had two separate components which carried out different tasks including (1) Demining component, consisting of one demining machine, one brush cutter machine, and one mobile platoon assigned to provide demining services to support the infrastructure construction activities, and (2) Infrastructure construction component assigned



to carry out community development activities. The project was jointly funded by KOMATSU Co. Ltd and Japanese Government Fund through JMAS.

In the first semester 2011, the MCB Project produced the following outputs.

- 3,500 meters of laterite road with both-side waterway, 3 pipe culverts and one spillway constructed.
- 8 community ponds constructed.
- 1 school building with 3 classrooms and 1 staff room constructed.
- 3 wells constructed.



According to plan, the safe land and infrastructure developed after mine clearance would be handed over to local authorities for further distribution to around 500 poor and landless families, who would be resettled into the Kilo and Chea Montrei Villages. The official hand-over ceremony was organized in the project site on March 7, 2011 and presided over by H.E Prak Sokhonn, Minister attached to the Prime Minister and Vice-President of the Cambodian Mine Action and Victim Authority (CMAA).



The actual land distribution after clearance was made on June 15, 2011 through lucky draw at the project site in Kilo Village, Traeng Commune, witnessed by **H.E Im Chhun Lim**, Senior Minister, Minister of the Ministry of Land Management, Urban Planning & Construction, H.E Heng Ratana, CMAC Director General and Battambang Governor HE Prach Chan as well as other relevant local authorities and development partners. The cleared land was distributed to 491 beneficiary families.



In addition, 2,000 meters of laterite road was constructed in Ou Anlork village, Tasen commune, Kamrieng district of the Battambang province under the CBD component of the MCB project with charity from the People of Japan and counterpart fund from the Commune Council of Tasen Commune.

2.5.4. <u>Program for Integrated Mine Clearance and Landmine Victim Assistance "The</u> Peace-building Project"

While the presence of landmine/UXO is a direct security threat to communities living in and around minefields, it is also a significant obstacle to the social and economic development of those communities. Many minefields in remote areas considerably affect the poorest farmers. Accordingly, in December 2008, CMAC requested the Government of Japan, through the Royal Government of Cambodia, to implement a conflict prevention and peace building program to accelerate mine clearance activities by applying integrated mine clearance technologies, developed through research and development activities for mine clearance related equipment in Cambodia. The request also included a component of local development in mine affected communities with a particular focus on agriculture and infrastructure development.





The overall objective of this program is to sustainably improve the livelihood and food security of the poorest farmers who live in the landmine contaminated area of Ou Donpov and Kampong



Makak village, Kdol Tahaen commune, Bavel district, and Rossei Ro village, Takream commune, Banan district. This is achieved through community assistance which promotes the productive use of land after mine clearance activities and provides communities with necessary agricultural support.

2.5.4.1. Project Objective

- To strengthen landmine and explosive remnant of war (ERW) clearance activities of CMAC through the procurement of necessary equipment
- To clear large areas of contaminated land and provide communities with a safer environment by integrating the operation of mechanical and manual demining through support of operations expenses to CMAC
- o To improve the livelihoods of people living in selected mine-affected villages through appropriate assistance for sustainable development

2.5.4.2. Project Achievements

The project started its demining operation in two selected sites: Site I covers Kampong Makak and Ou Donpov villages and Site II covers Russeiro community, Slabang village. The demining in site I was completed in June 2011 and the project to moved to site III in the same month.

As of June 2011, the Project employed a total of 204 staff, which included a project management team, a community assistance team, 8 demining machines teams, 4 mobile platoons, 4 mine detection dog teams, a brush cutter team, 2 explosive ordnance disposal teams, a civil engineering team, an agricultural land preparation team and 2 community-based mine risk reduction (CBMRR) staff.

Mine Clearance Achievements

During January-June 2011, the project cleared 5,812,722 m² (581.3 ha) of contaminated area in the target villages, found and destroyed 655 landmines and UXO including 317 anti-personnel mines, 16 anti-tank mines, 318 unexploded ordnances and 4 improvised mines. The achievements of the project classified by location can be summarized in the table below.







Table 5: Progress productivity classified by location

| No. | Location | | | | 2011 | | | |
|-----|-------------------|---------|-----------|-----------|---------|---------|-----------|-----------|
| | | Jan | Feb | Mar. | Apr | May | Jun | Total |
| 1 | Kampong Makak | 236,563 | 259,171 | 317,139 | 71,281 | 50,076 | | 934,230 |
| 2 | Ou Doun Pov | 307,485 | 367,039 | 284,783 | 263,021 | 294,487 | 115,399 | 1,632,214 |
| | Site I | 544,048 | 626,210 | 601,922 | 334,302 | 344,563 | 115,399 | 2,566,444 |
| 1 | Russey Ro | 349,740 | 418,697 | 500,786 | 485,441 | 526,448 | 639,033 | 2,920,145 |
| | Site II | 349,740 | 418,697 | 500,786 | 485,441 | 526,448 | 639,033 | 2,920,145 |
| 1 | Buo Sangkreach | X | X | X | X | X | 13,498 | 13,498 |
| 2 | Chrang Bak | X | X | X | X | X | | 0 |
| 3 | Trapeang Kbal Sva | X | X | X | X | X | 312,635 | 312,635 |
| | Site III | 0 | 0 | 0 | 0 | 0 | 326,133 | 326,133 |
| | Total | 893,788 | 1,044,907 | 1,102,708 | 819,743 | 871,011 | 1,080,565 | 5,812,722 |

The progress productivity, classified by demining teams, of the mine clearance component is summarized in the table below.

Table 6: Progress productivity classified by team

| No. | Demining | Achievements, 2011 | | | | | | | | | |
|-----|----------|--------------------|-----------|-----------|---------|---------|-----------|-----------|--|--|--|
| NO. | Tools | Jan | Feb | Mar. | Apr | May | Jun | Total | | | |
| 1 | MPL | 82,592 | 111,361 | 79,532 | 124,308 | 211,638 | 308,064 | 917,495 | | | |
| 2 | CMC | 106,465 | 159,410 | 104,967 | 62,248 | | | 433,090 | | | |
| 3 | ВСТ | 70,490 | 38,316 | 44,579 | 45,316 | 32,748 | 55,374 | 286,823 | | | |
| 4 | MDD | 119,785 | 146,070 | 232,733 | 124,140 | 136,472 | 157,194 | 916,394 | | | |
| 5 | DMT | 514,456 | 589,750 | 640,897 | 463,731 | 490,153 | 559,933 | 3,258,920 | | | |
| | Total | 893,788 | 1,044,907 | 1,102,708 | 819,743 | 871,011 | 1,080,565 | 5,812,722 | | | |

Two district focal points (DPF) of the Community-Based Mine Risk Reduction Program (CBMRR) were deployed to coordinate and facilitate mine action activities, mine risk education, victim assistance and development activities in target districts. As a result, 177 mine risk education courses were conducted and reached 3,269 people, of whom 1,286 were men, 1,098 women and 885 children. CBMRR staff also conducted consultation for behavior changes for 51

households in the target district.

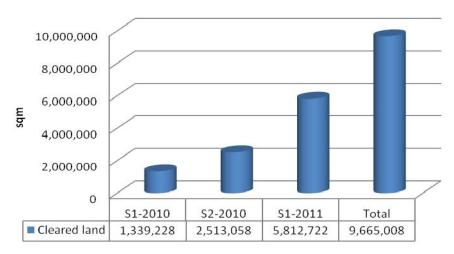
In addition, 2 explosive Ordnance Disposal team (EOD) were deployed to respond to the requests from the landmine and UXO affected communities, to collect and destroy mine and UXO, and conduct limited clearance for risk reduction purposes. For instance, 268 requests from the communities were responded by the teams, which then collected and destroyed 4,786



mines and UXO, including 1,089 anti-personnel mines, 40 anti-tank mines and 3,657 UXO.

All teams were expected to clear approximately 72 hectares per month or 432 hectares for the reporting period. The teams actually cleared 581.3 ha or equal to 134% compared to the operational plan. The demining achievements of the project by semester are presented in the graph below.

Cleared land classified by semester



The demining operation in Site I was completed in June 2011. To continue with the demining operations, Site III was identified, assessed and selected in collaboration with JICS staff. The criteria for selection of the site III also followed the same mechanism of PMAC/MAPU process as well as ensuring the site is suitable for the deployment of demining machines and other tools in both dry and wet seasons. The site selection also took into account the distance to the old site to minimize transportation cost.

Based on the criteria mentioned above, three villages including Buo Sangkreach, Chrang Bak and Trapeang Kbal Sva were selected for Site III of the project. Based on the updated baseline survey data provided from CMAA, the three villages contain a total of 33,031,506 m² of contaminated land (199 minefields). 15 minefields (163 ha) and 7 spare minefields (110 ha) of the 199 minefields were selected for demining operations of the project in 2011.

The accommodation at site I is used to support the demining operation activities in Site III. Subsites in the target villages of the Site III were also prepared for specific teams, to enable them to conduct their tasks in an effective and efficient manner.

Community Assistance

The community assistance concept and operation was designed on the basis of the actual needs of target villages, such as land reclamation, agricultural infrastructure construction and agriculture training, with the aim to convert the minefields into farmland after the Six-Month Report 2011 Activities and Outputs



demining operation. Key stakeholders such as provincial governor, relevant provincial departments (water resource, environment, provincial rural development, provincial department of agriculture, and the forestry administration) as well as local authorities (district & commune chief) are strong advocates and participants of the whole process. Three main activities were carried out.

Farming Support/Land Reclamation

Land preparation activity took place from March to June 2011 with a plan achieve 504 hectares agricultural land. The project actually achieved 501.9 hectares of land preparation, which means that the prepared land can be used for farming in an efficient manner. 239.2 hectares of the total land benefited 69 families in Kampong Makak village and 262.7 hectares benefited 58 families in Ou Donpov village. The preparation work land was undertaken by two Tractor teams



under the management and supervision from the Community Development team of the Peace-building project.

Infrastructure Construction

The infrastructure construction was based on the results of technical survey and design by the Battambang Provincial Technical Departments (Provincial Development of Rural Development-PDRD). Progress of road construction is indicated in the table below:





| Progress of | of Road construction | | | | |
|-----------------|--------------------------|--------------------|---------------|------------|----------------|
| Project site | Village | Road Line | Type of road | Length (m) | Work completed |
| | | Road Line 01 | Earth Road | 1,890 | 100 % |
| | | Road Line 02 | Earth Road | 2,800 | 100 % |
| | Kampong Makak village | Road Line 03 | Earth Road | 2,580 | 100 % |
| | , villago | Road Line 04 | Earth Road | 930 | 70 % |
| 1 | | Sub-total | Kg. Makak | 8,200 | |
| | Ou Donpov village | Road Line 01 | Earth Road | 1,973 | 70 % |
| | | Road Line 02 | Earth Road | 1,337 | 70 % |
| | | Road Line 03 | Earth Road | 350 | 100 % |
| | | Sub-total | Ou Donpov | 3,660 | |
| | | Road Line 01 | Earth Road | 1,025 | 70 % |
| | | Road Line 02 | Laterite Road | 2,490 | 100 % |
| II | Russei Ro village | Road Line 03 | Earth Road | 1,540 | 70 % |
| | village | Road Line 04 | Earth Road | 847 | 70 % |
| | | Sub-tota | I Rosei Ro | 5,902 | |
| | Grand Total Road I | _ength in site I & | <u></u> | 17,762 | |

The project planned to construct a total 17,762 liner meters (three years or just this year?) of road after landmine clearance. During the reporting period, 10,110 of 17,762 liner meters was 100% completed, and the other 7,652 liner meters were 70% completed.

The construction of cross structure was also conducted based on the drawing designed by the PDRD. The progress the construction of cross structure is indicated in the table below:

| Project | Village | Construction of | | Road | Line | Total | Pond | Signboad | | |
|---------|------------------|------------------|-------|-------|-------|-------|-------|----------|--------|--|
| site | Village | structure & pond | RL#01 | RL#02 | RL#03 | RL#04 | Total | Fond | o.gouu | |
| | 17 | Single culvert | 2 | 2 | 1 | 2 | 7 | | | |
| | Kampong Makak | Double culvert | 2 | 6 | 5 | 0 | 13 | 1 | 5 | |
| I | IVIANAN | Water gate | 2 | | | | 2 | | | |
| | Ou Donpov | Single culvert | 1 | 4 | 1 | | 6 | 1 | 4 | |
| | Ou Donpov | Double culvert | 2 | | | | 2 | ' | 4 | |
| П | Russei Ro | Single culvert | 0 | | 2 | 3 | 5 | 3 | 7 | |
| ll ll | Russel Ro | Double culvert | 3 | 6 | 3 | | 12 | | | |









Agriculture Training

Most agriculture land where landmines and ERW are being cleared under this project is used for rice farming and upland crop farming such as corn, bean, sesame, etc. According to the socio-economic baseline survey conducted at the beginning of the project, 80% of the people at the project site raised around 10-11 chickens on average. The survey indicated that the major obstacle in chicken raising was disease, especially during the early raining season (March-April). To address this issue, it was identified that training should be



provided to the people in chicken raising skills and knowledge, with particular focus on disease control. At the same time, the survey also found that 80% of people at the project site faced shortage in vegetable consumption on average around 6-7 month per year. It was observed that vegetable farming in the target villages was still limited because landmines were not yet cleared around their homestead land. By introducing the skill and knowledge on vegetable farming, it was expected that landmine victims would be able to improve their livelihood by expanding vegetable production.

Chicken Raising

The Battambang Provincial Department of Agriculture (PDA) was awarded a contract by the project on 11th May to provide training on chicken raising in 3 targeted villages of Russei Ro, Ou Donpov and Kampong Makak for a duration of 4 months from May to August 2011. Two classes are planned for Russei Ro village, 2 classes for Ou Donpov village and 2 classes for Kampong Makak village. The following table indicates the progress with the chicken raising training.







Progress of Chicken Raising

| Targeted village | Loca | tion | Trainin | g Class | Beneficiary | | |
|------------------|-------------|-------------|-----------|---------|-------------|--------|--|
| rargeted village | Commne | District | Class 1 | Class 2 | Total | Female | |
| Kampong Makak | Kdol Tahaen | Bavel | yes | | 40 | 28 | |
| Kampong Wakak | Nuoi Tanaen | Davei | | yes | 39 | 23 | |
| Ou Donpov | Kdol Tahaen | Bavel | yes | | 33 | 22 | |
| Ou Donpov | Nuoi Tanaen | Davei | | yes | 33 | 22 | |
| | Takream | Banan | yes | | 35 | 17 | |
| Russei Ro | Takicaiii | Darian | | yes | 35 | 16 | |
| TOTAL | 2 coomnes | 2 districts | 6 classes | | 215 | 128 | |

Vegetable Production

The main objective of vegetable training is to enhance vegetable farming at home around the minefields which had been cleared of mine and UXO under the program. More specifically, the training aims to achieve the following objectives:

- a. To equip with basic knowledge on vegetable and its farming;
- b. To equip with basic skills and technique in vegetable and its farming;
- c. To increase the production size of vegetable farming at the target site.

2 classes of vegetable production training have been conducted Kampong Makak village and one each in Ou Donpuv and Russey Ro villages. A total of 113 people received the training, of whom 100 (or 88.5%) were





female. The number of training recipients represent 101% of the number requested during survey in March.

| Progress of Vegetable production Training | | | | | | | | | |
|---|-------------------|-------------|---------|---------|-------------|--------|--|--|--|
| Targeted village | Loca | Location | | g Class | Beneficiary | | | | |
| Targeted village | Commune | District | Class 1 | Class 2 | Total | Female | | | |
| Kampong Makak | Kdol Tahaen Bavel | | yes | | 25 | 22 | | | |
| | | | | yes | 25 | 23 | | | |
| Ou Donpov | Kdol Tahaen | Bavel | yes | | 38 | 34 | | | |
| Russei Ro | Takream | Banan | yes | | 25 | 21 | | | |
| TOTAL | 2 communes | 2 districts | 6 cla | isses | 113 | 100 | | | |

Six-Month Report 2011 **Activities and Outputs**



2. **ACTIVITIES AND OUTPUTS**

2.6. Support Activities

CMAC, with approximately 2,000 staff employed and deployed throughout the country, is the largest demining organization in Cambodia and employs the most diversified demining tools in operations. The size of operations makes CMAC one of the most complicated entities to manage in term of logistics and personnel. Supporting staff are required to be very professional to ensure that all aspects of operations are detailed and closely followed up. CMAC also employs a set of high standard processes and procedures to maximize the safety and efficiency of demining operations.

The procedures and key processes within CMAC have been carried out in accordance with the International Standards of Operations (ISO), since 2004. The ISO certification demonstrates that CMAC processes and procedures are in place to meet standards in relation to record management, monitoring and evaluation procedures and regular review systems.

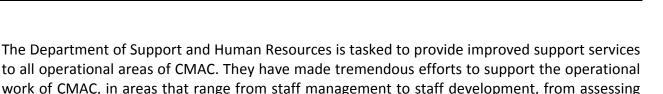
Additionally, in line with the requirements of the ISO accreditation, CMAC systems have been designed to facilitate continuous improvements in the workplace. The ISO certification provides assurance to donors, development partners and the public, that CMAC's operations undertaken with the highest standards of quality and safety.

CMAC is an operation driven institution. Therefore it needs a very strong and professional support team to ensure smooth demining operations. At the same time, efficiency and effectiveness oriented measures and initiatives are crucial. The installation of GPS tracking system in vehicles and demining machines is one initiative that has resulted in a range of benefits, such as the exact location of assets at any given time, a reduction in fleet fuel costs, the recovery of stolen assets, improved service delivery and improvement in driver safety. In addition, staff welfare improvement is an important task for CMAC. This includes improving of human resources policy and procedure, living condition of field staff as well as improving levels of staff motivation.





Six-Month Report 2011 Activities and Outputs



2.6.1. Logistic Support

The Department of Support and Human Resources closely monitors the maintenance and supply of communication and logistic systems in a way that helps ensure it can meet the challenges posed by providing equipment, logistical and human resources supports to a workforce deployed across the country and in particular, to remote parts of Cambodia. The systems had enabled the department to perform its duties and obtained a satisfactory result. The department successfully provided timely and appropriate supports to all divisions of workforces of CMAC.

logistical needs to the procurement and distribution of supplies, from the maintenance of small vehicles and repairs, and finally, the management of the CMAC transport fleet and machinery.

A brief summary of achievements during the first six months of 2011 were as follows:

- Conducted and reconciled the first stock take for consumable stores, and reported to CMAC top management;
- Strengthened the implementation of De-mining Units and operational sites re-supply system, and coordinated with related Departments to equip for newly established and re-structured some teams;
 - th ment under the project supported by counterpart
- Equipped new teams with additional assets and new equipment under the project supported by counterpart funding and Clearing for Results project, at both Demining Unit 1 and Demining Unit 2;
- Worked closely with the Consultant for the Project for "Improvement of Equipment for Demining Activities" (Phase VI), funded through Japanese Grant Aid, which totaled to 1,298,000,000 yens (approximately USD 16.8 million);
- Strengthened the implementation of the stock management for each project;
- Improved Fixed Asset Tracking System (FATS) at DU levels and other relevant sections in CMAC, focusing on monthly and yearly reporting of fixed assets;
- Regularly updated the fixed assets movement record, including its status and users, into the FATS, using reports received from each De-mining Unit, spot checks conducted and stock take results;



- Coordinated with Finance Department to register 277 items into CMAC Fixed Assets List, including 96 items of in-kind donation fixed assets from Japanese Government (Peace Building Project), 171 items from JICA, 2 items from Royal Government of Cambodia and 8 items purchased by Demining Unit 6;
- Coordinated with Central Workshop to receive repaired cutting tools and re-issue to Mobile Platoons and Teams; and
- Conducted spot checks on store custody, management and utilization, at each De-mining Unit and Mobile Teams.

2.6.2. Maintenance and Transport

Transportation is the biggest component of CMAC operations, and as such, it constitutes the largest cost in the inventory. The cost is cumulative in spare parts, fuel and maintenance costs.

The Office of Machinery and Transport has taken efforts to manage the means of transport to ensure quality and reliability, so that operations on the ground are adequately supported. Some remarkable achievements for the Office can be presented as follows:

- Managed a total of 336 vehicles, 27 brush cutters (20 in active operations), 8 demining machines, and 99 motorcycles.
- Upgraded vehicles of the mobile teams and De-mining Units as well as newly established teams;
- o Coordinated and conducted services and maintenance of vehicles to support the smooth running of CMAC's Headquarters operations, and other mobile teams attached to HQ;
- Conducted spot checks on the use of vehicles by the De-mining Units, Training Centre and by project teams;
- Provided technical training to drivers, platoon and team leaders on traffic law and preventive vehicle maintenance; and
- Coordinated with Procurement Section to purchase Third Party Liability Insurance for CMAC Vehicles and issued to all Demining Units, Training Center and Central Workshop.

CMAC has a Central Workshop (CWS) in Battambang in the western part of Cambodia, where most of CMAC's demining activities take place. Having a workshop in this location allows CMAC to quickly respond to operations at the field. There are always challenges and difficulties in terms of road conditions and environment, in particular the rainy season which delays CMAC demining operations. The Central Workshop plays an important role in the maintenance and repair of CMAC vehicles, heavy mechanical demining machines and mine/UXO detectors.



ISO 9001:2008

As part of the service from the Central Workshop in Battambang, CMAC deployed its mobile workshop to demining sites far from the Central Workshop and to areas that were difficult to access, to support field operations in a timely manner. Furthermore, the mobile workshop is often deployed specifically to support the maintenance of heavy demining machines, which are difficult to move to the central workshop for routine maintenance.







In addition to the maintenance and repair of mine detectors at the Central Workshop, CMAC also assigns mobile mine detector mechanics to check and verify mine detector in the field.



2.6.3. Medical Support

The health of our deminers is one important factor that can impact on the achievement of our operation work plan and the staff welfare as a whole. This constitutes an overall concern of CMAC management. By June 2011, CMAC deployed 46 medical staff with varying education levels. Staff included doctors, medical assistants and nurses. Health promotion is one of the most important activities of the Medical Section.





Patient Statistics

Medical staff at all levels has used their utmost efforts in collaboration with relevant sections to promote staff health, especially for staff in the field. Physical checks of team



accommodation areas in the field by medical staff have promoted health care and hygiene education among CMAC personnel. The medical staff provided information on food preparation and storage, the importance of cleaning accommodation and surrounding areas, clothes and bedding. This work helped reduce the number of patients compared with last year.

Table 1: Patient statistic by DUs:

| Characteristic | | Pa | atient S | tatistic | by DU | s/TC/H | Q | | Total Case by | % of |
|----------------------|----|-----|----------|----------|-------|--------|-----|----|----------------|---------|
| Characteristic | HQ | DU1 | DU2 | DU3 | DU4 | DU5 | DU6 | TC | Characteristic | Patient |
| Hospitalized | 0 | 19 | 13 | 0 | 1 | 0 | 7 | 0 | 40 | 2.22 |
| Infirmary Rest | 0 | 13 | 73 | 0 | 0 | 1 | 2 | 0 | 89 | 5.00 |
| Site Patient | 0 | 31 | 48 | 0 | 0 | 0 | 48 | 0 | 127 | 7.04 |
| Home Patient | 0 | 21 | 17 | 0 | 4 | 1 | 28 | 1 | 72 | 4.16 |
| Total Patient by DUs | 0 | 84 | 151 | 0 | 5 | 2 | 85 | 1 | 328 | 18.42 |

Consultations and Treatment Statistics

CMAC medical doctor was assigned to provide consultation and physical treatment to field staff, who are working far from home and surrounded with infectious diseases such as malaria and typhoid etc. The table below shows the statistics of medical consultations and treatments provided to field staff at all demining units.



| | | | | | , | | | | <u>.</u> | |
|----|-------------------------------------|----|-----|-----|-----|-----|-----|-----|----------|-------|
| SN | SUSPICION OF DISEASE | HQ | DU1 | DU2 | DU3 | DU4 | DU5 | DU6 | TC | Total |
| | | | | | | | | | | Cases |
| 1 | Common Cold/Influenza | 66 | 573 | 675 | 0 | 32 | 61 | 708 | 71 | 2186 |
| 2 | Headache/Migraine | 9 | 229 | 196 | 0 | 19 | 38 | 217 | 42 | 750 |
| 3 | Malaria | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 4 |
| 4 | Conjunctivitis (Eye Infection) | 16 | 117 | 160 | 0 | 5 | 12 | 113 | 7 | 430 |
| 5 | Otitis (Ear Infection) | 0 | 9 | 10 | 0 | 2 | 0 | 18 | 0 | 39 |
| 6 | Rhinitis/Sinusitis (Nose Infection) | 1 | 27 | 27 | 0 | 2 | 0 | 13 | 7 | 77 |
| 7 | Laryn-Pharyngitis/Tonsiltis | 22 | 171 | 250 | 0 | 14 | 46 | 277 | 31 | 811 |
| 8 | Stomatitis/Toothache/Gingivitis | 5 | 109 | 102 | 0 | 9 | 14 | 126 | 14 | 379 |
| 9 | Acute Pulmonary Infection | 1 | 68 | 31 | 0 | 0 | 0 | 46 | 33 | 179 |
| 10 | Parasitosis | 0 | 17 | 50 | 0 | 0 | 7 | 48 | 6 | 128 |
| 11 | Intoxication (Food, Drug, Chemical) | 0 | 2 | 0 | 0 | 0 | 0 | 4 | 0 | 6 |
| 12 | Typhoid Fever | 0 | 15 | 0 | 0 | 1 | 1 | 0 | 6 | 23 |
| 13 | Gastro-Colitis | 23 | 318 | 442 | 0 | 23 | 31 | 402 | 30 | 1269 |
| 14 | Diarrhea/Dysentery | 28 | 436 | 584 | 0 | 20 | 53 | 601 | 40 | 1762 |
| 15 | Genito-Urinary Infection | 0 | 13 | 14 | 0 | 0 | 0 | 31 | 0 | 58 |
| 16 | Urinary Caculus | 0 | 3 | 8 | 0 | 0 | 0 | 1 | 0 | 12 |
| 17 | STI(Sexual Transmitted Int | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18 | Dermatosis (Skin Infection) | 0 | 41 | 73 | 0 | 11 | 7 | 112 | 7 | 251 |
| 19 | Absces/Cellulitis/Myositis | 0 | 32 | 46 | 0 | 1 | 2 | 19 | 3 | 103 |
| 20 | Acute Myalgia/Arthralgai | 21 | 235 | 161 | 0 | 12 | 18 | 290 | 35 | 772 |
| 21 | Avitaminosis(Vitamine Deficency) | 0 | 13 | 49 | 0 | 0 | 2 | 45 | 25 | 134 |



| 22 | Asthenia/Vertigo/Fainting | 10 | 153 | 244 | 0 | 7 | 7 | 92 | 49 | 562 |
|----|----------------------------|-----|------|------|---|-----|-----|-------|-----|--------|
| 23 | Wound/Ulceration | 0 | 166 | 196 | 0 | 3 | 33 | 193 | 0 | 591 |
| 24 | Mine/UXO Accident | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 25 | Traffic Accident | 0 | 4 | 5 | 0 | 0 | 0 | 0 | 0 | 9 |
| 26 | Snake, Dog, Insect Bites | 0 | 15 | 20 | 0 | 0 | 0 | 3 | 0 | 38 |
| 27 | Burn | 0 | 1 | 9 | 0 | 0 | 0 | 2 | 0 | 12 |
| 28 | AHT(Arterial Hypertension) | 0 | 4 | 4 | 0 | 1 | 0 | 7 | 0 | 16 |
| 29 | TB(Tuberculosis) | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 3 |
| 30 | HPT(Hepatitis) | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 31 | AIDS | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| 32 | Other Diseases | 9 | 6 | 181 | 0 | 3 | 1 | 0 | 1 | 201 |
| | Total of Cases | 211 | 2781 | 3543 | 0 | 165 | 333 | 3,369 | 407 | 10,809 |

Other activities

- Staffs injury benefit has been promoted through direct visits by Medical Staff at each Demining Unit to locations where personnel were injured while working;
- 103 MEDEVAC exercises has been conducted at mine/UXO field;
- Published 'health flash' and distributed it to medics to be used to educate field staff on personal hygiene and transmitted disease prevention matters;
- Malarial prevention through spreading of chemical solution at site accommodation every week as well as treating mosquitoes nets, and distribution of insect skin repellent to all field staff;
- Introduced and implemented environmentally friendly living conditions for field staff:
- Studied living conditions of field staff and assessed requirements in order to make proper plan;
- o Conducted monthly checks and refilled first aid kits for all platoons and teams; and
- Conducted the health care promotion by applying anthelmintic (anti-parasite) on field staff.

2.6.4. Human Resource Management

The implementation of a human resource information system to enhance the management of staff information, staff relocations and the essential database of staff information within the organization had contributed to significant improvements in the process of personnel management, therefore enhancing skills in resource management within the organization. The system enables to store staff data in central database maintained at CMAC Headquarters to protect unpredicted damage.

Staff Deployment

CMAC, by the end of June 2011, deployed 1,715 staff including 1,550 permanent staff and 165 SSA staff. Out of these, there were 113 female staff (equal to 7% of the total staff). The number of deployed staff during the reporting period was 295 persons less than in 2010. The table below shows the locations of staff:



| No. | Location/ Operation Site | Permanent Staff | SSA Staff | Total Staff (30 June 2011) | Stand-Down (30 June 2011) |
|-----|-----------------------------|--------------------|--------------|-------------------------------|------------------------------|
| 1 | Headquarters-PNP | 183 | 31 | 214 | 0 |
| 2 | Training Center | 24 | 17 | 41 | 0 |
| 3 | Central Workshop | 18 | 2 | 20 | 0 |
| 4 | Demining Unit 1 | 383 | 24 | 407 | 13 |
| 5 | Demining Unit 2 | 545 | 47 | 592 | 3 |
| 6 | Demining Unit 3 | 29 | 4 | 33 | 93 |
| 7 | Demining Unit 4 | 38 | 16 | 54 | 14 |
| 8 | Demining Unit 5 | 17 | 4 | 21 | 93 |
| 9 | Demining Unit 6 | 313 | 20 | 333 | 0 |
| | Total | 1,550 | 165 | 1,715 | 216 |

Staff Training

The human resources capacity had been well managed and strengthened with the necessary skill sets and information technology. The commitment towards building staff proficiencies can be shown through provision of training courses to employees irrespective of their current job positions. The Department of Support and Human Resources worked very closely with the Training Department to conduct training needs assessment, identity and organize training courses, arrange staff for training and make sure that training records are updated and maintained for all staff effectively. Training is well embedded within the human resource management system.

Staff Motivation

CMAC provides equal opportunities to all staff to receive training, be promoted to higher positions, receive an increase in salary, to work in different positions, and also regularly accesses work areas for staff safety.

| Promotion | 41 persons |
|---|-----------------------------------|
| Volunteer transfers | 24 persons |
| Salary increase | 18 persons |
| Received training | 386 persons (including refresher) |
| Change positions | 35 persons |
| Rewards | 132 persons |
| Certificate of acknowledgment | 50 persons |
| Sick leave without pay | 06 persons |
| Leave without pay | 05 persons |
| Maternity/Pregnancy leave | 08 persons |
| New Recruitment | 38 persons |



Staff Separation

For the reporting period, 201 staff contracts were terminated. The main factors of staff separation are listed below:

| Abandoned the post | 11 persons |
|--|------------|
| Disability of work and chronic illness | 07 persons |
| Retirement | 03 persons |
| Layoff | 02 persons |
| Termination by discipline reason | 03 persons |
| Termination temporary (Pregnancy) | 06 persons |
| End Contract | 29 persons |
| Resignation | 76 persons |
| Death by disease | 03 persons |
| Death by accident | 03 persons |

Most of the resigned and separated staff left CMAC to get a new job or better pay, in some instances with other de-mining operators that are local or overseas. Some of the staff resigned due to family circumstances that changed their place of living, or for personal health issues. One reason of particular concern to CMAC management for staff resignation is due to increasing uncertainty and instability with the current employment due to project termination, suspension, gap and downsizing due to funding issue.

Compensation and incentive payment

CMAC is committed to livelihood sound and reasonable staff compensation policy to ensure that they are fairly treated in case of injuries, death or other types of staff separation, in consideration of their past performance and duration of service. In 2010, CMAC paid a total of USD 16,980 on compensation to 16 disabled and chronic illness staff and USD 9,600 to 4 deaths. For the first six months of 2011, CMAC has spent a total amount of USD 36,832.75 compensation, in which USD 24,000



compensated to staff death, USD 6,752.75 for staff retirement, and USD 6,080 for staff disability.



2.6.5. Explosive Management

CMAC plays a key role in both national and regional security. The use of explosives has to be tightly controlled and strictly managed to ensure the national and regional security is not affected. CMAC has assigned personnel to manage control the use of explosive in CMAC and all Demining Units. CMAC also manages explosives recovered through the Explosive Harvesting Program partnership with Golden West Foundation and issues these explosives to Halo Trust and



MAG for use in their operations. Recorded documents have to be kept and stored correctly and timely follow up occurs to ensure the correct use of explosives for operations.

Activities in this area in the last six months, included:

- o Issued explosives from stock to all demining units and teams to support ground operations;
- Coordinated with Explosive Harvesting Program (EHP) in order to receive and manage recovered explosives to support CMAC, Halo Trust an MAG;
- o Issued recovered explosive from EHP to Halo Trust and MAG to support their operations on the ground;
- o Conducted surprise checks on the explosive used by the mobile teams and evaluated the requirement of explosive to support CMAC operations. Results have indicated that the management, transportation and storage of explosives has been properly conducted in a safety manner; and
- Conducted spot check on store custody, management and utilization at De-mining Units.

2.6.6. Procurement

Given the nature, size and locations of CMAC's operations, on-time support is a vital role for Procurement Section. The Section must identify and purchase quality materials and equipment in a transparent manner, then deliver it in a timely manner to field teams and Demining Units to meet requirements of field operations.

Some key achievements during this half of the year can be described, as follows:

- ISO 9001:2008
- Coordinated with Department of Finance and other Departments to identify needs and purchase equipment based on the Procurement List and budget approval. As at end of June 2011, the total purchased amount was USD 512,992.70;
- Conducted competitive bidding for critical items for supporting operation on the ground. This included uniform for staff, tires for vehicles, lubricant oil, dry food for Mine Detection Dog, demining tools, boots for deminers, medicine and equipment for dogs and competitive bidding for construction of the CMAC Museum;
- Coordinated custom clearance for donated equipment and purchases;
- Carried out contracting services and contract management.





2. **ACTIVITIES AND OUTPUTS**

2.7. Financial Management

It is very crucial to achieve a sound financial management in response to the needs of operations to ensure that all activities on the ground are operating in a safe and cost efficient manner. Financial fluctuations always affect operational activities, outputs, quality and eventually the staff's morale. This situation also has a far-reaching effect on the activities of any development projects that CMAC is involved with. This financial presentation will outline a whole-year revised budget requirement. It will also present the Bilateral, UNDP Clearing for Results, Royal Government of Cambodian, and Contractual Services.

Bilateral Funding Situations

The bilateral funding contribution in this context focuses on the financial support to the specific projects bound by agreements signed by CMAC on behalf of the Royal Government of Cambodia with the particular development partners. This type of contribution is directly channeled to CMAC.

UNDP Funding Situation

As stated in the original IWP 2011, UNDP extended the Clearing for Results from last year 2010 for the period 01 January to 31 March, 2011 and CMAC expected to receive funding from the UNDP Clearing for Results Fund approximately totaling US\$ 4.5 Million for the Clearing for Results Bidding, but CMAC just got only 2 millions for demining activities projects in Banteay Meanchey and Battambang Provinces, for the period from 01 May, 2011 to 31 January, 2012.

Contractual Service

When estimating fees for a project, CMAC has to manage its financial contribution not only at the direct team operation costs but also take into account at the policies of the Donor or Client on overheads recovery and margins, Some donors or clients permit overheads recover and/or margins some allow pre-determined percentages and other do not. Policies on these matters are generally included in tender documents issued at the time of calling for Service.

Risk of Funding Management

CMAC is facing funding reimbursement for below projects:

- 1. Ecosorn Project ended 16 September, 2010 in amount of Euro 248,814.00 in USD around USD 348,340.00
- 2. USA Project did not get the fund reimbursement since February, 2011 in amount total of USD 250,108
- 3. RGC Phreah Vihear 30% while the project ended last Year 2010 in amount of approximately in USD 71,850.00

Six-Month Report 2011 **Activities and Outputs**



4. Two new Projects of Mine Clearance at Phreah Vihear in total amount of USD 110,000

The total amount of above projects is USD 780,297, which has not been reimbursed yet. This has negatively been impacted on CMAC cash flows management. However, the efforts and commitment from development partners, and the Royal Government have been already taken place. Therefore, these reimbursements will be occurred in a few weeks later.

Main Projects Ended in the 1st Semester, 2011

- 1. Handicap International (HI-B) ended 28 February, 2011
- 2. JMAS-Komatsu ended 31 March, 2011
- 3. Grass-Root DU4 ended 31 March, 2011
- 4. World Bank Project ended 31 May, 2011
- 5. USA-DU3&DU3 suspense operation ended 28 February, 2011

For the project Handicap International (HI-B) and Grass-Root DU4, it will lead to staff stand-down.

Project Budget Expected in the 2nd Semester, 2011

- 1. CMAC/NPA MDD-TC Project of USD 72,485.00
- 2. Supporting Humanitarian Demining Activities in the Northwest Cambodia: Kapong Thom, Siem Reap and Preah Vihear Provinces (RGC/JPN Counter DU4) = USD 823,769.66
- 3. JMAS CMAC: the Project for Improvement of Mine Clearance in Battambang Province in amount of USD 413,163
- 4. Explosive Remnants of War Clearance to support Neak Loeung-Bridge Construction (Neak Loeung Bridge Project) of USD 793,189.00
- 5. Supporting Humanitarian Demining Activities at Battambang Province (RGC/NPN Counter Part D2) of USD 848,344.00
- 6. Handicap International Belgium (HI-B) of Euro 268,321 approximately in USD 348,317.00

The estimated budget for these projects in the second semester is approximately USD 2,806,105, and these projects will cover the period in 2011 as well as in 2012.



Overview of Budget Plan (Budget Expectation) in 2011 and beyond

| | | | | Dunia et De de d | | | | Chahua | |
|---------|-------------------------|---|-----------|------------------|----------------|-------------|----------------|----------|-----------|
| S/ N | Donor/Dev. Partner | Project Title | | Project Period | | Location | Project Cost | | tatus |
| | Japan | | Period | From | То | | | Ongoing | Completed |
| 1 | Counterpart Funds | HUMANITERIAN DEMINING | 1 Year | 1-Nov-10 | 31-Oct-11 | DU 1 | \$1,564,388.00 | ٧ | |
| 2 | Japan (PB) | PEACE BOAT | 5 Months | 1-May-11 | 15-Nov-11 | DU 4 | \$26,001.81 | ٧ | |
| 3 | Japan (JMAS CBD-DU2) | COMMUNITY BASED DEMINING | 1 Year | 15-Jul-10 | 14-Jul-11 | DU 2 | \$316,342.45 | \ | |
| 4 | Japan (JMAS- MoFA) | SAFETY VILLAGE CONSTRUCTION | 1 Year | 15-Jul-10 | 14-Jul-11 | DU 2 | \$162,155.52 | ٧ | |
| 5 | Japan (JMAS- EOD) | UXO CLEARANCE (EOD/CBURR) | 1 Year | 8-Oct-10 | 7-Oct-11 | HQ/DU 4 | \$308,772.60 | ٧ | |
| 6 | Japan (SVC Komatsu) | SAFETY VILLAGE CONSTRUCTION | 1 Year | 1-Apr-11 | 31-Mar-12 | DU 2 | \$136,126.60 | ٧ | |
| 7 | | PEACE BUILDING PROJECT | 2 Year | 15-Jan-10 | 14-Jan-13 | DU 2 | \$4,235,268.00 | ٧ | |
| 8 | Japan (JICS) | PEACE BUILDING INFRUSTRUCTURE DEVELOPMENT | 6 Months | 1-Feb-11 | 31-Aug-11 | DU 2 | \$393,728.00 | ٧ | |
| 9 | | PEACE BUILDING LAND RECLAIMED | 3 Months | 1-Mar-11 | 31 Jun 2011 | DU 2 | \$25,139.00 | ٧ | |
| 9 | | PEACE BUILDING LAND RECLAIMED | 2 Months | 1-Jul-11 | 31-Aug-11 | DU 2 | N/A | ٧ | |
| 10 | | CLEARING FOR RESULT I | 15 Months | 1-Jan-10 | 31-Mar-11 | DU 1,2,4 &5 | \$3,583,175.22 | | |
| 11 | UNDP/CMAA | CLEARING FOR RESULT (CFR II- BMC) | 5 Months | 1-May-11 | 31 Sep 2011 | DU 1 | \$555,547.10 | ٧ | |
| 12 | | CLEARING FOR RESULT (CFR II- BTB) | 5 Months | 1-May-11 | 31 Sep 2011 | DU 2 | \$556,712.97 | ٧ | |
| 13 | NPA | ERW/ Cluster Munitions Survey | 1 Year | 1-Jan-10 | 31-Dec-11 | HQ | \$205,000.00 | ٧ | |
| 14 | Germany | HUMANITERIAN DEMINING | 1 Year | 1-Jan-11 | 31-Dec-11 | DU 6 | 1.000.000 EU | ٧ | |
| 15 | | | 14 Months | 1-May-10 | 30-Aug-11 | DU 1 | \$170,060.00 | ٧ | |
| 16 | MAG | HUMANITARIAN (MINE DETECTION DOG) | 30 Months | 1-Feb-10 | 31-Jul-13 | DU 1 | \$231,900.00 | ٧ | |
| 17 | | | 1 Year | 1-Nov-10 | 31-Oct-11 | DU 2 | \$92,760.00 | ٧ | |
| 18 | NPA | EXPLOSIVE DETECTION DOG | 5 months | 1-Aug-11 | 31-Dec-11 | TC/DU5 | \$72,485.00 | ٧ | |
| 19 | UNICEF | MINE RISK EDUCATION | 11 Months | 1-May-11 | 1-Mar-12 | HQ/DU 1 | \$22,000.00 | ٧ | |
| 20 | РРМС | PRAIRIE PACIFIC MINING CORPORATION | 9 Months | 1-Jan-11 | 30-Sep-11 | DU 2 | \$113,188.80 | ٧ | |
| 21 | GEJ | REHABILITATION LATERITE RAOD | 9 Months | 1-Jan-11 | 30-Sep-11 | DU 2 | \$88,553.00 | ٧ | |
| 22 | UNA Sweden | Mine Clearance & Victim Assistance | 12 month | Jan 2011 | Dec 2011 | DU1, DU2 | \$120,000.00 | ٧ | |
| 23 | USA | UNITED STAT OF AMERICA | 3 Months | 1-Jan-11 | 31-Mar-11 | DU 5 | \$378,287.45 | | ٧ |
| 24 | НІВ | PRO-ACTIVE BATTLE AREA CLEARANCE | 14 Months | 15-Dec-09 | 28-Feb-11 | DU 5 | \$457,255.03 | | ٧ |
| 25 | WB | LAND ALLOCATION FOR SOCIAL ECONOMIC DEVELOPMENT | 10 Months | 1-Aug-10 | 31-May-11 | DU 5 | \$432,254.00 | | ٧ |

| BM TRADA | dir, |
|---------------|------------------|
| DM IKADA | Y |
| ISO 9001:2008 | Investigation of |

| 26 | Grass-Root | HUMANITARIAN DEMINING TO SUPPORT DEMINING ACTIVITY in Preah Vihear, Kampong Thom, Oddar Meanchey | 12 months | 10-Mar-10 | 9-Mar-11 | DU 4 | \$676,537.14 | | ٧ |
|----|---|---|---------------|-----------|-----------|---------|--------------|---|---|
| 27 | Peace Boat | Mine/ERW Clearance in Sna Pha Ek, Srayong, Preah Vihear | 7 months | 1-May-11 | 30-Nov-11 | DU 4 | \$26,001.81 | ٧ | |
| 28 | RGC | MINE/UXO CLEARANCE | 6.5 Months | 15-Jun-11 | 31-Dec-11 | DU 4 | \$41,732.77 | | |
| | CONTRACTUAL | SERVICES | | | | | | | |
| 29 | DAIHO Corporation | CONDUCT MINE/UXO CLEARANCE | 10 days | 29-Mar-11 | 7-Apr-11 | CMACHQ | \$4,750.00 | | ٧ |
| 30 | Prairie Pacific Mining Corporation (PPMC) | SURVEY, SURFACE AND BORE HOLE CLERANCE | 9 months | 1-Jan-11 | 30-Sep-11 | CMAC HQ | \$79,800.00 | | ٧ |
| 31 | Prairie Pacific Mining Corporation | SURVEY, SURFACE AND BORE HOLE CLERANCE | 4 months | 19-May-11 | 19-Sep-11 | CMAC HQ | \$19,108.80 | | ٧ |
| 32 | Asia Air Survey | PATH FINDING, SURVEY, SUB- SURFACE AND SUB SURFACE CLEARANCE | 15 days | 1-May-11 | 15-May-11 | CMAC HQ | \$2,500.00 | | ٧ |
| 33 | SOM (MINEBEA) | SURVEY, SUB-SURFACE AND DEPTH SEARCH CLEARANCE | 24 days | 6-May-11 | 27-May-11 | CMAC HQ | \$55,000.00 | | ٧ |
| 34 | Khmer Aggregates CO, LTD | SURVEY, SURFACE AND BORE HOLE CLERANCE | 1. 5 Month | 20-Dec-10 | 31-Jan-11 | CMAC HQ | \$26,868.00 | | ٧ |
| 35 | PPSEZ | SURVEY, SURFACE AND BORE HOLE CLERANCE | | 8-Jun-11 | D/TBC | CMAC HQ | \$19,820.59 | | |
| | \$ 11,869,896.14 expected in 2011 GRAND TOTAL: \$ 16,499,219.66 until 2013 | | | | | | | | |

Note: Some projects will be finished until 2012 and 2013, for example, Peace Building Project which costs \$4,235,268, Mine Detection with MAG which costs \$231,900 and another Safety Village Construction with JMAS which costs \$162,155.52.

Six-Month Report 2011 **Activities and Outputs**



CONSOLIDATION RECEIPT AND EXPANDITURE STATEMENT FOR THE PERIOD FROM 01 JANUARY 2011 TO 30 JUNE 2011

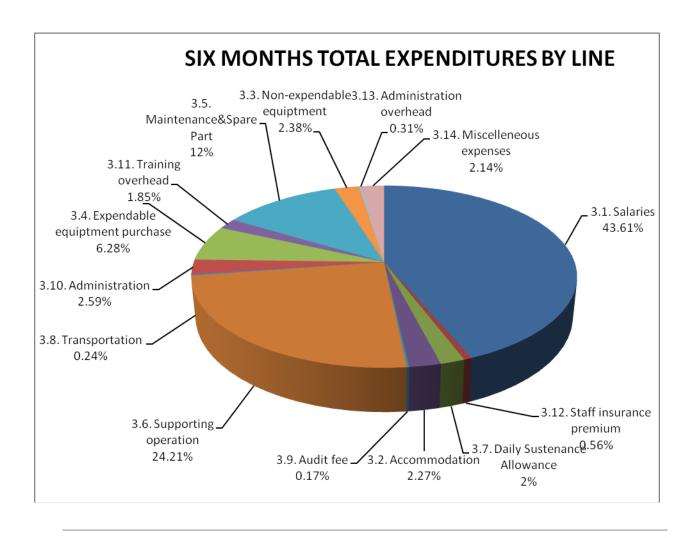
| | Currency US\$ |
|------------------------------------|---------------|
| I. OPENING BALANCES | 1,506,242.26 |
| II. Incomes | |
| 2.1. Donor Contribution | 4,461,689.65 |
| 2.2. Interests | 874.67 |
| 2.3. Fee for Services | 484,624.05 |
| 2.4. Miscellaneous incomes | 5,804.92 |
| Total incomes | 4,952,993.29 |
| III. Expenditures | |
| Operating expenses | |
| 3.1. Salaries | 2,449,518.30 |
| 3.2. Accommodation | |
| 3.3. Non-expendable equipment | 133,931.10 |
| 3.4. Expendable equipment purchase | 352,843.38 |
| 3.5. Maintenance and Spare Parts | 650,855.89 |
| 3.6. Supporting operations | 1,359,885.56 |
| 3.7. Daily Sustenance Allowance | 99,936.67 |
| 3.8. Transportation | 13,535.01 |
| 3.9. Audit fee | 9,800.00 |
| 3.10. Administration | 145,204.26 |
| Sub-Total operating expenses(1) | 5,343,062.92 |
| Administration Overhead | |
| 3.11. Training overhead | 103,844.35 |
| 3.12. Staff insurance premium | 31,648.66 |
| 3.13. Administration overhead | 17,615.36 |
| 3.14. Miscellaneous expenses | 120,421.05 |
| Sub-Total operating expenses(2) | 273,529.42 |
| Total expenditures (1+2) | 5,616,592.34 |
| Surplus/(Deficit) | -663,599.05 |
| IV. BALANCE BEFOR RETURNED | 842,643.21 |
| 4.1. Returned/Transferred | 138,847.71 |
| V. CLOSING BALANCES | 703,795.50 |



CONSOLIDATION RECEIPT AND EXPANDITURE STATEMENT FOR THE PERIOD FROM 01 JANUARY 2011 TO 30 JUNE 2011

| | BILATERIAL | UNDP | RGC | CONTRACT | СМА | TOTAL |
|-------------------------------------|--------------|-------------|-------------|------------|-------------|--------------|
| I. OPENING BALANCES | 1,056,738.05 | -60,183.96 | -243,734.39 | 20,793.81 | 732,628.75 | 1,506,242.26 |
| II. Incomes | | | | | | |
| 2.1. Donor Contribution | 3,696,431.98 | 650,655.01 | 59,134.95 | | 55,467.71 | 4,461,689.65 |
| 2.2. Interests | 583.07 | 155.97 | 5.61 | | 130.02 | 874.67 |
| 2.3. Fee for Services | | | | 139,432.20 | 345,191.85 | 484,624.05 |
| 2.4. Miscellaneous incomes | 5,100.00 | | | | 704.92 | 5,804.92 |
| Total incomes | 3,702,115.05 | 650,810.98 | 59,140.56 | 139,432.20 | 401,494.50 | 4,952,993.29 |
| III. Expenditures | | | | | | |
| Operating expenses | | | | | | |
| 3.1. Salaries | 1,677,744.41 | 317,875.70 | 2,542.00 | 38,084.11 | 413,272.08 | 2,449,518.30 |
| 3.2. Accommodation | 88,269.83 | 12,679.52 | 2,138.45 | 2,745.63 | 21,719.32 | |
| 3.3. Non-expendable equipment | 118,492.60 | 9,520.00 | 653.50 | 1,680.00 | 3,585.00 | 133,931.10 |
| 3.4. Expendable equipment purchase | 255,322.44 | 47,109.69 | 7,449.95 | 5,408.76 | 37,552.54 | 352,843.38 |
| 3.5. Maintenance and Spare Parts | 437,405.21 | 96,877.35 | 14,418.68 | 10,718.63 | 91,436.02 | 650,855.89 |
| 3.6. Supporting Operation | 995,165.46 | 143,233.44 | 1,954.71 | 13,210.57 | 206,321.38 | 1,359,885.56 |
| 3.7. Daily Sustenance Allowance | 43,641.39 | 10,412.00 | 15.00 | 7,431.56 | 38,436.72 | 99,936.67 |
| 3.8. Transportation | 12,399.51 | 1,135.50 | | | | 13,535.01 |
| 3.9. Audit fee | 9,800.00 | | | | | 9,800.00 |
| 3.10. Administration | 28,580.44 | 5,300.15 | 18,618.18 | 927.90 | 91,777.59 | 145,204.26 |
| Sub-Total operating expenses(1) | 3,666,821.29 | 644,143.35 | 47,790.47 | 80,207.16 | 904,100.65 | 5,343,062.92 |
| Administration Overhead | | | | | | |
| 3.11. Training overhead | 42,177.94 | 58,527.69 | | | 3,138.72 | 103,844.35 |
| 3.12. Staff insurance premium | 31,616.66 | | | | 32.00 | 31,648.66 |
| 3.13. Administration overhead | 17,615.36 | | | | | 17,615.36 |
| 3.14. Miscellaneous expenses | | 120,421.05 | | | | 120,421.05 |
| Sub-Total operating expenses(2) | 91,409.96 | 178,948.74 | | | 3,170.72 | 273,529.42 |
| Total expenditures (1+2) | 3,758,231.25 | 823,092.09 | 47,790.47 | 80,207.16 | 907,271.37 | 5,616,592.34 |
| Surplus/(Deficit) | -56,116.20 | | 11,350.09 | 59,225.04 | -505,776.87 | -663,599.05 |
| IV. BALANCE BEFOR RETURNED | 1,000,621.85 | -232,465.07 | -232,384.30 | 80,018.85 | 226,851.88 | 842,643.21 |
| 4.1. Returned/Transferred | 86,188.84 | | | 52,629.37 | 29.50 | 138,847.71 |
| V. CLOSING BALANCES | 914,433.01 | -232,465.07 | -232,384.30 | 27,389.48 | 226,822.38 | 703,795.50 |





TOTAL EXPENDITURE BY MONTH



Six-Month Report 2011 Future Plan

3. FUTURE PLANS

The first six- month period 2011 passed through with some challenges and difficulties in term of cash flow channel and global financial crisis which influences on very sectors including mine action sector as well. However, successful output of the overall operations was smoothly achieved. For the next sixmonth from July to December 2011, CMAC plans to carry out the following activities.

Overall Operations:

Given available information concerning current and possible future projects, CMAC demining tools will be managed and deployed as highlighted in the table below for the next six-month 2011.

| MONTH | CBAT | MP | SLD | LLD | EDD | СМС | CBD | DM | вс | MRE | EOD | BLS | TSC | СВМ | CBU | CMC5 | BAT | ERC | BAV |
|-----------|------|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|
| | 1 | 26 | 8 | 4 | 4 | 8 | 3 | 9 | 21 | 3 | 26 | 9 | 8 | 34 | 33 | 4 | 4 | 3 | 7 |
| July | 0 | 22 | 5 | 4 | 2 | 8 | 3 | 9 | 21 | 3 | 23 | 9 | 0 | 23 | 19 | 4 | 4 | 3 | 7 |
| August | 0 | 21 | 5 | 4 | 3 | 7 | 0 | 8 | 20 | 3 | 23 | 9 | 0 | 23 | 19 | 4 | 4 | 3 | 7 |
| September | 0 | 23 | 5 | 4 | 3 | 8 | 2 | 9 | 21 | 3 | 25 | 9 | 0 | 28 | 19 | 4 | 4 | 3 | 7 |
| October | 0 | 23 | 5 | 4 | 3 | 8 | 2 | 9 | 21 | 3 | 25 | 9 | 3 | 28 | 19 | 4 | 4 | 3 | 7 |
| November | 0 | 21 | 4 | 4 | 3 | 8 | 2 | 9 | 18 | 1 | 22 | 6 | 3 | 23 | 19 | 4 | 0 | 1 | 5 |
| December | 0 | 21 | 4 | 4 | 2 | 8 | 2 | 9 | 18 | 1 | 22 | 6 | 3 | 23 | 19 | 4 | 0 | 1 | 5 |
| Total | 0 | 131 | 28 | 24 | 16 | 47 | 11 | 53 | 119 | 14 | 140 | 48 | 9 | 148 | 114 | 24 | 16 | 14 | 38 |

- CMAC will release 25,334,000 m² in term of clearance
- Continue to monitor all demining tools performance with the aim to enhance their effectiveness, efficiency and safety and suitability for operations.
- Engage in activities to fully implement the land release methodology in all CMAC demining projects.
- Conduct a training session to support all CMAC ISO Members on the CMAC Quality Management System of ISO 9001:2008.
- Review and revise Underwater ERW detection and recovery SOP, ERW survey SOP, Baseline survey SOP, Technical survey SOP and MDD/EDD SOP.
- Engage in activities to enhance project management of all CMAC projects
- Review and assess productivities of all land release tools and initiate improvement
- Work with NPA to enhance performance of MDD/EDD toolbox.
- Continue to engage in demining contract arrangement to support infrastructure, mining and the like projects.

Six-Month Report 2011 Future Plan

Mine Risk Education:

 Deliver mine risk education messages and consultations for behaviours change to at least 110,000 people at risk through 4,580 MRE presentations and 15,600 household visits by MRE staff, including Mine Risk Education and Reduction teams (MRE teams) and Community-based Mine and UXO Risk Reduction Program (CBMRR and CBURR).

- Facilitate around 3,000 requests for mine and UXO removal from local authorities and communities.
- Continue to cooperate with partners to implement post-mine clearance development projects, facilitate landmine victims to access to victim assistance and development services,

Training:

- Conduct training courses according to training plan in:
 - a. Intensive Demining training for MDD staff (who not receive basic demining),
 - b. Brush Cutter operator training course,
 - c. Field Management Training,
 - d. Field Monitoring Training,
 - e. MDD/EDD refreshment training,
 - f. EOD supervisor course.
- Design and conduct specialized EOD training courses to fill in the EOD-specific skill gaps
- Prepare and deliver training to international participants
- Upgrade training resources including the trainers, training facilities, training materials and curricula

Research and development:

- Continue Operational Field Evaluation (OFE) of ALIS on clutter rejection.
- Follow up OFE rechargeable battery MINELAP D-size.
- Cooperate with Tohoku University on performance trial of CEIA UXO Detector on GPR depth information.
- Cooperate with SADA (Space Asset Demining Assistance) on performance trial of minefield satellite imaging technology.
- Cooperate with US Research and Development team on trial of LUXOR detector.
- Continue to review and innovate methodologies and technologies to enhance field operations
- Review and revise Underwater ERW detection and recovery SOP, ERW survey SOP, Baseline survey SOP, Technical survey SOP and MDD/EDD SOP.

Six-Month Report 2011 Future Plan

Corporate Management:

 Work with donors and partners for funding to resume suspended projects and launch new projects including the US-supported projects in DU3 and DU5, the HIB project in DU5, the CPF projects in DU2 and DU4, preparation for tender of CFR 3 (2012), and NPA MDD/EDD project (2011 and 2012-2014).

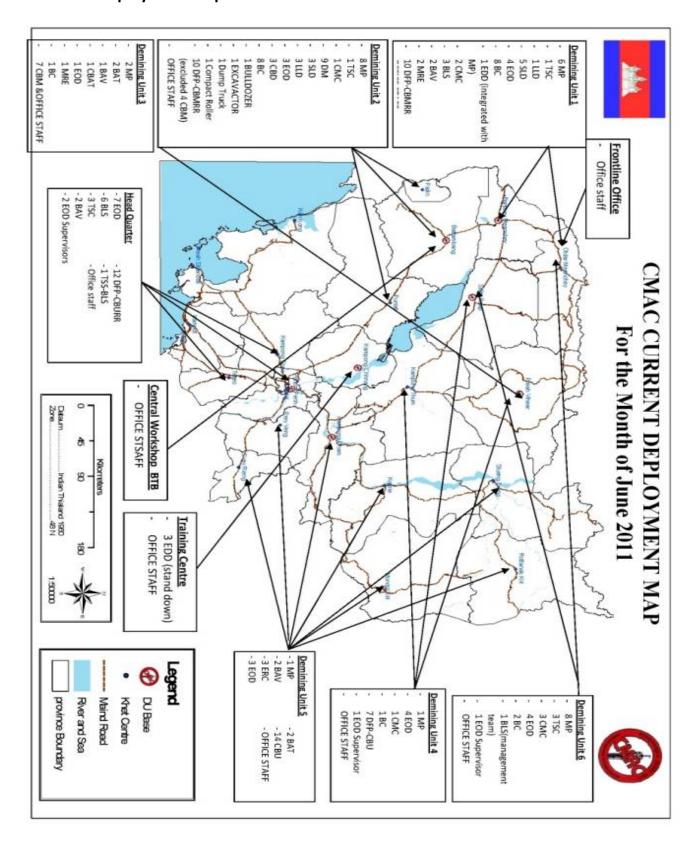
- In partnership with CMAA and other organizations, organize an International Land Release Workshop in Siem Reap as part of the activities leading up to the 11th MSP.
- Engage in activities with CMAA and GICHD to organize the 11TH MSP and other side events in Phnom Penh in November.
- Engage in activities to enhance CMAC profile, such as attending national, bi-lateral and international workshops, support the CMAC Public Affairs Communication team to develop media release, technical documentation, and making presentation on CMAC Operations.
- Complete the revision of the CMAC Strategic plan and the Planning and Operations department strategic action plan [by area of specialization-Standard (MDD-EOD and MD), Project and Operation Management (Operation, PM and Data Base), Survey].
- Continue to promote international partnership initiatives such as the continued training support to PAICMA, the knowledge sharing agreement with Lao PDR, training for Nepalese mine action officials, and other future international cooperation programmes.

Six-Month Report 2011

Appendix

4. APPENDIX

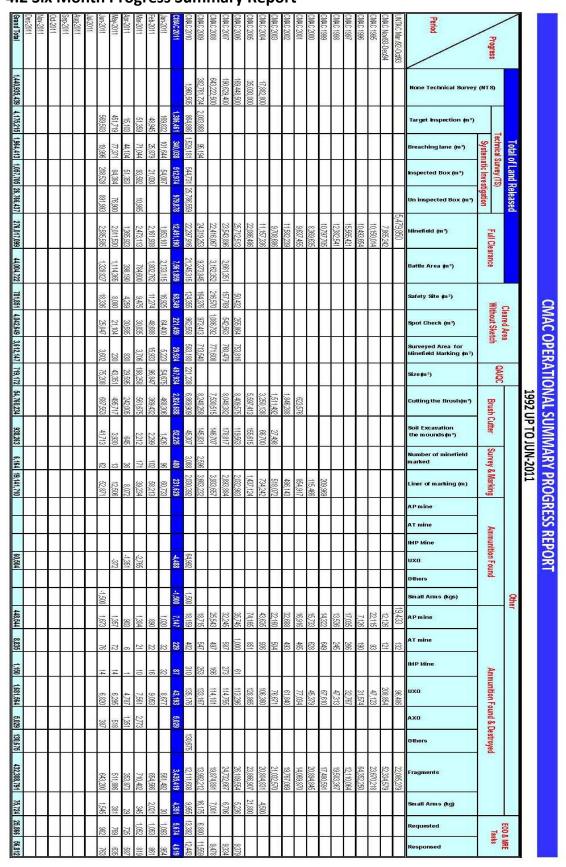
4.1 CMAC Deployment Map as of June 2011



Six-Month Report 2011

Appendix

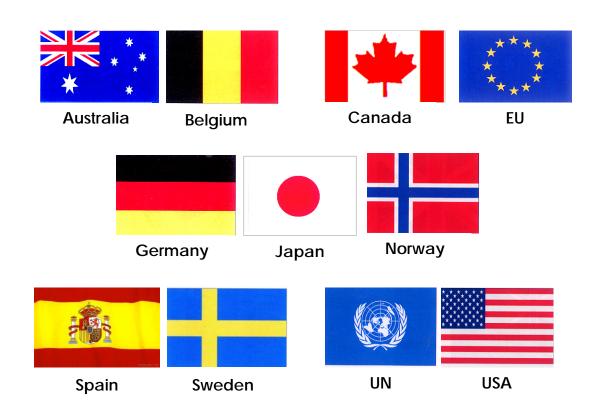
4.2 Six Month Progress Summary Report



4.3 Donor and Partner Acknowledgement



Kingdom of Cambodia



- AUSTCARE
- CARE International
- CMAA
- ECHO
- HI (HIB)
- GICHD
- JICA
- JMAS
- Local Authorities
- NPA
- Peace Boat

- Rotary International District 2650
- Save the Children Norway
- UNDP
- UNHCR
- UNICEF
- UNMAS
- UNOPS
- NGOs
- Good Eart of Japan (GEJ)
- Privates





4.4 QR-07G-Survey Form-Six-Month, yearly & project reports 15 Aug 2007

| | QR-07G: Survey Six Month, Yearly & Project Reports | | | | | | | | | |
|--|--|-----------------------|------------|--------------|--|--|--|--|--|--|
| | Operations & Planning Department | | | | | | | | | |
| | Approved: DOP | Dated: 15 August 2007 | Version: 3 | Page 70 of 4 | | | | | | |

CMAC Six- Month Report 2011

The CMAC's Operations & Planning Department is implementing the ISO 9001:2008 Quality Management System (QMS). To fulfill the QMS requirements, we need to survey our customer satisfaction on our products/services.

Your feedback is valuable for the improvement of our quality management system. We appreciate very much if you could spend your time to complete and return this survey form to CMAC Chief of Secretariat. Please rate (circle) your satisfaction appropriately.

Please specify the report your comments refer to:

| Title of Report: Dated: |
|-------------------------|
|-------------------------|

1. Report presentation

| 8 | Not satisf | fied | | | | → | Very satisfied © | | | |
|-------------------------|------------|------|---|---|---|----------|------------------|---|----|--|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| Write any comment here: | | | | | | | | | | |
| | • | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

2. Do you find all the information you need?

| (3) | Not satis | fied | | | | → | Ver | /ery satisfied 😊 | | |
|-------------------------|-----------|------|---|---|---|----------|-----|------------------|----|--|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| Write any comment here: | | | | | | | | | | |
| | • | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

3. Is the language clear and understandable?

| | Not satisfied | | | | | | Very satisfied 😊 | | | | | |
|---|-------------------------|---|---|---|---|---|------------------|---|---|----|--|--|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| Γ | Write any comment here: | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

4. Your general comments to improve our reports?

| | | |
|------|------|------|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

(Optional)

Name:

Position:

Organization:

Date:

Please cut and pass this paper to **Mr. Khun Ratana –CMAC Chief of Secretariat** after you completed your writing.

SAVING LIVES AND SUPPORTING DEVELOPMENT FOR CAMBODIA

