CMAC








TEN YEARS

ACHIEVEMENTS AND PERSPECTIVE

2000 – 2009 – 2014

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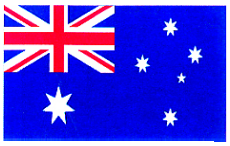
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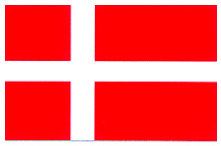
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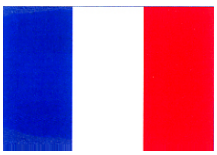
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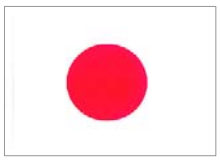
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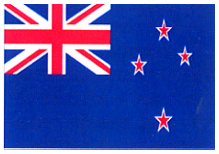
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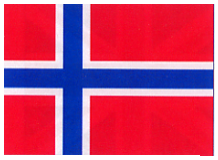
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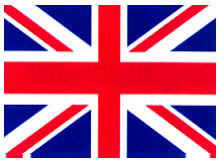
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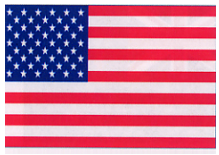
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- AUSTCARE
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- CMAA
- ECHO
- HI (HIB)
- GICHD
- JMAS
- Local Authorities
- Peace Boat
- NPA
- Rotary International District 2650
- Save the Children Norway
- UNDP
- UNHCR
- UNICEF
- UNMAS
- UNOPS
-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

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CMAC:

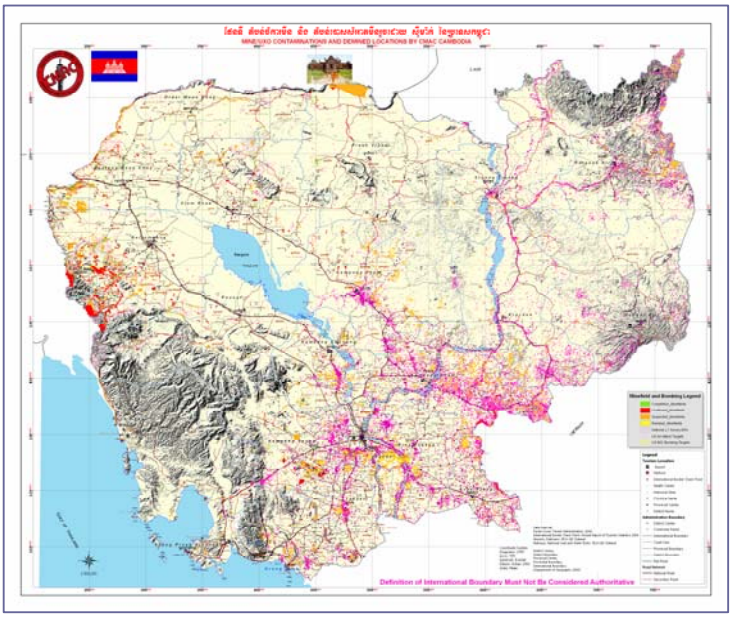
TEN YEARS OF SAVING LIVES AND SUPPORTING DEVELOPMENT

THE Cambodian Mine Action Centre (CMAC) is a national demining organization and is currently the largest demining organization in Cambodia. It is also one of the largest demining institutions in the world. Currently, CMAC as a single demining organization employs over 2,400 staff and deploys more than a dozen demining tools including manual demining teams, mine/UXO detection dogs, mechanical clearance systems, survey, EOD, and mine/UXO risk education.

As a leading demining organization in Cambodia, CMAC has made remarkable achievements in the past ten years of 2000 – 2009.

ORGANIZATIONAL BACKGROUND

Cambodian Mine Action Centre (CMAC) was established as a demining organization in June 1992 by the Supreme National Council of Cambodia. This statute was extended by the Royal Decree of November 01, 1993 and the revised statute approved by the Royal Decree of February 25, 1995, conferred to CMAC the statute of a public institution with the legal individual authority placed under the Prime Minister.



On June 21, 1999, a subsequent Royal Decree gave a new statute to CMAC by providing a new structure of the executive responsibilities within CMAC. The need to formally ascertain the roles of CMAC Governing Council vis-a-vis the new Authority, Cambodian Mine Action Authority (CMAA) formally established in September 2000 as a regulatory body, gave rise to the new Royal Decree on the establishment of CMAC pronounced on August 07, 2001. This new Decree condensed the size of the CMAC Governing Council membership and clarified CMAC's roles as a National Institution to provide mine action services for humanitarian and development projects.

CMAC has its own headquarter (HQ) in Phnom Penh, one Centre for Training and Research & Development in Mine Action and Explosive Remnants of War (Siem Reap and Kampong Chhnang), and six Regional Demining Units (DUs) located in Banteay Meanchey "DU1", Battambang "DU2", Preah Vihear "DU3", Siem Reap "DU4", Kampong Cham "DU5", and Siem Reap "DU6". Most of these Demining Units operationally cover more than one province, enabling CMAC to cover most of the areas in Cambodia.

CMAC is responsible for implementing mine action in the Kingdom of Cambodia with the mission statement of "Saving Lives and Supporting the Development of Cambodia" and with the main focus on execution of the following programs:

- Mine/UXO Risk Education
- Mine Information and Survey
- Mine/UXO Clearance
- Training in Mine Action

During the course of its operations, CMAC has developed and trained one of the best and diversified demining resources capable of delivering safe, quality and efficient demining operations in the country. To implement its roles, CMAC has developed and deployed the following resources:

- Mobile platoons (MP): demining workhorse of CMAC
- Community-based demining platoons (CBD)
- Short-leash mine detection dog teams (MDD)
- Long-leash mine detection dog teams (LLD)
- Explosive (UXO) detection dog teams (EDD)
- Community mine clearance/battle area clearance teams (CMC/BAC)
- Mine clearance and brush cutting systems (Brush Cutters)

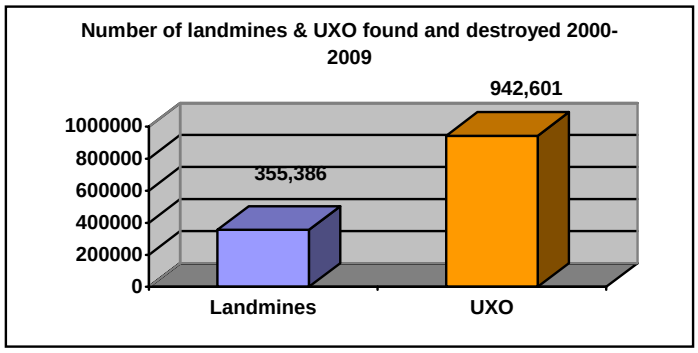
- Demining machines
- Mine/UXO risk education and reduction teams (MRER)
- EOD teams
- Survey teams
- District Focal Point networks for mine/UXO risk education and reduction
- 1 main headquarters, 6 regional demining units, 1 training centre, 1 central maintenance and repair workshop
- Mine detection dog training, testing and licensing facilities
- Puppy program facilities
- Research and development facilities
- Explosive harvesting program and facilities

OPERATIONAL AND SOCIO-ECONOMIC ACHIEVEMENTS

CMAC made remarkable progress and its productivity jumped to double in the past five years. From 1992 to 2004, CMAC's clearance productivity averaged 12 km² per year, but this rate increased to 22 km² in 2005 and gradually increased in subsequent years. This was made possible due to the introduction of full use of machines, improved demining methodology, toolbox integration, field management and training.

As statistical data show, 71% of CMAC's total progress from 1992 to 2009 was achieved in the past ten years (2000 – 2009), which indicates increased annual operational outputs. In total, CMAC cleared 251 km² of land since its establishment, of which 179 km² was achieved in the past ten years. There are also new outputs generated in the past few years such as land release through technical survey and non technical survey and the records of tasks requested by the communities and responded by CMAC quick response teams.

In the past ten years to September 2009, CMAC alone through demining operations found and destroyed 348,967 anti-personnel mines, 6,419 anti-tank mines, and 942,601 items of UXO of all types, including cluster munitions. In total from 2000 to September 2009, CMAC found and destroyed a total of 1,297,987 items of landmines and UXO altogether, compared to nearly 2 millions landmines and UXO found and destroyed during the period of 1992 – 2009. In addition to this, CMAC also found, collected and destroyed over 59 tons of old cache from 2004. As far as systematic recording goes back to 2006, CMAC's quick response teas responded to over 36,000 requests from the communities for mine and UXO interventions.



Nationally, Cambodia cleared a total of over 500 km² in the past 17 years. Of this, CMAC alone contributed up to 48% of the total clearance figure including RCAF's. If only three accredited humanitarian demining operators are taken into consideration, CMAC has produced over 70% of total clearance produced by the three operators conducting humanitarian demining operations in Cambodia.

Besides landmine and UXO clearance, CMAC continues to carry out other important mine action (non-clearance) activities such as mine risk education, survey, area reduction, training and community-based mine/UXO risk reduction program through a participatory approach whereby the affected communities are empowered to carry out mine/UXO awareness education, risk assessment, prioritization of mine action tasks and establish community mapping to capture the scope of mines and UXO in their own community. In the past ten years, CMAC's Mine Risk Education (MRE) teams, CBMRR and CBURR network conducted a total of 472,374 household visits, delivered 40,376 MRE sessions, reaching a population of 2,691,798 people. As of 2009, CMAC deployed 30 CBMRR's District Focal Point (DFP's) Officers, who are supervised, assisted and monitored by 5 Provincial Coordinators. In addition, these CBMRR DFP's have recruited over 600 volunteer networks in 192 villages of 56 communes. There are also 35 CBURR DFP's Officers working

closely with the UXO affected communities in 35 high casualty districts in the high impact provinces, especially in the eastern part of Cambodia, covering a total population of over 2.5 million people, including those who are very vulnerable to daily risks associated with UXO.

Activities	Achievement			
	MRER	CBMRR	CBURR	Total
Number of villages reached	5,007	1,050	24,625	30,682
Number of sessions delivered	6,091	3,770	30,515	40,376
Households visited	196,637	144,911	130,826	472,374
People attending mine risk education	846,202	1,212,053	633,543	2,691,798

A villager's impression on CMAC de-mining activities

"…People feel very happy and proud of the cleared land, land being cleared and land to be cleared by CMAC. The decision made when moving into the land plagued by landmines was purely out of poverty factor and shortage of land for agriculture..."

"…People are proud of CMAC and wish that its work be continued within the area of people's residence and the land for agriculture to support and improve their livelihood".

Extract from Annual Report 2001

CMAC is not only involved in mine clearance and EOD disposal; it is also very concerned with the socio-economics related to cleared land. In this respect, CMAC fully supports the Royal Government's prioritization process and has been closely working with the Provincial Mine Action Committee (PMAC), Mine Action Planning Unit (MAPU) and other development organizations to ensure that demining produces maximum socio-economic benefits, targets the right population, and the land cleared is geared for those who really need it. To achieve this purpose, the responsibility for selection of minefields for clearance has been decentralized to Demining Units who work closely with the provincial authorities (PMAC/MAPU), development NGOs and more importantly with the local communities in selecting priority areas for clearance.

In the past ten years, CMAC handed over close to 4,500 minefields to the beneficiaries through the local authorities. A total population of over 117,900 families and 138,800 students receive safe land for their livelihood activities and schooling, and over half a million families (close to 3 million people in approximate term) indirectly benefit from this process. In a very subtle way, poverty and landmine problem are closely linked, and a large number of civilian population often have to make ends meet on landmine contaminated areas. Therefore, in addition to risk reduction, which undoubtedly still remains a very high priority for Cambodia's mine action sector today, fighting poverty through landmine clearance is equally critical. In this respect, landmine clearance in Cambodia is not only justifiable for risk reduction, but it explains the great humanitarian and development necessities and produces high returns on investments.

Clearing Land for Irrigation System Rehabilitation

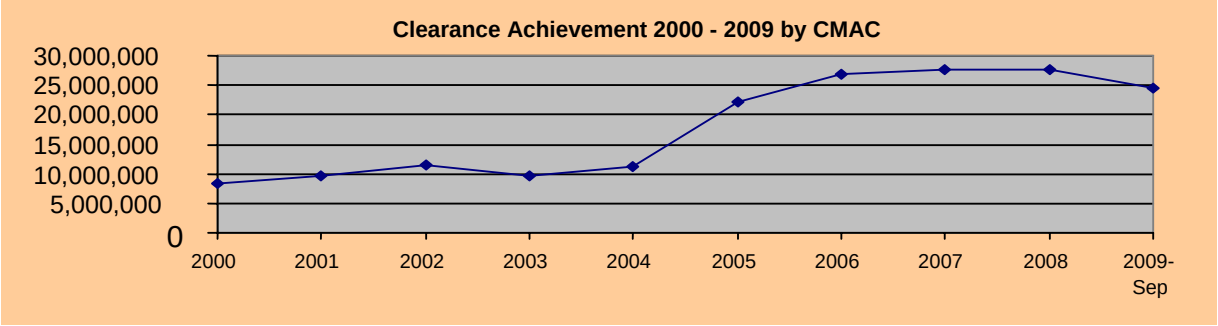
The minefields in Moung Russey District, where 17-April Water Canal is located, were severely affected by landmines mostly from 1983 to 1995. The following casualties were recorded: 29 people and 100 animals were killed and 52 people were maimed. Just before CMAC's deployment, 2 people and 2 animals were killed and 1 ox-cart destroyed in an anti-tank mine accident. This tragedy would continue if CMAC had not deployed demining force in the area.

(*Extract from CMAC Annual Report 2001*).

Type of Beneficiaries	Number of Beneficiaries
Direct Beneficiaries (families)	117,902
Indirect Beneficiaries (families)	587,227
Students	138,802

Productivity statistics: Ten Years Achievements

YEAR	DEMINING OPERATIONAL ACHIEVEMENT								
	Operational Clearance Size (m²)*	LAND RELEASE		FOUND & DESTROYED					Number of Minefields
		Non Technical Survey (m²)	Technical Survey (m²)	AP Mine	AT Mine	UXO	Small caliber (Kgs)	Tasks Responded	
Mar./92-Oct/93	5,479,850			19,433	132	96,486			43
Nov/93-Dec/94	7,865,242			12,126	121	208,854			64
1995	10,150,014			22,115	93	47,123			56
1996	10,493,654			7,126	190	31,574			45
1997	15,565,421			17,035	266	32,767			98
1998	12,382,541			13,536	245	47,313			94
1999	10,797,705			14,322	649	67,610			143
Sub-Total 1:	72,734,427			105,693	1,696	531,727			543
2000	8,369,635			15,733	628	45,379			232
2001	9,637,455			16,916	465	77,034			269
2002	11,582,239			32,688	493	61,840			383
2003	9,708,686			22,160	504	76,671			348
2004	11,157,336	17,882,800		43,635	936	106,360	4,500		363
2005	22,086,486	35,030,000		74,165	851	128,865	21,800		543
2006	26,772,625	169,448,500		35,806	1,000	113,296	5,236	9,379	585
2007	27,666,058	190,629,400		36,018	587	114,755	6,706	9,334	570
2008	27,653,389	643,222,500		35,911	497	114,101	7,001	9,478	755
2009-Sep	24,502,652	382,606,657	1,772,302	35,935	458	104,300	13,978	8,437	445
Sub-Total 2:	179,136,561	1,438,819,857	1,772,302	348,967	6,419	942,601	59,221	36,628	4,493
Grand Total	251,870,988	1,438,819,857	1,772,302	454,660	8,115	1,474,328	59,221	36,628	5,036



OPERATIONAL AND SOCIO-ECONOMICS ACHIEVEMENTS

Some Key Chronology:

- 1999-2000: Improvements of management practice
  Improved policies and procedures
  Revised structure
- 2001- Diversification of funding schemes/projects
  Toolbox diversification
  Community-based risk education

		Research & development activities
•	2003-	Technical survey started at CMAC
		Toolbox integration
		Explosive Harvesting Program (2005)
•	2006-	Technical survey revised (TS/NTS)
		Battle area clearance (ERC, BAC)
		Explosive detection dogs (EDD)
		R&D: test and evaluation of demining machines
•	2008-	Land release, baseline survey
		HSTAMIDS training, ALIS testing, MDD breeding
•	2009-Onward	International cooperation, training & expertise exchange
		Development assistance to affected communities

Advocacy of the Anti-Personnel Mine Ban Treaty

The Law to Ban the Use of Anti-Personnel Landmines, which was adopted by the National Assembly of the Kingdom of Cambodia on 28 April 1999, gives CMAC a mandate to implement several key activities. Since Cambodia became a State Party to the Mine Ban Treaty in 2000, CMAC has played an active role in promoting the implementation of the Treaty. As part of this advocacy role, CMAC, alongside with CMAA has attended international conferences, participated in advocacy and education campaigns, conducted stockpile destruction, engaged in active mine clearance, and regularly submitted Article 7 reports. This active advocacy engagement has demonstrated Cambodia's strong commitment to the Mine Ban Treaty.

Stockpile Destruction

The Law to Ban the Use of Anti-Personnel Landmine gives CMAC one of the key roles of stockpile destruction. Since Cambodia became a State Party, Cambodia undertook successfully to locate and destroy all stockpiles. The Royal Armed Forces destroyed over 70,000 stockpiled anti-personnel mines between 1994 and 1998. Since then, police and military units continued to find anti-personnel mines and other weapons in various locations and from various sources. Many were caches left over from the decades of war. Those mines and weapons were handed to CMAC for destructions.

Ownership and Partnership

At one point before the year 2000, CMAC had more than 60 resident technical advisors in all fields, and CMAC operations were overseen by a Programme Coordinator.

Following on from the new spirit of partnership and co-operation achieved in the November 2000 Symposium, UNDP and CMAC launched a comprehensive and consultative evaluation exercise concurrent with the audit exercises, both of which directly fed into the formulation of the new programme of support to the sector. One of the key aspects of the new programme involved the removal of the Programme Coordinator post from the advisory services to CMAC in recognition of the need to support the concentration of management of all aspects of the programme in the hands of

national management team in CMAC. Having reached a consensus with all concerned on the need to concentrate on the implementation of evaluation and audit recommendations, long term, "resident" advisory services would be replaced with alternative and focussed inputs with clear goals and objectives.

CMAC recognized the importance of the work, skills and contributions that the technical advisors brought into the organization. However, CMAC management also realized that CMAC as a national organization should be managed by the national staff. Realizing the importance of the ownership, CMAC started to build the capacity of the national staff to take over the management of the organization. Eventually, the number of these technical advisors was significantly reduced to just a small number.

However, managing an organisation such as CMAC does call for close partnership with donors, stakeholders and key players. CMAC recognizes that working closely and constructively with the partners will ensure the success and continuity of its demining operations as well as exchange of experience and lessons learned. Over the years, CMAC has built up a very close relationship with donors and key partners, including development organizations and technical institutions, in implementing a quality mine action program. Through this partnership, CMAC has ensured that it has been implementing the mine action program in line with national and international framework, regulations and standards.

Structure and Behavioral Reform

Following the financial difficulty experienced in 1999-2000, CMAC had to get up on its feet after a mass lay-off of staff. Reforms in organization structure and behaviors were necessary as part of the recovery process to address the challenges left by the crisis.

The reforms were necessary to as part of the measures to ensure that the structure and organizational behaviour was conducive to an effective working environment. Policies and procedures were updated and new ones were developed to accommodate the dynamic corporate activities undertaken by CMAC. Performance management, efficiency, professional accountability were strengthened at all levels of CMAC. Financial, logistics, training and operational management was also improved to raise CMAC to a new level of performance and efficiency to ensure donor confidence, the continuity of donor funding and the quality of work produced.

With a commitment to sound management practices, CMAC made tireless efforts to build up its capacity to meet the changing environment in mine action. Effective fund raising, project management, promotion of partnership and ownership, national and international coordination and relations, internal capacity building, in-house management issues, safety and quality of demining, financial management and

effective deployment (to suit the resources available) – these were some of the critical tasks which consumed a great deal of the management time. As a learning organization, CMAC management will constantly seek best practice from its staff by defining appropriated policies and work practices to "fit" the broader organisational strategies of cost reduction, quality enhancement and safety through innovation of new demining technologies and methodologies.

The organizational culture and behaviour changes has been linked to changes in mine action with the impact of globalization leading to the need for better service, cost effectiveness, flexibility, responsiveness and quality. With a strong commitment to these qualities, it is not only having an impact on CMAC as an organization, but on the overall cost and productivity of demining operations. Despites some foreseen and unforeseen problems of financial shortfalls, CMAC has been able to maintain cost minimization and maintain goals and outputs at an acceptable level.

Management Reform

Immediately after the 1999-2000 financial difficulty, a number of management reforms were conducted to improve the organization performance. Those reforms were necessary to ensure that CMAC could address the challenges in post crisis period and to improve management practices to regain donor confidence and maintain the organizational health.

Strategically, the rolling Five-Year Strategic Plan 2003–2007 served a clear vision and provided an indicative direction in mine action for CMAC. Reflecting on the implementation of this first five-year strategic plan, CMAC was quite satisfied that it achieved most of the objectives and activities set out in this plan, including annual operational targets, diversification of mine action tools, toolbox integration and other management improvements. One of the key remarks about this plan was the double increase in operational productivity it set out to achieve and was actually achieved from 2005.

As part of CMAC's commitment to good governance, transparency and cost effectiveness, CMAC made great efforts to improve its organisation management from being "seriously deficient as opined by the KPMG general audit in 2000 to "partially satisfactory" in audit opinion by KPMG audit in 2002 and "satisfactory" in audit opinion by Ernst and Young general audit in 2004.

The 2004 CMAC White Paper was another measure toward further improvement of CMAC management and operations. This White Paper was developed in internal consultations with staff at different levels to ensure that all issues pertaining to the organization management were captured, analyzed and solutions recommended. This White Paper gave a very essential direction for the organization management and was well communicated to all staff. The implementation of ISO 9001-2000 is another example of CMAC's strong commitment to quality management system, which is the backbone for a successful organization. CMAC has maintained this ISO implementation since 2004 and in 2007 a new certification audit was conducted, resulting in the renewal of the Certificate.

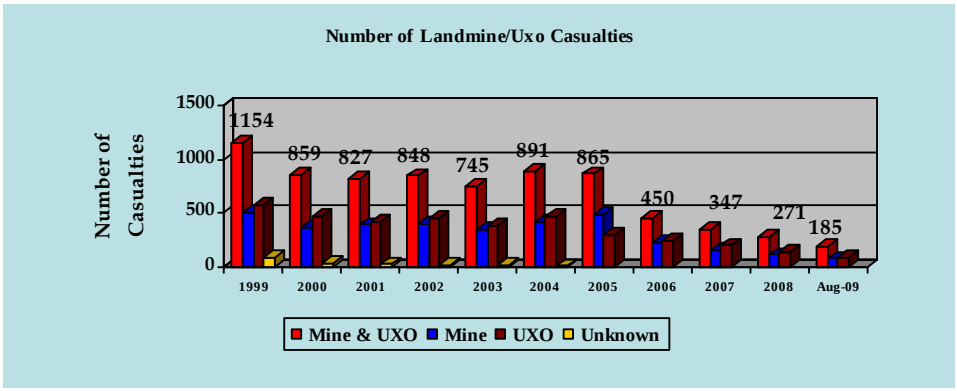
Positive results have been noticed in the overall performance of the staff, operational achievements and change in organization behavior. CMAC maintains its continued effort to implement effective measures especially as it moves toward a more competitive environment in mine action.

Increased Operational Productivity

From 1992 to 2004, CMAC's clearance productivity averaged about 12 km² per year, but this rate increased to over 20 km² in 2005 and continued to gradually increase in subsequent years. As indicated in the tables and chart earlier, the productivity jumped double from 11 km² in 2004 to 22 km² in 2005 and continued to increase to 26 and 27 km² per year in subsequent years. This was made possible due to the introduction of full use of machines, improved demining methodology, toolbox integration, field management and training. One of the key reasons for the increase has direct link with the use of the brush cutters.

Today, the application of the brush cutters has gone a long way. Brush cutters were originally designed to cut and remove vegetation (non-ground engaging) in the mine fields to support other demining components such as manual demining teams, platoons, and MDD teams. Since the introduction into operations the brush cutters have enormously helped speed up the demining process and have changed the way demining is conducted in Cambodia. With the use of these machines, together with sound field management and training, CMAC was able to double its productivity in 2005 and continued to deliver a very high productivity in later years.

Community and Authority Participatory Approach



Casualty rate in Cambodia remained extremely high after the wars until 2005. The recent drop in the number of landmine/UXO casualties can be credited to effective participatory MRE program so far implemented in Cambodia by mine action stakeholders in general and in specific by CMAC as one of its core activities.

CMAC's risk education and reduction strategy realizes that an effective MRE is based upon careful and ongoing assessment of the needs of the affected communities with involvement of existing community structures and local authorities in prioritising tasks for mine action programs.

CBMRR

Recognizing the effectiveness and relevance of such a community-based approach, the Community-Based Mine Risk Reduction (CBMRR) project started in late 2001 and was piloted initially in 6 districts in north-west Cambodia for the period of October 2001 – May 2002.

CBMRR was a new concept jointly developed with UNICEF and Handicap International.

The objective of this new mine awareness concept was to establish a sustainable local mine risk education capacity by empowering local partners, i.e. villagers and village leaders, to participate in and prioritise mine risk reduction response and to provide mine risk education to the population living in mine/UXO contaminated areas, to facilitate access of mine/UXO affected communities to appropriate mine action, victim assistance and community development responses, and to maintain and improve a public information campaign to raise mine/UXO problem and support behavioural change amongst mine/UXO affected communities with a long term strategy for casualty reduction. The District Focal Points based at the district level would undertake participatory information collection activities at village level and select volunteer mine/UXO representatives in the target villages, communes and districts.

CBURR

Similar to the CBMRR concept, in respect to the UXO issue CMAC's CBURR networks have played a very important role in ensuring that the communities have a strong residual capacity to collect and pass on mine/UXO information, provide UXO risk education, and support UXO risk reduction and community development planning. Strengthening the local police to be the UXO focal point is also an effective strategy to involve the local communities and authorities to tackle the UXO problem. In this respect, CMAC has provided training to hundreds of police officers from high impact and high casualty districts identified through the CMVIS casualty reports.

CBD – Community-Based Demining

In 2005, CMAC established a new type of demining platoon called the Community-Based Demining Platoon (CBD).

To respond to the magnitude of the mine/UXO problem in some high casualty and highly contaminated communities, where the young people lack the means to generate income and are prone to risk from their livelihoods, where the landmine/UXO threat is constant and long term, and where economy and resettlement are severely impeded by the presence of vast minefields surrounding the communities, CMAC continues to involve the affected communities to conduct landmine/UXO clearance in their own communities for the purpose of their community rehabilitation and development. In this respect, the Community-Based Demining (CBD) was established at the commune level with community deminers recruited and trained from the affected villages within the communes. The principle aim of the community-based demining is to reduce the risks to communities and provide safe land for the community rehabilitation and development.

All members of the CBD platoons are recruited from the community based on the following criteria:

Priority 1: Mine victims from poor families.
Priority 2: Widows or widowers from poor families.
Priority 3: Members from landless poor families.

Effectiveness of the community-based approach

Recognizing the contributions made by the local communities in addressing the landmines and UXO problem, and realising the importance of the participatory approach, CMAC has always encouraged and provided capacity building to the communities to be more active in addressing their community issues related to the landmines and UXO so that this exercise will eventually be taken over by the communities themselves. This proactive effort requires expanded community roles, commitment and experience, and this can be achieved through strengthening their capacity in both technical knowledge and means of communication with mine action operators and development partners. Through such an exercise, a sustainable residual mine and UXO risk reduction capacity can be established, which becomes the backbone resource to realize the Royal Government's vision of zero victims and zero impact.

Technology: Research and Development

The challenges in mine action in Cambodia and worldwide require CMAC to maintain competitive advantages through improved technology and methodology. In this respect, CMAC recognizes the importance to acquire and maintain a high quality demining capacity through quality training and research and development activities. Today in the changing and competitive mine action environment, CMAC regards research and development as a very important component in its mine action.

Before 2000, CMAC was very successful working with Japanese manufacturers to design and develop the brush cutters, which were eventually introduced in operations in 2000. These machines have enourmously helped CMAC to speed up demining activities.

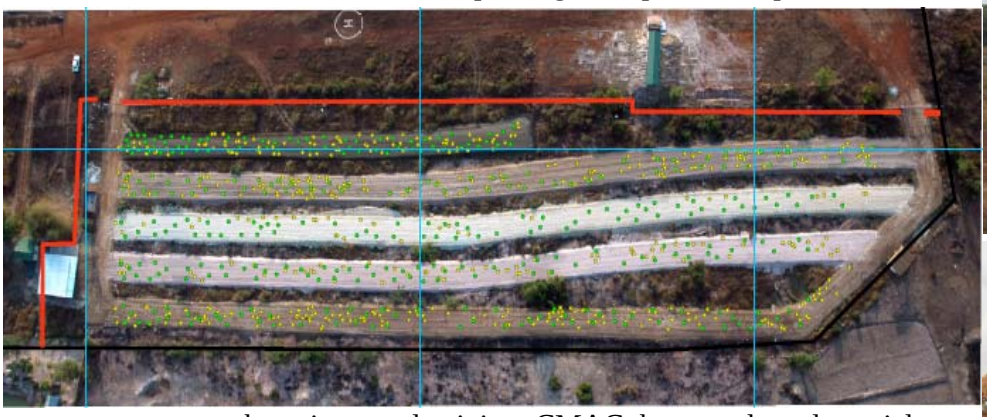
The following will capture some of the main R&D activities that CMAC has conducted in the past ten years.

- From 2005, CMAC started the Explosive Harvesting program supported by the US Government in partnership with Golden West Foundation to cut old ammunitions to extract and reshape explosives for re-use in demining operations. This has been a success story, and CMAC is self reliant in term of explosive charges. These charges are also distributed to MAG and Halo Trust free of charge to support their operations in Cambodia.
- In 2006, CMAC carried out the Project for Research and Development of Mine Clearance Related Equipment Phase I, supported by the Government of Japan. This project managed the test and evaluation of three demining machines and three GPR mine detectors manufactured by Japanese manufacturers.

- In 2007, CMAC tested the sifting buckets imported from the US in partnership with NVESD. These tests were conducted on the existing bursh cutters donated by the Government of Japan to expand their operational capabilities.
- In 2008, CMAC continued with the Phase II of the Project for Research and Development of Mine Clearance Related Equipment, supported by the Government of Japan. During this Phase, the three demining machines were put in operational trials to assess their operational capabilities after modifications made based on the Phase I recommendations and further develop the SOP's for the demining machines.

- In 2008-2009, testing and training on the HSTAMIDS detector was conducted. HSTAMIDS is an American made landmine detector applying the dual sensor concept. It combines a normal metial detector and GPR sensor. From the training results, it is highly expected that HSTAMIDS would contribute greatly to speeding up landmine clearance operation in Cambodia.

- EDD single search trial: as part of its continued and strong commitment to improving the operational procedures and boosting productivity, CMAC has conducted a trial on EDD single search operations, which will see innovative ways of using the Explosive Detection Dogs in the UXO fields. This trial started in late 2008 and continued into 2009 to assess the performance and outputs as well as costs associated, quality and safety.



- Other tests and evaluations: besides the key tests and evaluations mentioned earlier, CMAC also conducted a number of other tests and evaluation of demining related equipment such as tersts of ALIS detectors (Japanese product), battery charger test for mine detectors, magnet test in partnership with ITEP, CEIA detector tests,

and tests of other deep search detectors.

- In addition, CMAC has also established high standard and quality test facilities in Siem Reap and in Kampong Chhnang, able to house test and evaluation of mines and UXO detectors of various types and depths (up to 12 metres deep). The construction of these test facilities were supported by the Japanese and US Government. These test facilities will be able to house and accommodate any types of tests. In addition to the facilities, CMAC also upgraded the skills and experience of its staff to plan, manage, and carry out quality test and evaluation of mine clearance related equipment.

From Emergency and Development: Linking Mine Action with Development

CMAC has always been a very strong supporter of development in post clearance areas. It is essential that land cleared can only benefit the people and will fully justify the cost if the land is properly used for optimum benefits. This is the reason why CMAC strictly follows the prioritization process of the PMAC/MAPU to ensure that, in addition to risk reduction, minefields selected to be cleared offer the most benefits to the communities and that these benefits are squeezed from every dollar spent on mine clearance.

CMAC has a long experience and can be considered a good model organization to link mine action and development. In order words, CMAC places a great attention on the post-clearance development. This is processed, managed and monitored through its Socio-Economics Branch and Sections, and socio-economics impacts and beneficiaries are crucially considered in CMAC's Integrated Work Plans.

In 1999, as mine action in Cambodia moved from emergency phase to development phase, CMAC introduced the concept of the Land Use Planning Unit (LUPU) and established the Socio-Economics functions within its organization. The purpose was to decentralize minefield selection to the local and provincial authorities to enable and empower them as well as development organizations and partners to secure a fair and transparent mine clearance planning process to ensure the proper use of land cleared for humanitarian and development purposes. The LUPU was an ad hoc provincial body created by a provincial sub-decree and placed under the authority of the Provincial Rural Development Committee (PSC) and the provincial sub-committee on the use of land in mine areas. In September 2000, a Royal Decree was issued to establish the Cambodian Mine Action and Victim Assistance Authority (CMAA), and the LUPU mechanism was revised to become the Provincial Mine Action Committee (PMAC), and the Land Use Planning Unit (LUPU) became the Mine Action Planning

Unit (MAPU). Today, CMAC strictly follows the PMAC/MAPU process in minefield prioritization and selection for clearance. Through this process, socio-economics of mine action is key and land to be cleared is targeted for subsequent development.

CMAC also has long experience working with development partners such as Austcare, CARE International, NPA, Peace Boat, Rotary Club, ZOA, Good Earth Japan and SVC projects. In addition to clearance support, these organizations provide development support to the mined communities to re-activate their livelihood, improve their living conditions, enhance their social integration and raise their esteem and value. These activities have contributed enormously to the Royal Government's effort to poverty reduction and eradication.

Technical Survey and Land Release

The primary aim of CMAC's technical survey is to collect and verify landmine and UXO contamination information to quickly and reliably identify and classify the contaminated areas, level of risks and to enable the clearance requirements to be more clearly defined. CMAC has been implementing technical survey since 2002, and the concept of CMAC's technical survey has evolved ever since. Through experience and practice in the field, and to respond to the national strategy of accelerated area reduction, CMAC has sought different measures to improve its technical survey capability and efficiency in order to identify the real threats and release non threat and low threat areas.

In order to speed up technical survey information collection, CMAC redefined its technical survey concept and process in late 2006. In this new concept, technical survey utilizes the community-based mine risk reduction network members as the moderator of information by using all existing sources of information within their community and by coordinating with key informants as well as the local authorities to ensure that the obtained information is verifiable and reliable. While the new concept of technical survey involves a lot of inputs from the local authorities and the CBMRR, its outputs (mine/UXO contamination maps) are distributed more widely to the village authorities, PMAC/MAPU and CMAA for planning and prioritization purposes. Land released through this process can also be removed from the contamination map in the national database.

With technical assistance from NPA and GICHD over the last year, CMAC is now in a final phase of refining its 2006 land release protocol (formally SOP for technical survey). This will be CMAC's augmented contribution the national policy on land release, providing an innovative method to release land without having to fully clear all suspected areas. Moreover, this newly revised protocol will complement the national baseline survey CMAS already adopted by the CMAA. This is another positive and challenging step forward in the landmine action sector and indeed at CMAC.

Mechanical Clearance Capacity

Brush Cutting Machines

Experience shows that in a country like Cambodia, where vegetation overgrows very fast from season to season, manual vegetation removal takes up to 60 to 70% of the demining time. Some minefields are just not possible to clear by hand.

More than ten years ago, CMAC thought and fought hard for the answers to o vercome the difficulties faced by the deminers in vegetation removal. Finally, through the cooperation with Japanese manufacturers and with assistance from the Japanese Government, CMAC found the solution. After comprehensive tests, trials and improvements from 1999 and subsequent years, CMAC found that the mechanical system proved to be very effective in dealing with heavy vegetation. As a result of the tests and trials, the first Brush Cutters (BC) were donated by the Government of Japan and introduced in CMAC operations in 2000.

In 2000, CMAC had 4 Brush Cutters: 2 Hitachi Ex-150 and 2 Komatsu PC-60. In 2003, CMAC received 8 more Hitachi ZX-160 brush ctters and in 2005, 15 new Hitachi ZX-160 brush cutters were delivered to CMAC under the grant aid scheme, resulting in a total of 27 Brush Cutters deployed in the minefields. As already mentioned earlier, these machines were one of the key factors which helped CMAC increased its operational output by two folds from 2005.

Demining Machines

In 2006, CMAC conducted a test and evaluation of three demining machines, two Hitachi and one Komatsu. The result of the evaluation of these three machines showed that all three machines achieved high degree of efficiency in clearing AP mines at different depths, different soil types in the different environment. After the completion of the R&D phase I, all three demining machines were sent back to Japan to be modified/upgraded according to the recommendations issued by CMAC. Following this, the Government of Japan supported CMAC to carry out the phase two of the test and evaluation in the real minefields, after which the machines were assessed to be suitable for operations and were henced procured for CMAC's operations.

The machines have great potential in future technical survey to release suspected land more quickly. CMAC is currently deploying four of these machines and plans to procure several more to support is demining operations.

Mechanical Experience

Besides the operational quality and performance, experience that CMAC has gained using these machines in the minefields is very essential. In addition to the skills to operate the machines, CMAC has gained extensiv e expereince ingft the management and

integration of these machines with other toolboxes, such as manual demining teams and mine detection dogs. Development of SOP's applicable in the operational areas is time consuming and requires skills and expereince. With this point of view, CMAC is ready and willing to share its experience managing the mechanical systems with other mine affected countries.

Mine/Explosive Detection Dogs

Mine/Explosive Detection Dog has become one of the most important and effective demining tools in the recent years, and many demining organizations are becoming more and more confident in utilizing dogs to support demining activities. CMAC has established and sustained an effective operational MDD/EDD program, and has extended this service to MAG to support MAG's demining operations in Cambodia.

MDD programme started to be developed in 1997, when the first dogs for CMAC's MDD programme were trained. The first dogs became operational in 2000. At the time, the MDD programme was under the technical assistance of the Swedish Army. In 2003, the Swedish Army handed over the MDD to be under full management of CMAC.

Some key chronology of MDD program:

- 1997: the first MDD's were trained
- 2000: the first MDD's became operational
- 2003: the Swedish Technical Advisors left and MDD programme was under full management of CMAC
- 2004: MDD teams were restructured
- 2005: Long leash MDD's were trained
- 2006: Long leash MDD's became operational
- 2006: Explosive detection dogs (EDD) were trained
- 2007: Explosive detection dogs (EDD) became operational
- 2008: Puppy programme activated
- 2008-2009: Trial of EDD single search

In 2005, CMAC established the long-leash dogs in addition to the existing short leash dogs in order to diversify the search patterns to respond to different types of terrain and minefield conditions.

Due to the nature of the risks and number of casualties caused by UXO, there has been a growing demand for underground UXO clearance in UXO affected areas. As a result, CMAC recognized the necessity to focus on the area of greatest need and the need to expand and strengthen its capacity in the field of ERW response. In this respect CMAC trained its first EDD's in 2006 and

they became operatoinal in 2007 with the dedicated support by the Norwegian People's Aid (NPA) and its Global Training Centre in Bosnia (the GTC). These are probably ones among the first in the world. Today, CMAC has close to 100 dogs, both MDD and EDD.

The Puppy Program

Acknowledging that the costs of importing semi-trained dogs are high while the budget to support this activity is expectedly shrinking, CMAC has been working on a new solution to the issue: breeding its own dogs.

The first puppies were born in March 2008, the offspring of proven landmine detection dogs. They were the first litter of 10 landmine detection dogs born in Southeast Asia. Unfortunately, seven of the 10 puppies died from canine Pravovirus, which affects the intestinal tract. The setback, however, will not deter CMAC from developing its dog breeding program. To compensate for the loss, GTC in Bosnia provided 10 new puppies to CMAC to be trained with the remaining 3. Training of these puppies started immediately after they were born.

With the program up and running and some further investment, CMAC expects to run and manage the first landmine detection dog breeding program in south-east Asia and this is expected to benefit Cambodia and the region greatly.

Enhanced Physical Facilities

Prior to 2005, all office facilities, including the main headquarters in Phnom Penh and regional offices were housed in rented office buildings. This involved some issues such as the rental costs, the lack of permanent office buildings for network installation, etc.

Thanks to support from the Royal Government and donors, coupled with CMAC's management initiatives, CMAC has added several office buildings to its assets. The main office headquarters in Phnom Penh were built and inaugurated in 2005 with the Royal Government's funding, giving CMAC a new face and comfortable office facilities conducive to working environment. Following the construction of the office facilities, the Government of Japan through JICA donated the communication networks and their installation costs to enable effective communication.

Added to CMAC's fixed assets were also the office facilities of the Demining Unit 2 in Battambang (constructed with Royal Government's fund in 2007), Demining Unit 4 in Siem Reap (donated by the Government of Japan in 2006), Demining Unit 5 in Kampong Cham (donated by the Government of Japan in 2008) and the Central Maintenance and Repair Workshop in Battambang (donated by the Government of Japan in 2005). The office site in Siem Reap also has research and and development facilities which can accommodate tests and evaluation of mine detectors. These facilities have added at least more than 1 million USD to the fixed assets of the Royal Government.

In addition to these new facilities just constructed, the Government of the United States and the New Zealand also funded in 2009 the renovation and some additional construction of the Training Centre facilities in Kampong Chhnang, upgrading this Centre to a better quality standard. These upgrades have improved the image as well as professionalism of the Training to be ready to accept international training. In addition to these renovations, the Government of the United States has also added several research and development facilities as satellite infrastructure to the Training Centre. The Training Centre also accommodates training, testing and licensing facilities for the MDD and EDD.

Training

Most training is conducted at the Training Centre in Kampong Chhnang. The primary role of the Training Centre is to provide all training to enable CMAC to conduct its operations. The Training Centre offers over 40 courses, with training categorised into basic, advanced and refresher courses. Training courses include manual demining, explosive ordinance disposal (EOD), mine risk education (MRE), survey and information, navigation, mine/UXO detection dogs (MDD/EDD), battle area clearance (BAC) and mechanical demining systems. The courses include technical training, minefield management, leadership, and medical training, etc.

The vast majority of training for CMAC is conducted at the Training Centre. However, instructors are also deployed to the Demining Units (DU) and field operations sites to conduct certain activities, particularly refresher training.

In the past ten years, CMAC ran and sent staff to 488 training courses, attended by over 12,800 trainees. The Training Centre conducted 389 training courses participated by some 11,500 trainees. These trainees were not only CMAC's staff but also came from the Royal Cambodian Armed Forces (RCAF), the National Police, members of MAPU, officers from the local authorities and staff from partners and NGO's. Following many years of experience, the Training Centre is recognized as a high quality training school in mine action by many external demining organizations as well as international mine action experts. As a result, delegations from many countries often visit this Training Centre to understand its activities as well as gain experience in training management.

In addition to in-house training, CMAC also sent its middle and senior management for external training in management

and leadership in other higher education institutions in Cambodia as well as abroad. For the period, over 1,270 trainees were sent to 83 external courses in the country and 29 middle and senior managers were sent to 16 courses overseas.

International cooperation has been CMAC's new focus. Recently, CMAC through JICA has been in discussion with Colombia's PAICMA on the possibility of CMAC providing training to PAICMA's staff in the future. Plans have been agreed that CMAC will run three courses for PAICMA starting from 2010. CMAC also looks for other opportunities to share and exchange its experience with other mine affected countries.

Project Management Capacity

Currently CMAC manages over 20 different projects. Some of these projects are multi-year, some are yearly based.

Managing so many projects at one time requires skills, commitment and effective coordination. The project management involves developing proposals, executing and monitoring approved projects, collecting feedback, producing reports and coordinating audits. Each project usually requires a set of reports, an external audit, has a different timeframe, and has a set of specific requirements. However, all these projects are the backbone of support to CMAC.

Over the years, CMAC has developed a strong capacity to manage these projects effectively. This capacity ranges from planning, development of proposals, budget planning and control, deployment and team mobilization planning, producing annual integrated work plans, project monitoring and writing project reports. There are two major tools used in the project management: the mobilization plan and the cost database, which have been developed and refined over the years to increase effectiveness and efficiency of project management.

Catering to the National, Provincial and Community Needs

CMAC has been a leading demining organization in Cambodia, not only in terms of size and toolbox diversification, but also in terms of contributions to risk and poverty reduction. Its annual outputs have averaged between 25 to 30 km² in the past recent years. This annual clearance output makes up the largest portion of the total national clearance capacity in Cambodia.

As a national demining organization, CMAC conducts mine clearance in response to the national, provincial and community needs identified through a transparent and participatory approach using the provincial prioritization mechanism called PMAC/MAPU. This process ensures that the tasks selected for clearance meet the prioritization criteria.

CMAC's activities do not respond only to risk reduction but also to development needs. As the largest demining organization in the country, CMAC's contributions to risk reduction (casualty reduction), supporting development and poverty reduction are essential and key to Cambodia's development goals spelled out in the Royal Government's Rectangular Strategy, Millennium Development Goals and National Development Strategy.

Gender Mainstreaming

Gender issue at CMAC does not only pertain to female staff participating in mine action activities, but also to female beneficiaries of mine action activities as a whole.

In demining operations, which is mainly considered a male-dominant career in many societies, CMAC provides equal employment opportunity to male and female candidates. Female participation constitutes close to 10% of the total CMAC workforce. In some positions, female employees are even more encouraged. As a result of this gender policy, female employees are found nearly all types of positions, including senior management, office staff, deminers, dog handlers, trainers, and platoon commander. One female employee, Chim Srey Mao, has worked all her way from being a cleaner to be a platoon commander. One of CMAC's female deminers, **Yang Samphoas**, was selected to represent CMAC in a Peace Boat fund raising trip in Japan to tell her story as a rural Cambodian girl victimized by the poverty and landmines as well her impression and experience working as a deminer in CMAC.

CMAC's sees a great importance to attach female participation to demining activities, as they likely to be more caring, disciplined and concentrating. They also represent other female working class and can be an effective bridge in risk education and behaviour change with other young girls and women who are considered very powerful household heads in may Cambodian families.

CMAC not only targets female participation in demining activities. Young girls and women also form the integral part in risk reduction and education activities, target beneficiaries of mine clearance and targets for peer education for behavioural change. It is in this philosophy that CMAC's clearance and risk education activities often focus on women who are often the powerful

household heads, influential members of the communities as well as the risk-prone and vulnerable groups. They are considered a every effective messenger and educator in rural communities, helping shape the basic education messages for other groups in their communities.

THE PATH AHEAD 2010 – 2014

Landmines and other Explosive Remnants of Wars (ERW) remain within Cambodia as a lethal legacy of decades of wars and civil conflicts which continued in some parts of the country until as late as 1998. As a result, Cambodia became one of the most heavily landmine/ERW contaminated countries in the world. The National Landmine Impact Survey (LIS), completed in April 2002 reported 4,544 km² of land area being contaminated by landmines, unexploded ordnances (UXO) and cluster munitions. Based on the casualty statistics by Cambodian Mine Victim Information Service (CMVIS), Cambodia still ranks one of the highest casualty rate countries in the world. On-going demining operations since 1992 further uncovered substantial ERW as well as landmine sitting outside of the LIS surveyed area which further expanding the mine/ERW risk. Together landmines and ERW have caused human casualties and sufferings long after the armed conflict with the loss of lives and limps and the unprecedented and wide spread downstream negative socio-economics, health, environmental and psychological consequences that will take years of cleaning up, interventions, and substantial resources expended.


AP-T69 landmine found in a corn field

As part of its strong commitment to combat the landmine and ERW legacy, the RGC has integrated landmine/ERW activities into the Government's major national development strategies and added as an additional Cambodian Millennium Development Goal (MDG9) and a goal in the Rectangular Strategy. Internationally, Cambodia is a State Party to the Anti Personnel Mine Ban Treaty (APMBT) and has actively involved in various international initiative and agenda to enhance global ability to address landmine/ERW threat. As 2010 will be the deadline for Cambodia to implement the APMBT (clear all known AP mines affected sites) and Cambodia has not been able to meet this obligation, Cambodia has already submitted to its Article 5 Extension Request to give Cambodia another ten years to implement the APMBT.

By doing so, it is necessary to quantify the remaining problem to be addressed in the next ten years. Based on CMAC empirical research using documented data obtained by the CMAC's own technical survey teams (TST) from 2004 to 2008 and the further analysis by the CMAC management team, CMAC projected that only 672 km² of confirmed mine areas is in the need for full clearance using all available demining tools including machines, dogs and manual clearance assets; 1,864 km² of suspected/residual areas can further be reduced using technical and non-technical survey techniques integrated with other demining tools; while 2,008 km² can be released through a baseline survey currently being implemented by all accredited demining operators.

This initial finding was offered to the CMAA to be used as a base to project remaining landmine/ERW problem in order to formulate its strategy for the Kingdom of Cambodia for Article

5 Extension Request (ER). With further thoughts and assessments, CMAA came up with a slightly different figure of the remaining problem. However, in CMAC opinion this new projected number will not dramatically affect CMAC work plan for the next five years which had been developed based its initial projection to address the remaining problem.

Based on this projection and the further CMAC's own operational and managerial capacity assessment, CMAC perceived that with favourable financial situation, in five years starting from 2010, it will be able to release around 186 km² of land through full clearance method and another 719 km² through technical/non-technical survey methods, to destroy approximately 830,000 landmine/ERW, and to respond to around 63,000 EOD calls. To meet the aforementioned high expectation, three options were assessed and developed and one best option was selected. This option calls for a sustained capacity of over 2,100 persons and a total funding of approximately 95 million US dollars; of which over 63 million USD is allocated for land release through full clearance and technical surveys; close to 3 million USD for baseline survey, around 2 million USD for mine action training, and an estimated 27 million USD for equipment.

Year	Staff	Productivity (m²)	Land Release through Survey	UXO/Mines	Cost (USD)
Year 1: 2010	2,174	33,810,000	178,200,000	155,760	12,586,220
Year 2: 2011	2,172	37,974,000	178,200,000	167,400	12,983,816
Year 3: 2012	2,143	38,274,000	132,000,000	167,520	12,772,952
Year 4: 2013	2,143	38,274,000	132,000,000	167,520	12,772,952
Year 5: 2014	2,118	38,274,000	99,000,000	167,520	12,599,252
	TOTAL:	**186,606,000**	**719,400,000**	**825,720**	**63,715,192**

An ambitious vision and a mission statement were set specific to meeting this five-year strategy: CMAC Vision statement reads 'CMAC is committed to maximizing land release of mines/ERW affected areas and eliminating mine/ERW incidents in Cambodia', and its Mission statement spells out "CMAC is to dramatically reduce the hazards and adverse socio-economic consequences of landmines and explosive remnants of war threats faced by the people in Cambodia, and support development through delivery of mine action services in line with the national mine action strategy and the national strategic development plan".

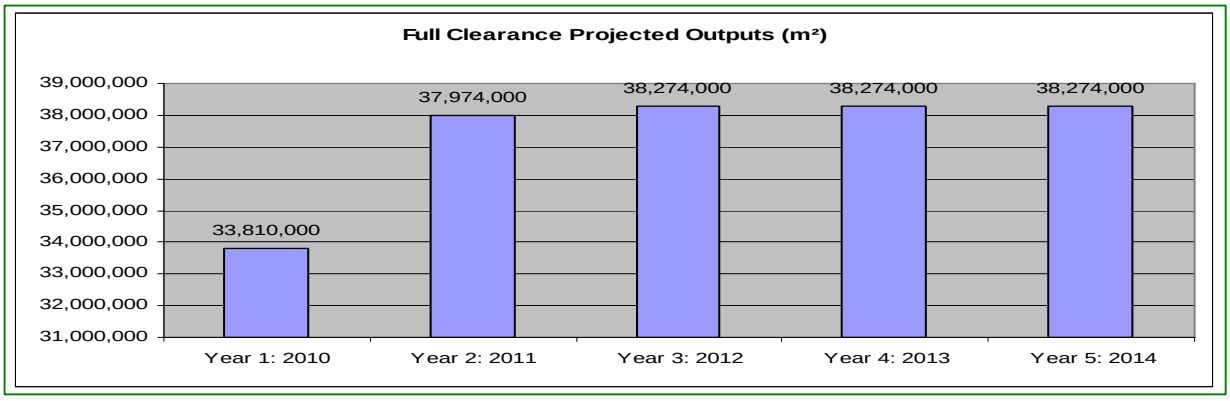
This strategy has set at its core 17 goals and 78 objectives which are Specific, Measurable, Achievable, Realistic and Time bound (SMART). All goals and objectives are intended to be achieved by 2014. They correspond to the four CMAC core activities. In addition matters related to Corporate Management, national and international obligation, and cross-cutting agenda have also been incorporated. These goals include:

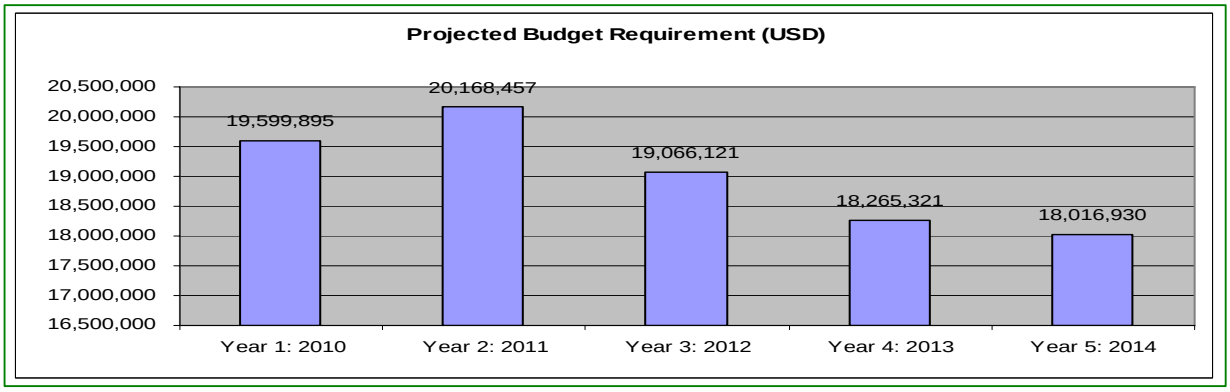
1. To complete the Baseline Survey by 2012 to more accurately quantify the remaining mine/UXO affected areas
2. To deploy technical survey to support land release and release 719 km² through technical and non technical survey by 2014
3. To release 186 km² of landmine and ERW areas through full clearance by 2014
4. To gradually engage in victim assistance activities and community development services
5. To realize CMAC's Training Centre to become a Centre of Excellence for Mine Action by 2014
6. To improve mine action efficiency through introducing updated technologies and methodologies
7. To promote and strengthen international cooperation through policy and technical exchange program

8. To continue improving and introducing new initiatives in landmine/ERW risk education
9. To adhere to the Anti-personnel Mine Ban Convention
10. To continue compliance to IMAS and CMAS in CMAC' SOPs and internal policies & procedures
11. To continue to strengthen operations-driven work practices through continuous improvements of the support and finance systems and services
12. To continue strengthening Total Quality Management
13. To improve corporate and project management systems and practice to ensure effectiveness and efficiency of project implementation
14. To strengthen CMAC human resource development and management
15. To develop and implement effective Communication, Marketing and Fund Raising activities
16. To continue promoting gender in mine action
17. To continue to promote HIV/AID awareness within CMAC organization and communities living nearby CMAC Operations.

Like other plans, the implementation of this Strategic Plan may encounter some unexpected difficulties, which can be internal or external. It was viewed that at least seven risks may arise from the implementation of this Plan; hence their mitigation has been thought through. They are related to (1) funding Issue: (2) demining technology, (3) environmental factors; (4) equipment supply, (5) staff's capacity, (6) continued border tensions, and (7) partnership with developments.

Taking the available resources through the support from the RGC and CMAC donors, and partner agencies, together with the commitments and efforts of CMAC staff and its management, it is highly expected that this Plan will be implemented and activities will be achievable.





For further information, please refer to: cmac.org.kh

GLOSSARY

ASEAN	Association of South East Asian Nation
AP mine	Anti-personnel mine
AT mine	Anti-tank mine
BAC	Battle area clearance
BAT	Battle area clearance Team
BAV	Battle area clearance by village
BTB	Battambang
CBMRR	Community-Based Mine Risk Reduction
CBURR	Community-Based UXO Risk Reduction
CBD	Community-Based Demining Team
CCM	Convention on Cluster Munitions
CIP	Commune Investment Plan
CMAA	Cambodian Mine Action and Victim Assistance Authority
CMAC	Cambodian Mine Action Centre
CMC	Community Mine Clearance
CMVIS	Cambodia Mine Victim Information System
CSU	Contractual Service Unit
DFP	District Focal Point
DM	Demining Machine
DU	Demining Unit
EC	European Commission
ECOSORN	Economic and Social Relaunch of Northwest Provinces
EDD	Explosive Detection Dog
EOD	Explosive Ordnance Disposal
ERO	Eastern EOD Regional Office
EU	European Union
GTC	Global Training Centre
HI	Handicap International
ICRC	International Crescent and Red Cross
JICA	Japan International Cooperation Agency
JMAS	Japan Mine Action Service

L1S	Level One Survey (Impact Survey)
LLD	Long Leash Dog
LUPU	Land Use Planning Unit
LWF	Lutheran World Federation
MAPU	Mine Action Planning Unit
MAP	Mine Action Planning
MAT	Mine Awareness Team
MA-DWG	Mine Action District Working Group
MDD	Mine Detection Dog
MMT	Mine Marking Team
MoEYS	Ministry of Education, Youth and Sports
MP	Mobile Platoon
MRE	Mine/UXO Risk Education, or
	Mine/UXO Risk Education and Reduction (Team)
MUC	Mine/UXO Committee
NGO	Non-Governmental Organization
PLA	Participatory Learning and Action
PMAC	Provincial Mine Action Committee
RGC	Royal Government of Cambodia
SLD	Short Leash Dog
SR	Siem Reap
TC	Training Centre
TS(T)	Technical Survey (Team)
UNA-USA	United Nation Association of United States of America
UNDP	United Nations Development Program
UXO	Unexploded Ordnance

1992	April	UNTAC personnel arrive and assume UNAMIC responsibilities. Mine Clearance Training Unit (MCTU) established.
	June	CMAC created by Cambodia's Supreme National Council.
	November	First CMAC Governing Council meeting.
1993	May	National elections held: huge voter turn out.
	October	Secretary General reports to Security Council that he has asked UNDP to provide technical support and capacity-building expertise to CMAC.
	November	CMAC's SNC mandate extended by Royal Decree. First UNDP/OPS technical assistance project on "Assistance to Demining Programmes" (CMB/93/A07) begins.
1994	August	First CMAC Steering Committee Meeting.
1995	Jan-Dec	IDP's commence returning. Increase in mine and UXO casualty rates.
	February	CMAC statutes extended by Royal Decree.
1996	January	CMAC begins developing dogs and mechanical machines in clearance activities.
	July	UNDP Phase II support project "Assistance to Demining Programmes II" begins
	December	Highest level of mine and UXO casualties due to IDP and Refugee movement.
1997	December	Ottawa Mine Ban Treaty signed. Cambodia signs Treaty
1998	July	UNDP Phase III support project « Assistance to Demining Programmes III » begins.
1999	May	Land Use Planning Unit (LUPU) established
	March	Entry into force of Ottawa Treaty
	May	Entry into force of national law prohibiting the use of anti-personnel mines
	July	Cambodia ratifies Ottawa Treaty
2000	January 01	Ottawa Treaty came into force in Cambodia
	September	Royal Decree establishes CMAA.
	November	National Symposium on Mine Action in Cambodia.
2002	January	CMAC starts ISO process and preparations
2003	January	CMAC's Five-Year Strategic Plan (2003-2007) approved by Governing Council
2004	February	ISO 9001-2000 Certificate awarded to CMAC for quality management
	October	Royal Government establishes PMAC/MAPU (Sub Decree 70)
2005	December	CMAC's annual clearance productivity doubled
2009	May	Cambodia submits Article % Extension Request for the Ottawa Mine Ban Treaty
2010	January	Mine Ban Treaty Deadline for Cambodia