

# ព្រះរាជាណាចក្រកម្ពុជា

ជាតិ សាសនា ព្រះមហាក្សត្រ

Kingdom of Cambodia  
Nation Religion King



មជ្ឈមណ្ឌលសកម្មភាពកំបាំងមីនកម្ពុជា  
Cambodian Mine Action Centre

## Five-Year Strategic Plan 2010-2014



Saving Lives and Supporting Development for Cambodia



## FOREWORD

Since demining began in Cambodia, the country has been very active in addressing all five pillars of mine action; it has also adopted the Anti-Personnel Mine Ban Treaty (APMBT). On 28 July 1999 Cambodia ratified the APMBT, and the Convention entered into force on 01 January 2000. On 28 June 2000, Cambodia submitted its initial transparency report, which indicated that there were areas under Cambodia's jurisdiction or control in which anti-personnel mines were known or suspected to be in place. In accordance with Article 5 of the Convention, Cambodia will undertake to destroy or ensure the destruction of all anti-personnel mines in these areas as soon as possible but not later than 01 January 2010. While deadline is fast approaching and there still substantial anti personal landmines remained. In this regards, Cambodia has submitted its request for a 10 year extension. CMAC as a national institution mandated to rid landmine/ERW problem from Cambodia will have significant roles to play contributing to the destruction of all remaining Anti-Personal landmines within the extension period.

Undertaking this massive role, CMAC envisage extensive works ahead. Meeting them would require thorough planning and sufficient resources to support CMAC activities. As a first step, a 'Plan' needed to be developed. Hence the planning process has begun since December 2008. It involved reviewing of global, national and operational mine action environment, assessment of the current strengths and weaknesses of CMAC own program and the sector's, search for opportunities and challenges which may be in the way. A number of workshops involving staff and other stakeholders were held to consult and discuss the best ways forward. This has resulted in the development of the CMAC Five-Year Strategic Plan.

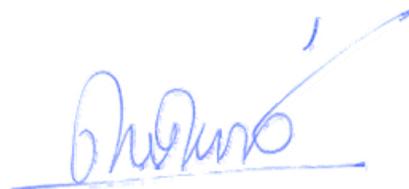
This Plan is covering an implementation period from 2010 to 2014. It is a road map for CMAC continued fulfilling its mission as mandated by the Royal Government of Cambodia. It is also a 5 year rolling plan developed in line with other Royal Government of Cambodia strategies including its effort of meeting the Country's International obligation.

It intends to provide a clear strategic vision and mission for CMAC to follow in the next five calendar years. It outlines goals and sets specific objectives for each identified goal. These goals and objectives will be revised on an annual basis as required in coping with the changing mine action landscape, socio-political-economic and development environment, through opened consultations with relevant key stakeholders in mine action and other sectors. It serves as a guide to the more detailed action plans to be developed by each organizational function operating within CMAC and to communicate CMAC strategic intents to donors and other stakeholders of its way forward in addressing landmine and ERW. It will be implemented, managed, monitored, assessed and evaluated and further improved with the aim to place CMAC as a most effective, efficient and preferred demining organization.

The Management of CMAC is taking this opportunity to express its appreciation to all parties who were involved in putting together this important document; and extent its gratitude to the generosity of its donors and supporters and the Royal Government of Cambodia for their continued assistance to CMAC.



Khem Sophoan  
Chairman of the Governing Council  
Cambodia Mine Action Centre



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Director General  
Cambodian Mine Action Centre

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## EXECUTIVE SUMMARY

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 km<sup>2</sup> of land area being contaminated by landmines, unexploded ordnances (UXO) and cluster munitions. 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 lost of lives and limbs and the unprecedented and wide spread downstream negative socio-economic, health, environmental and psychological consequence that will take years of cleaning up, interventions, and substantial resources expanded.



The Cambodia Mine/ERW Victim Information System (CMVIS), a database of information pertaining to Landmine/ERW casualties within the country reported an average of 890 cases from 1999 to 2005. Through dedication of the many stakeholders involved in mine action sector, number of casualties was sharply dropped to 450, 352 and 266 cases in 2006, 2007 and 2008 respectively. Despite this positive progress, the number of casualties remains very high, and sees Cambodia still ranked amongst the most landmine affected countries worldwide.

In an attempt to address this negative impact, the Royal Government of Cambodia (RGC) has been on the proactive engagement with landmine/ERW activities since the promulgation of the Cambodian Mine Action Centre (CMAC) as a national institution to provide mine action services for humanitarian and development project and the subsequent establishment of the Cambodian Mine Action and Victim Assistance Authority (CMAA) to regulate and monitor all mine action activities within the Kingdom. The RGC has further integrated landmine/ERW activities into the Government's major national development strategies and added as an additional Cambodian Millennium Development Goal (MDG9). 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.



International interests in mine action can be found in the long and sustained commitment of the international community in the provision of funding and in-kind support to mine action program in Cambodia. Together with support from the RGC, noticeable achievement was resulted to reduce threat, release land for productive use and allowing community reintegration and reconstruction to take place.

Despite of the many successes, much works remain. During the 2<sup>nd</sup> Cambodia Development Coordination Forum Meeting in December 2008”, the RGC has committed among other actions to continued taking action to further casualty reduction at a rate of 50 from the previous year, and to decrease the total area of contaminated landmine/ERW land by 7-10% and ensuring the implementation, monitoring, and evaluation of existing mine action/ERW policies, action plan and the development of a coherent 10 years National Strategy for Mine Action. CMAC as a national organization is expected to play an important role to meeting this intension.

Since its establishment, CMAC has grown into a large national organization that employed close to 3,000 deminers and headquarters personnel by June 1998. Its current strength was at 2,300, working on four functional areas, (1) landmine/ERW risk education, (2) landmine information, (3) landmine/ERW Clearance, and (4) Training in mine action. The largest component of CMAC remains the CMAC demining platoons. However, CMAC continues to innovate by introducing new demining tools, new approaches and methodologies aiming to effectively and efficiently dealing with the risk, from manual clearance to mine detection dog, to mechanical clearance; from landmine information verification to technical and non-technical survey; from Explosive Ordnance Disposal to battle area clearance; from purely operation-based for deployment planning to community based approach to mine action planning; and from operations cost driven to a very efficient budget management and cost control organization. During this 16 years period, extensive capacity has been developed to take full ownership as a national demining organization.

Since its inception, with generous supports and contributions from the RGC, donor countries as well as the international public and private organizations, CMAC has cleared over 230 km<sup>2</sup> and found and destroyed over 1.8 million landmines and ERW. It is committed to increase its clearance and land release productivity through on-going innovative and improved methodologies and technologies. These successes were made possible largely through international funding. This external dependency is a critical risk affecting the sustainability of its operations.

With the spread of global financial crisis, there are fears that financial assistant to developing countries will be reduced. This can affect funding to mine action programs globally. Surviving this 21<sup>st</sup> century phenomenon, mine action needs to be up front very efficient, effective and result focused. Its program must be holistic, aligned and harmonized with national and local priorities to be effective in their intervention; tediously efficient in spending; religiously innovative in the quest for efficiency through continuous improvement toward high achievement without jeopardizing the safety of deminers, beneficiaries and the public. In above mentioned context, CMAC is preparing itself to meet these challenges of (a) much more works which remaining to be completed, and (b) dealing with scarcity of resources and the ever demanding accountability. This five-year strategic plan is providing CMAC with a Road Map for successful operations.

To guide its five-year strategic planning, CMAC viewed the necessity of identifying the left over landmine/ERW contamination problems. A study was initiated and developed based on CMAC empirical information collection 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 km<sup>2</sup> 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 km<sup>2</sup> of suspected/residual areas can further be reduced using technical and non-technical survey techniques integrated with other demining tools; while 2,008 km<sup>2</sup> (including cleared land) can be released through a “baseline survey” currently being implemented by CMAC, Halo Trust and MAG.

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 Request for Extension (ER) to its international obligation in meeting the APMBT's Article 5. This ER document suggests that a certain share of work would be undertaken by four main demining operators. Accordingly, it is expected that CMAC is able to release 322.6 km<sup>2</sup> through full clearance and 1,304.8 km<sup>2</sup> through technical and non-technical survey methods with integrated tools in the next 10 years<sup>1</sup>.

Base 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 lands by full clearance method 186 km<sup>2</sup> (average 38 km<sup>2</sup> annually) and by Technical/non-technical survey methods 719 km<sup>2</sup> (average 145 km<sup>2</sup> annually), to destroy approximately 830,000 landmine/ERW, and to respond to 63,000 EOD calls. To meet the aforementioned high expectation, three options were assessed and developed. One best option was selected. This option calls for a sustaining 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; closely to 3 million USD for baseline survey, around 2 million USD for mine action training, and close to 27 million USD for equipment.

To achieve these ambitious targets, all mine action functions will need to be strengthened; staff capacity at all levels will further be enhanced; commands and controls, human resources, supports and financial systems will further be scrutinized; staff and management commitment and dedication will be sought.

An ambitious vision and a mission statement were set specific to meeting this five-year strategy: CMAC Vision statement states ‘CMAC is committed to maximizing land release of

<sup>1</sup>Kingdom of Cambodia Request for an extension of the deadline for completing the destruction of anti-personnel mines in mined areas in accordance with Article 5 of The Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction, (30 April 2009), p.59.

mines/ERW affected areas and eliminating mine/ERW incidents in Cambodia'. Its Mission statement states "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".

To ensure relevancy, adaptability, responsiveness, quality, practicability and implement ability of the plan, nine key strategic assumptions were discussed and assessed; they are:

- (1) socioeconomic and humanitarian applications,
- (2) meeting national and international obligations,
- (3) commitment from Royal Government and international community,
- (4) CMAC as a key and leading demining operator,
- (5) Resources available to support CMAC,
- (6) demining technologies and methodologies,
- (7) continued involvement from affected communities and authorities,
- (8) Partnership with development and international agencies, and
- (9) functionality of existing mine action coordination mechanism.

Six-key value principles were considered in the process; there are

- (1) nature of mine action,
- (2) humanitarian imperative,
- (3) internal core values,
- (4) principle of cooperation and partnership, and
- (5) national and international frameworks, and
- (6) two operational principles were also considered, (1) priority areas, and (2) land release methodologies.

Vital to the successful implementation of plan is the CMAC organizational corporate structure, the CMAC Governing Council and the CMAC Executive unit. Their capability to deliver quality work vis-à-vis their own respective roles and functions is needed; moreover, a complementary and supportive relationship between them must be fostered. All departments' work related competencies must be strengthened.

This strategy has set at its core 17 goals and 78 objectives which are Specific, Measurable, Achievable, Realistic and Time bound (SMART), these strategic goals and objectives were developed with contributions made from the CMAC staff and management in numerous discussions. Consultations with key stakeholders, donors and partners were also employed. 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 were incorporated. These goals are:

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 km<sup>2</sup> through technical and non technical survey by 2014
3. To release 186 km<sup>2</sup> 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/AIDS awareness within CMAC organization and communities living nearby CMAC Operations.

To meet these goals and objectives, resources will be mobilized in accordance with the selected strategic options. Operational year 2010 will see many preparations and positioning of tools and systems and communication of this strategic message.

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.

## I. INTRODUCTION

### 1.1. PURPOSES

This Five Year Strategic Plan for the Cambodian Mine Action Centre (CMAC) covering the period from 2010- 2014. It is a road map for CMAC continued fulfilling its mission as mandated by the Royal Government of Cambodia. It is also a five-year-rolling plan developed in line with other Royal Government of Cambodia (RGC) strategies<sup>1</sup>.

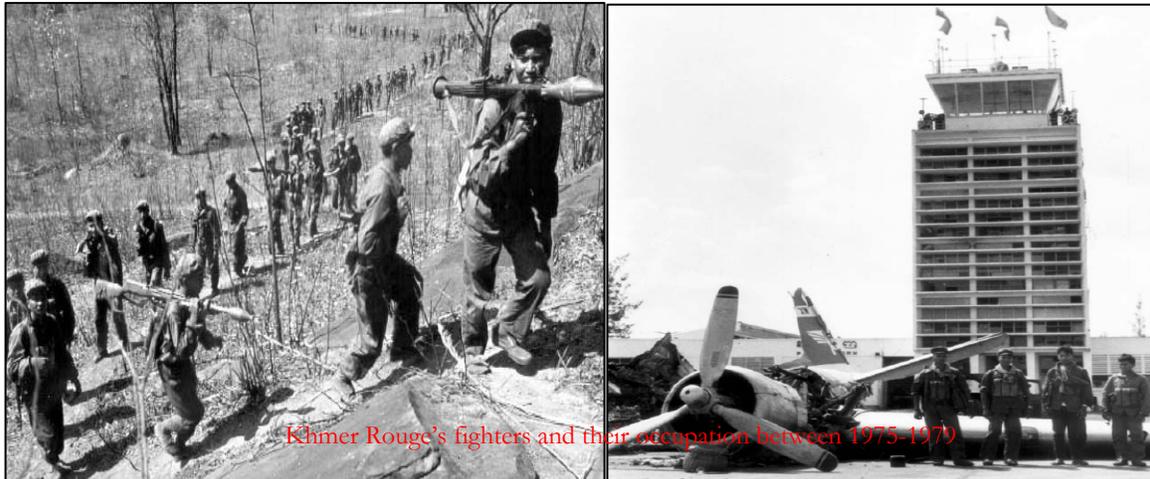
It intends to provide a clear strategic vision and mission for CMAC to follow in the next five calendar years. It outlines goals for CMAC in general, and sets specific objectives for each identified goal. These goals and objectives will be revised on an annual basis as required in coping with the changes of mine action landscapes, socio-political-economic and environmental development, through open consultations with relevant key stakeholders in mine action and other sectors. It is therefore a living document, which will be attuned and redirected to ensure organization journey is on the right path toward reaching the overarching CMAC organizational vision and mission statement<sup>2</sup>.

It is a guide to more detailed SMART<sup>3</sup> action plans to be developed by each organizational function within CMAC reflecting to the actual and foreseeable field requirements and method of operations, and for resources requirement.

### 1.2 RATIONALE

#### 1.2.1 General Background of the Mine/ERW Contamination

Landmines and other Explosive Remnants of War (ERW) still 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, with the heaviest mine laying campaign by all warring parties which occurred from 1979 to 1993 period.



<sup>1</sup> (1) 2006-2010 National Strategic Development Plan (NSDP); (2) Rectangular strategy; (3) 2006 National ERW strategy; (4) Cambodia Millennium Development Goals (CMDGs)

<sup>2</sup> CMAC Vision: Toward Zero Victim; CMAC Mission Statement: Saving Lives and Supporting Development for Cambodia

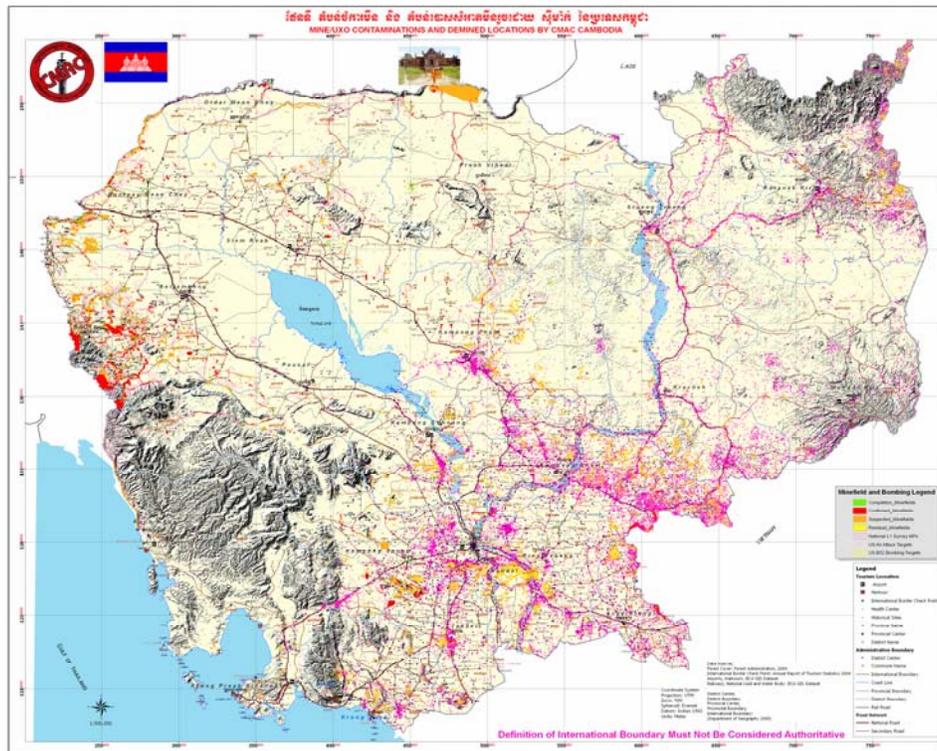
<sup>3</sup> SMART: Specific, Measurable, Achievable, Realistic and time bound

Table 1: Historical armed conflicts leading to mine/ERW problem in Cambodia

<b>WORLD WAR II</b> <b>FRENCH INDOCHINA WAR</b> <b>VIETNAM-AMERICA WAR (1968-1975)</b> <b>CAMBODIA INTERNAL CONFLICTS (1970-1998)</b>
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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 that 4,544 km<sup>2</sup> of land areas are being contaminated by landmines, unexploded ordnances (UXO) and cluster munitions<sup>4</sup> (figure 1: Map of Cambodia: Cambodia Landmine/UXO problem). On-going demining operations since 1992 further uncovered substantial ERW as well as landmines outside of the LIS surveyed area which further expands the mine/ERW risks. Landmines and ERW have caused human casualties and sufferings long after the armed conflicts with the loss of lives and limbs and the unprecedented and wide spread downstream negative socio-economic, health, environmental and psychological consequences that will take years of cleaning up, interventions<sup>5</sup>, and substantial resources expansion. It is important to note that whether there is a single or a thousand landmines, the ability to confidently use the land is compromised and people suffer.

Figure1: Mine/UXO contaminated map of Cambodia



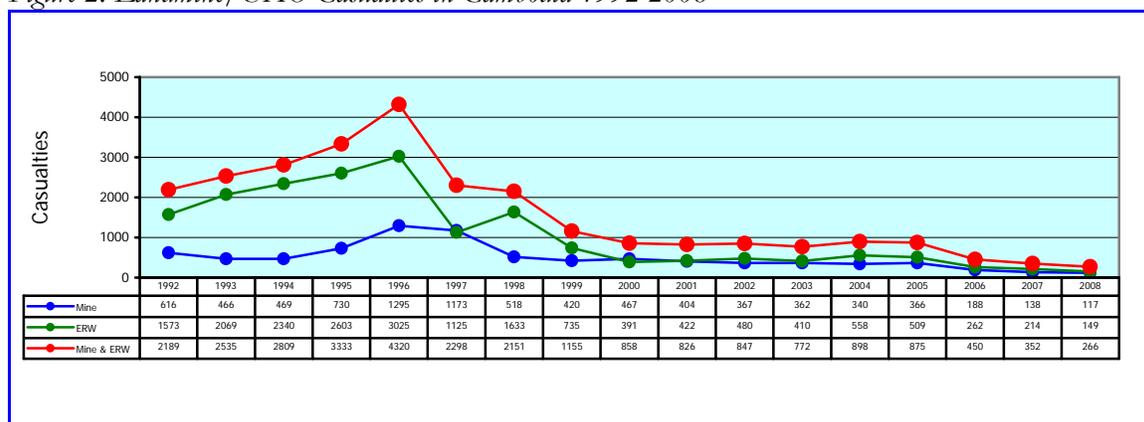
<sup>4</sup> Some types of munitions were used during the US bombardment. The US armed forces commonly used cluster sub-munitions types of BLU-3, 18, 24/66, 26/36/59, 49, 61, 63/86, 77 and MK118 (Rockeye). Based on reports provided by the US States Department which indicates the number of cluster sub-munitions used at least 26 million antipersonnel and anti-material cluster sub-munitions were delivered from at least 80,173 cluster munitions dispensed.

<sup>5</sup> Mine/ERW clearance (removal and destruction); minefield and Battle Area Clearance; Explosive Ordnance Disposal; Mine Risk Education; Mapping and marking; Victim Assistance; Advocacy; development support are among the many intervention activities

Since 1994 the Cambodian Red Cross has overseen the Cambodia Mine/ERW Victim Information System (CMVIS), a database of information pertaining to Landmine/ERW casualties within the country. Figure 2: presents mine/ERW casualty rate in Cambodia since 1992.

The recent drop (by almost 50%) in the number of casualties in 2006 (to 450 cases) along with a continued decline in 2007 (352 cases) and 2008 (266 cases) is a positive sign, and indicative of the dedication of the many stakeholders involved in the landmine action (MA) sector. Despite this positive progress, the number of casualties remains very high, and it is seen that Cambodia is still ranked amongst the most landmine-affected countries worldwide, particularly worse off than neighbouring countries which shared involvement in many of its conflicts. Thus, the declining casualty rate should be used as a motivating factor around which the MA sector can rally, to develop new programs and build capacity within the existing national framework to aid the RGC in meeting its target of a zero-victim state by the year 2012.

Figure 2: Landmine/UXO Casualties in Cambodia 1992-2008



### 1.2.2 Causes and Affects of Landmine/ERW

There are apparent strong links between poverty and landmine contamination. Living in a mined area faces many negative influences that remove most safe livelihood options, and inflict great psychological trauma and emotional hardship on individuals and families.

According to the Cambodian’s 2002 LIS, socio-economic impact of landmine/ERW was assessed for the first time. It was reported that some 6,416 (46%) out of 13,908 villages in Cambodia were affected. Each of these villages was asked to rate the severity of the impact on a scale from very severe to not severe. Findings were critical (see Table 2).

To more precisely assess the socio-economic effects of suspected areas on the life of village populations, villagers were asked to assess the number of houses, families or villages affected in 14 specific activities. The most



Anti Tank Mines Accident on the National Road No.10 to Pailin in January 2009

commonly reported restrictions on activities were access to agricultures land, pasture land, forested, and water resources implying that these communities would be further pushed into poverty (see table 3). This closely links landmine problems with prevalence of poverty.

Table 2: Socio-economic impact of landmines on villages (L1S)

Socio-economic impact	Total	Very Severe	Severe	Less Severe
Not enough housing land	1006 = 61.3%	362 = 22.0%	399 = 24.3%	245 = 14.9%
Not enough agriculture land	1406 = 85.7%	767 = 46.7%	444 = 27.0%	194 = 11.8%
Too high human casualties	1283 = 78.2%	243 = 14.8%	258 = 15.7%	782 = 47.6%
Loss of livestock	929 = 56.6%	55 = 3.3%	172 = 10.4%	701 = 42.7%
water access Difficulties	790 = 48.1%	47 = 2.8%	112 = 6.8%	631 = 38.4%
Gathering activities	1201 = 73.2%	96 = 5.8%	215 = 13.1%	890 = 54.2%

Table 3: Socio-economic effects of landmines on activities

Restricted Access to	No. Areas	% Areas	% Area Surface	Impact
Home	792	26.8	58.8	32,904 Houses
Home construction land	590	20.0	50.5	16,168 Houses
Agriculture land	2,077	70.4	84.5	102,778 Families
Pasture land	1,781	60.4	72.6	105,707 Families
Water sources	1,184	40.1	64.1	84,588 Families
Forests	2,000	67.8	90.9	172,878 Families
School	525	17.8	47.2	44,079 Students
Dams, canals	335	11.3	15.0	1,031 Villages
Markets	439	14.9	41.4	1,334 Villages
Business activities	353	11.9	37.1	596 Villages
Health centre	455	15.4	41.9	1,312 Villages
Pagoda	527	17.8	45.3	1,487 Villages
Bridge	136	4.6	14.6	242 Villages
Neighbouring villages	896	30.4	55.2	2,272 Villages

Studies identified the leading cause of landmine/ERW related to casualty and was directly related to livelihood of the people living in landmine/ERW affected areas. Inadequate livelihood opportunity is also a cause as well as an affect of poverty. Landmine/ERW's presence not only constrains agriculture production, but also drives people to forage for foods and forests by products in landmine/ERW areas, putting them in grave danger of becoming mine/UXO victims; thus perpetuating poverty. Similarly, the lack of livelihood drives people including children to scavenge for ERW to be sold as scrap metal risking of being killed or maimed.



Two legs lost old lady in Battambang Province

While adverse impact of landmine/ERW remains a major problem to the affected community, mine action activities must be continued; hence institutional capacity must be enhanced further; new technologies and methodologies must be developed, trialed and introduced; financial and in-kind contribution will be sought and made available; best management practice must be continuously pursued, and holistic participation by all those involved from beneficiaries to Governmental and non-governmental stakeholders; these should be encouraged and fostered.

*Figure 3: Landmine Accident to Villagers caused by Foraging in Pailin*



*Figure 4: Child of a Scrap Metal Dealer*



## II. COMMITMENT TO MINE ACTION

### 2.1. NATIONAL POLICY INITIATIVES

The Royal Government of Cambodia has been on the proactive engagement with landmine and UXO since the promulgation of the Cambodian Mine Action Centre (CMAC) in 1993 (see CMAC History) as a national institution to provide mine action services for humanitarian and development projects<sup>1</sup> and the subsequent establishments of the Cambodian Mine Action and Victim Assistance Authority (CMAA)<sup>2</sup> to regulate, and monitor all mine action activities in the Kingdom. Cambodia is a State Party to the Anti Personnel Mine Ban Treaty (APMBT) and to the Convention on Certain Conventional Weapons (CCW) Amended



His Majesty the King of the Kingdom of Cambodia

Protocol II regulating the use of anti-personnel mines and booby traps. Each year the CMAA, on behalf of the RGC, reports on the implementation of the treaty in Cambodia to the Meeting of the States Parties to the APMBT and to the UN on the implementation of this CCW Convention<sup>3</sup>. After 10 years of observing the APMBT and with substantial landmine remained, the CMAA on behalf of the RGC has submitted an extension request on the Article 5 of the treaty for another 10 years (1<sup>st</sup> version on 30 April 2009 and 2<sup>nd</sup> version )



Samdech Tep Vong, Head of the Monk of the Kingdom of Cambodia

Like many countries emerging from long period of armed conflict, national capacity and resources were limited. Cambodia relied on unhealthy foreign assistance to start up programs of reconstruction. This was often daunting challenges for all sectors in the country. Mine Action sector in Cambodia, however has made significant progress on many aspects and has developed substantial capacities in the past 16 years. Mine action actors have worked-out ways and means for effective delivery of services to the public, for enhancing coordination among themselves, and for aligning mine action with broader development priorities. This progress reflects not only the long-standing supports of donor countries, donor agencies, but also significant commitments by the Royal Government of Cambodia in terms of policy leadership. However, policy makers, practitioners and donor agencies agree that much remains to be done given the extent of the contamination<sup>4</sup>.



Samdech Techo Hun Sen, the Prime Minister of the Royal Government of Cambodia, spoke on the National Conference on Mine Action Strategy in Cambodia on 06 November 2008

1 Preah Reach Kret (Royal Decree) No. NS/RKT/0295/15, dated 25 February 1995, Chapter I, Article 2

2 Preah Reach Kret (Royal Decree) No. NS/RKT/0900/160, dated 04 September 2000

3 CMAA, Mine Action Achievement 2005 and workplan 2006

4 Linking Mine Action and Development workshop report, GICHD, 2006

Mine action achievements have both mirrored and contributed to Cambodia's progress more broadly, particularly in creating livelihoods/reducing vulnerability for growing rural populations, and in supporting the RGC's de-centralisation and de-concentration agenda. In turn, the importance of mine action has been recognised by, for example: (a) adding mine action as a Millennium Development Goal (MDG); (b) highlighting mine clearance in the Rectangular Strategy; (c) incorporating mine action within both the National Poverty Reduction Strategy: 2003-05 and the National Strategic Development Plan: 2006-2010 (NSDP); and (c) the establishment of a Mine Action Technical Working Group (TWG)<sup>5</sup>.

Although progress was made, a lot of challenges remained both on policy and actual landmine/ERW problems. They are: (a) extensive mine areas remained to be released, (b) financing short fall experienced in donor fatigue and resources competition among mine affected countries and competing interests with other emerging needs such as natural disasters, HIV/AIDS, traffic accidents, (c) heavy reliance on donor funding, (d) Cambodia-Thai border tension, (e) land use conflicts and disputes, (f) lacks of competitive process to bid for national resources, and (g) global financial crisis.

Notwithstanding the above experiences, mine action must go on until the landmine/ERW risks disappeared. The RGC obligation to address this threat is to its people, to the international community for its obligation under the APMBT, and to its generous donors.

The Cambodian Rehabilitation and Development Board (CRDB) and the Council for the Development of Cambodia (CDC) held a meeting in December 2008, to analyse national progress towards achievement of key macro development indicators, including mine action. At this meeting - the "Joint Monitoring Indicators for 2<sup>nd</sup> Cambodia Development Coordination Forum Meeting in December 2008", the Royal Cambodian Government committed to:

1. Continued casualty reduction dropping at a rate of 50 from the previous year, and to decrease the total area of contaminated landmine/ERW land by 7-10%
2. Ensuring the implementation, monitoring, and evaluation of existing mine action/ERW policies, action plan and the development of a coherent 10 years National Strategy for Mine Action.
3. Implementing the Strategic Budget Plan 2009-11 in order to reduce fragmentation and overlap between sectors
4. Improve the quality and accuracy of data available on Donor Partner contributions to allow for more effective sectoral planning.

## 2.2 CONTRIBUTION OF MINE ACTION SECTOR

International Interests in mine action can be found in the long and sustained commitments of the international community in the provision of funding and in-kind supports to mine action programs in Cambodia. Multi-lateral and bi-lateral granting arrangement have been instrumental in supporting humanitarian imperative that enable saving lives and assisting re-

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<sup>5</sup> This TWG is part of a broader mechanism for enhancing aid effectiveness to promote government ownership based on mutual accountability. Each TWG has a mandate that includes: (1) to develop a programmatic approach in support of the NSDP; (2) to link with other TWGs on mutual/cross-cutting issues, and (3) to promote aid effectiveness as outlined in the H-A-R Action Plan.

integration of thousands of returnees and internally displaced people (IDP), clearing the way for infrastructure rehabilitation and reconstruction and supporting development for Cambodia. Donor countries and their international assistance agencies have developed clear assistant policy and frameworks which enable the flow of funding and in-kind supports to the National Mine Action program as well as activities of demining NGOs working to eradicate mine/UXO caused suffering in Cambodia. On the other aspect, many mine/UXO clearance contractual arrangements have been implemented to take on further supports to infrastructure and private sector requirement.

### 2.3 PARTNERSHIP WITH DEVELOPMENT

Mine action is not a stand alone work. It exists because of humanitarian imperative, but without integration with development, its activities will not yield optimum socio-economic benefits to the affected communities. Recognizing this, many International Development NGOs have been in the fore front advocating strong support and developing their community assistant program to include mine action where landmine/ERW risks constraining development. This can be seen since the early phases of demining operations in Cambodia on the Integrated Mine Action work of NGOs and IOs such as NPA, HI (HI-B), CARE, World Vision, Austcare, LWF, CWS, Jesuit Services, JMAS, GEJ, UNDP, UNICEF, CIDA, AusAID, EC, USA, JICA, WB, ADB and private organizations such as BHP Billiton social responsibility program. This Partnership extended to involve the affected communities all across Cambodia with the participation from all levels of Government authorities, members of the commune councils, village leaders and village self-help groups in the introduction of MA work as a part of the Commune Investment Plan (CIP) in the effort of rehabilitating and developing their own communities. These are seen as mine action’s direct involvement in the national initiative of De-centralization and De-concentration. Participations of MA programs in collaboration with APSARA Authority, Preah Vihear Authority in clearing ancient cultural sites, national and international heritage places to provide safe access for preservation work to occur and for tourists; these are proven noble MA partnership with development.

It was through partnerships in the mine action sector and in development programs, the RGC is seeing the need for safeguarding the rights of poor people in receipt of demined land that are formalised, a process that is currently under way through the legislature and field implementation.



**Post-clearance development activities carried out by CMAC teams**

### III. CAMBODIAN MINE ACTION CENTRE (CMAC)

#### 3.1. PRE-ESTABLISHMENT

While it was known that Cambodia was suffering from a significant landmine problem, the international isolation of Cambodia during the 1980s meant that there was a lack of clarity over the true extent of the problem, and doubts over the accuracy of the available figures. The refugee camps along Cambodia-Thai border presented worrying evidence that the problem was extreme, with many amputees arriving in the camps, and many others were injured in trying to get to the camps. Official Red Cross statistics identified close to 63,500 mine/UXO casualties in the period since the Khmer Rouge's overthrow in 1979.



The first efforts to determine the extent of Cambodia's landmine problem were initiated by UNHCR and the UN Advance Mission in Cambodia (UNAMIC) in 1991, as they sought to locate safe areas for the 360,000 Cambodian refugees based in Thailand and due to imminent repatriation to Cambodia. During peace negotiations, a commitment was made to refugees/returnees that an option would exist whereby they would be provided with two hectares of productive lands per family, *in a District of their choice*. Ability to deliver on this commitment was soon put into question when it was discovered that much of the 'available' land available for resettlement was in fact only available because it was suspected or known to be mined.



Anxieties were heightened when a 1991 UNHCR survey found that 57% of returnees (~ 190,000 people) had declared their intention to resettle in Cambodia's most mine affected province Battambang, with the majority of the remainder planning to return to other mine affected north-western provinces.

A sample 1991 survey by UNHCR of 70,000 hectares of 'available' land in Battambang province set aside for allocation to returnees found that 30,800 hectares was "probably clear of mines," 28,000 hectares "probably mined", and 11,200 hectares "heavily mined".<sup>1</sup>

<sup>1</sup> Court Robinson, Repatriation to Cambodia, Center for Refugee and Disaster Studies, Johns Hopkins University, 2006

Such findings meant that mine clearance very quickly shifted from being an ‘important issue’ requiring significant attention within UNTAC<sup>2</sup>, to becoming the most urgent of issues requiring an immediate and massive response. It was in this context that a decision was taken in 1992 to establish CMAC to ensure Cambodia an ongoing national capacity for mine clearance. CMAC’s humanitarian mandate is to clear land for resettlement of refugees and Internally Displaced People (IDP), agriculture, community development, and reconstruction of infrastructure.

### 3.2. POST-ESTABLISHMENT

Under the UNDP project of Assistance to Demining Programs, CMAC grew rapidly. CMAC grew from a small group of local deminers and a few international experts at the start in 1993 (when the group was known as MCTU), to a large national organization that employed close to 3,000 deminers and headquarters personnel by June 1998. CMAC’s organizational structure is established on four functional areas: Mine Awareness, Mine Verification, Mine/UXO Clearance and Training. The largest component of CMAC includes the CMAC demining platoons.

At its peak in 1999, there were 67 humanitarian demining platoons and three contract (development) demining platoons. Currently 28 normal and mobile platoons are deployed in six separate demining units in six different provinces; however this amount is set to decline as platoons are being converted to smaller teams such as Community Mine Clearance Team (CMC), Technical Survey Team (TST), Technical Survey for Clearance team (TSC), ERW Clearance Team (ERC), Battle Area Clearance Team (BAT), Battle Area Clearance Team by Village (BAV), Community Battle Area Clearance Team (CBAT), etc. The CMAC function of minefield verification encompasses a number of discrete activities: survey, verification and mine marking; at its present composition, 13 TST are being prepared for the National Baseline Survey Intervention in support of the Cambodia effort to meet its international obligation on APMBT’s Article 5. 28 EOD teams are deployed to handle ERW removal and demolition tasks. Training and re-training activities are now primarily conducted at the CMAC Training Centre in Kampong Chhnang.

The Royal Government of Cambodia has continued to be one of the most active supporters of the international movement to ban landmines. This was apparent in 1997 when Cambodia became one of the signatories to the Ottawa Treaty on the total ban of landmines - one of the most effective and widely supported international conventions ratified through the United Nations; and CMAC was one of a mechanism to meet this international obligation.

In 1999–2000, there was a move to introduce better management practices at CMAC and in mine action sector. At the sector level,



<sup>2</sup> UNTAC: United Nation Transitional Authority in Cambodia – 1991-93

the Prime Minister approved a revised structure for CMAC on 30 January 2001. Further stronger landmine/ERW related to national legislations, policies and guidelines was introduced and implemented. This included the Sub-decree to establish the Cambodian Mine Action Authority (CMAA) in 2000 and its subsequent amendments as the regulatory body; the establishment of policies and operational guidelines on Socio-Economic Management of Landmine Clearance in 2004 (Sub-Decree 70); and many other landmine/ERW related strategies and initiatives. While at the same time, CMAC undertook organizational restructure aiming to be more efficient in operations and management in its bid to continue to be the main contributor to the sector. CMAC's operations were made possible by the renewal confidence and support of its international donors, the RGC and selective commercial contractual arrangements.

During the period 2003 - 2008, funding supports was provided to CMAC through the UNDP Trust Fund (multi-lateral), Bi-lateral fund, Government's contribution, and demining contracts.

In 2006 as Land Release was becoming the focus internationally, it was clear that a national standardized land release policy needed development and execution. With technical assistance from NPA and GICHD, CMAC is now in a final phase of refining its 2006 land release protocol (formally SOP for technical survey). This newly revised protocol complements the national baseline survey CMAS. CMAC will soon implement a baseline survey in 13 districts allocated by the RGC in the bid to help reassessing the remaining landmine problem in the Country. This is another positive and challenging step forward in the landmine action sector and indeed at CMAC.

Over the last few years, operations have seen an increase in EOD and ERW clearance capability, reflecting the changing trends in casualties, as the proportion of ERW victims to landmine victims rises. Demining

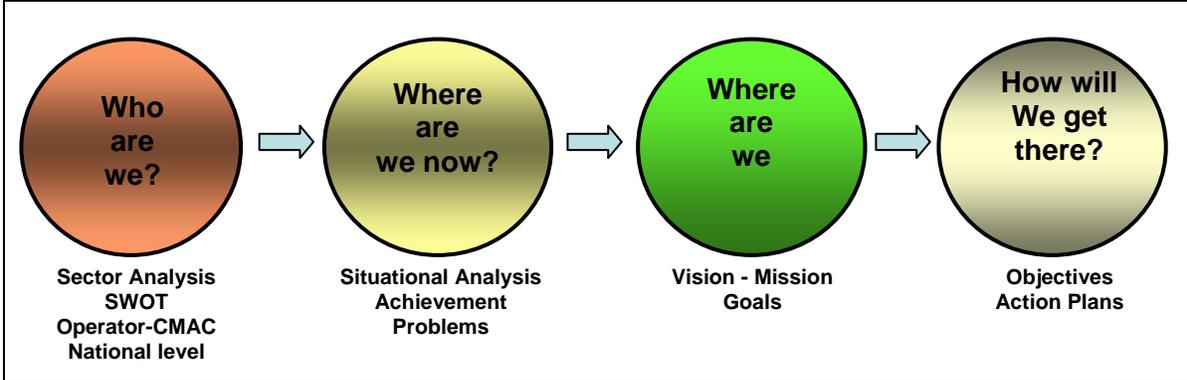


teams have been retrained and converted to perform EOD and battle area clearance tasks to meet the rising demand (BAC/BAT/BAV/CBAT) for over 10,000 EOD calls annually. Complementing these intervention efforts is the CBURR/CBMRR tool to link the community needs with the intervention teams. EOD increased capacity also comes as a result of the support to mineral exploration (such as BHP Billiton) and other like projects in future.

Through tireless efforts by the RGC and CMAC, and with generous supports and contributions from donor countries as well as the international public and private organizations, CMAC has cleared over 230 km<sup>2</sup> and found and destroyed over 1.8 million mines and ERW in the past 15 years. It is committed to increase its clearance and land release productivity through on-going innovative and improved methodologies and technologies.

## IV. STRATEGIC ANALYSIS AND ASSUMPTIONS

### 4.1. STRATEGIC PLANNING ANALYSIS



#### 4.1.1 Contextual Analysis

Year 2009 is the year that the global community experiences the worse financial crisis. No country in the world can escape the impact of this crisis. Cheap monies led to housing bubble in the United States. When it busted, the impact felt across the global financial institutions, then the after shocks rocked other assets, businesses and investments prompting reactive actions by Governments, public and private organizations and citizen alike to try to contain the crisis. These actions resulted in less money made available, which led to less spending; less spending led to job lost, and so on. This crisis is affecting how developed countries allocate their budgetary spending. This is likely to affect their international assistance budget. And this is going to impact on a country like Cambodia where a large portion if its income derived from international grants and loans. This certainly affects mine action sector globally as well as in Cambodia. There were expectations that this worse recession would last until the end of 2010 and the world market is slowly creeping back to it normalcy. Regardless of this optimism, this crisis is resulted in how money is made and spent. Development money including funding to mine action program is in no exception.

Surviving this 21<sup>st</sup> century phenomenon, mine action needs to be up front very efficient, effective and result focused. Its programs must be holistic, aligned and harmonized with national and local priorities to be effective in their intervention; tediously efficient in spending; religiously innovative in the quest for efficiency through continuous improvement toward achieving a state whereby the mine/UXO threats can no longer be a hindrance to people’s lives and their community development.

In this context, where does CMAC prepare itself to meet these challenges of much more work which remains to be completed, such as dealing with scarcity of resources and the ever demanding accountability? The answers are laid out in this plan.

Through a comprehensive analysis conducted internally<sup>1</sup> of the sector and of CMAC; it was recognized that CMAC has after 16 years of demining endeavour gained considerable technical and managerial competences in the process of executing its mandates. It was also noticed that considerable achievement in terms of CMAC contribution to the mine action sectors and development sectors in general. Mine action has positively contributed to safety and security of the people in landmine/ERW affected areas. The sector further contributed positively to land tenure security through its management of demined lands with the introduction of the bottom up mine action planning mechanism (MAPU); it has to a great extent enhanced socio-economic well being of the many beneficiaries to a certain level and contributes exponentially to the country rehabilitation and development. Although positive contributions have been made, but more works needed to be done as the magnitude of the problem remains large.

Cambodia is still considered a poor country. Many poor families are still living below the poverty line. Most of poor Cambodians live in rural areas and still practice subsistence farming and selling labour to nearby farms or businesses. They are very vulnerable to any type of disaster and manipulation, and have too little means of shield and protecting themselves. This was a reason in spite of some years of development assistance; many people still remained very poor. This poverty, to a greater extent, was stemmed from the inadequate of livelihood to generate living income.

This problem can be seen as prevalence among the landmine/ERW affected communities. Farming and farming related activities accounted for most of casualties. Casualties among children were still consistently high; internal migrations of people in search for available new lands for farming and for on-farm employment were also among the many main causes of concerns. Many landmine accidents happened in locations where landmine/ERW suspected land areas have been used for farming or other purposes, in some cases for many years without the benefit of mine clearance.

#### 4.1.2 Casualties and Responses

The rise of ERW related causes' casualty verses landmine is another aspect that needs close attention. These often occurred as the result of livelihood activities and of curiosity particularly among children. Places where ERW accidents happened were mostly in former battle areas where heavy weapons such as artillery and rocket shells were deployed. Accidents took place when people tempered with hazard items for economic or curiosity interests.

Manners how landmine/UXO casualties happened was slightly changed. There were many fewer incidents, but each incident inflicted many casualties which caused in many cases by Anti-Tank (AT) mines or ERW explosion. AT casualties were found around roadsides when victims were



<sup>1</sup> SWOT: Strength, Weakness, Opportunity and threat; and PESTLE: Political, Economics, Social Culture, Technology, Legal and Environment Analysis

undertaking activities related to road rehabilitation or construction or trespassing on old roads. The geographical patter of landmine/ERW accidents remains largely the same as previous years (see figure 4, 5 and 6), but only fewer cases. Therefore interventions are needed around the same geographical spread (see figure 7). However, interests should be taken to new areas opened for new resettlement and population growth. This is not restricted to just the North and North-Western parts of the country, but other areas as well.

Figure 4: Mine/ERW Casualties information – 1998.

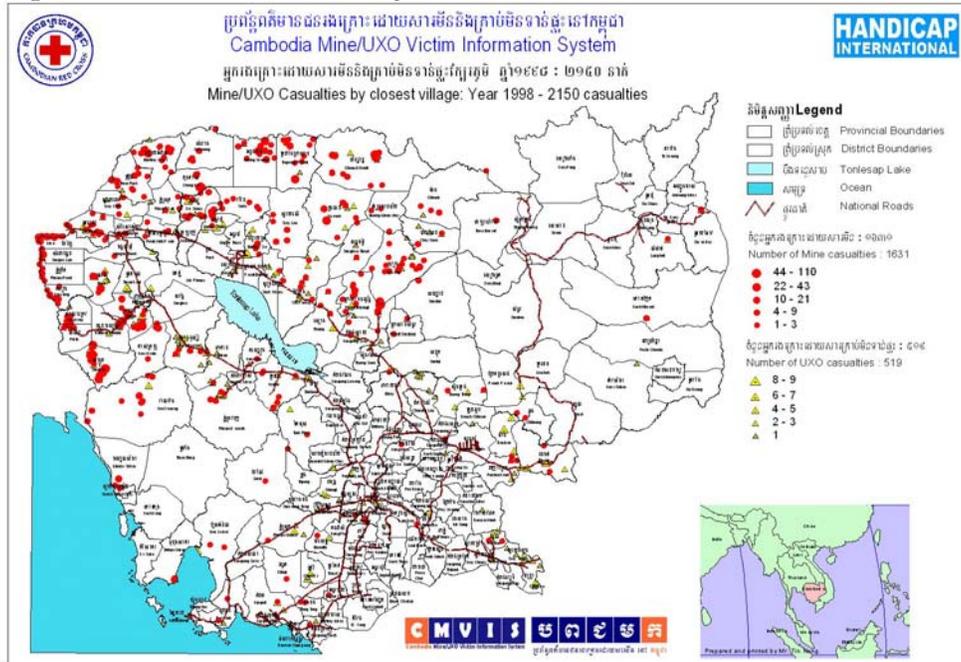
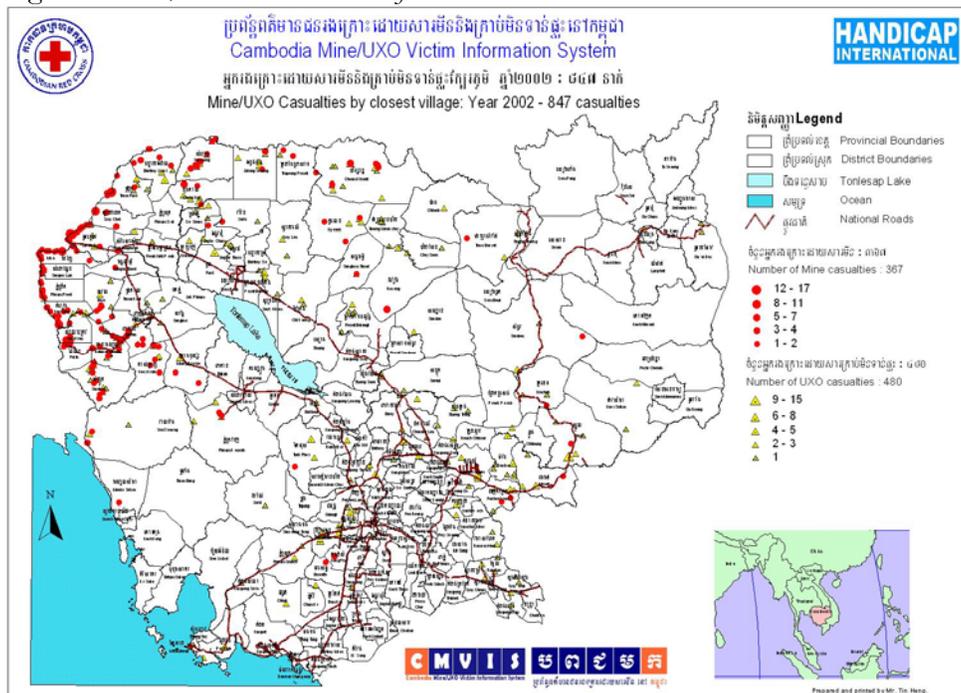


Figure 5: Mine/ERW Casualties information – 2002





Given the geographical spread of mine/UXO contamination and the need to address them CMAC has deployed its resources accordingly and this deployment practice will continue (Figure 7 shows clearance where casualties took place).

#### 4.1.3 Extent of the Remaining Problem

While there was no recorded document, an early projection of the numbers of landmine in Cambodia was around to 10 millions. This estimation was later reduced to somewhere around 4- 6 million. L1S (2000-2002) attempts to ascertain and quantify the full scope of Cambodia's landmine problems. Using participatory appraisal methods, all but two<sup>2</sup> of Cambodia's 13,908 villages were visited by trained Survey staff who worked with communities to document their understanding of their landmine/UXO problems. The completed L1S identified 3,037 suspect hazardous areas totalling 4,544 square kilometres (or 2.5% of the Cambodia total landmass) and affecting 6,422 villages – or 46% of all villages. Contamination was suspected in each of Cambodia's 24 Provinces

- **Number of villages contaminated 6,422 (46%)**
- **Number of areas contaminated 3,037**
- **Area of land suspected to be contaminated 4,544 Km<sup>2</sup>**
- **Number of Population being at risk 5,186,771 (45.3%)**
- **11,429 EOD tasks identified**

It is important to note that this survey did not provide a full reach; it was designed to find impacts on communities and get an overall snapshot of effects, and is useful in that sense. It did not however define precise mined areas boundaries and their characteristics so as to allow sufficient information for deployment of appropriate clearance resources. It is equally important to note that landmines are not the only hazard impacting the lives of million of Cambodians, during the period of October 1965 to August 1973, US war planes dropped 2.75 million tons of bombs on Cambodia, and more than the total tonnage were dropped by Allies (US, UK, Russia, France) during World War II. The protracted nature of civil war has further left Cambodia millions of ERW scattered throughout the entire country causing unprecedented catastrophic casualties and their down stream safety, social, psychological and economic affects.



After 16 years of demining (1992-2008), a small but noticeable dent was achieved over the overall reported L1S information. The combined total clearance achievements by all demining

<sup>2</sup> One village was deemed by Vietnamese authorities to be inside Vietnam, and the other proved impossible to access.

operators, CMAC, Halo Trust, MAG and the Royal Cambodian Armed Forces are according to the table 4 below:

Table 4: Demining Productivity from 1992 to 2008

		CMAC	RCAF	MAG	HALO	Grand Total
1992 - 2008	Areas in m <sup>2</sup>	227,368,336	170,640,882	26,433,356	52,062,230	476,504,804
	N. of APM	404,523	161,636	47,405	200,634	814,198
	N. of ATM	7,657	8,337	585	2,530	19,109
	N. of UXO	1,370,028	100,168	140,317	130,318	1,740,831

According to this achievement, there remained so much to be done to physically remove or destroy all landmine/ERW hazards from all known areas.



Experiences reported by operators as well as the CMAC own technical survey teams have suggested that not all mine areas be captured by the L1S; and not all polygons (or part of the polygon) identified in L1S were mine/UXO contaminated. These pose a concern over the accuracy of the L1S data used for the purpose of prioritization of demining operations on the one hand; on the other hand to quantify and qualify the remaining problems is in question. To date, there has not been any credible risk assessment done to precisely state this problem.

At this juncture, in support of the CMAA initiative, CMAC, MAG and Halo Trust are currently implementing a Baseline Survey with the intend to define a clearer picture of the remaining mine/ERW problem by first focussing on the 21 top mine/UXO casualties affected districts<sup>3</sup> (See annex 1: Map of top 21 casualties affected districts). This Baseline survey will take time and need additional resources to speedily achieve result.

However, based on CMAC empirical research using documented data obtained by the CMAC’s own technical survey teams (ISTI) from 2004 to 2008 and the further analysis by the CMAC management team, CMAC projected that only 672 km<sup>2</sup> 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 km<sup>2</sup> of suspected/residual areas can further be reduced using

<sup>3</sup> 21 Prioritized districts for Baseline Survey: Sala Krau, Malai. Ou Chrov, Thma Puok, Kamrieng, Samlout, Phnum Proek, Rotanak Mondol, Pailin, Veal Veang, Samraong, Svay Chek, Choam Khsant, Sampov Lun, Banteay Ampil, Trapeang Prasat, Bavel, Koas Krala, Banan, Anlong Veang, Moug Ruessei

technical and non-technical survey techniques integrated with other demining tools; while 2,008 km<sup>2</sup> can be released through a baseline survey currently being implemented by all accredited demining operators. This projection was adapted by the CMAA for the purpose of Article 5 of the APMBT extension request (1<sup>st</sup> version)<sup>4</sup>

Table 5: Illustrates CMAA's projection of remaining problem

Description	Size (km <sup>2</sup> )	Remarks
<b>1. Original problem</b>		
Level One Survey	4,544	Completed in 2002, officially endorsed by RGC
<b>2. Classification of remaining problem based on calculated quantification</b>		
Confirmed	697	For full clearance
Suspected/Residual	1,839	For further Technical Survey and Non Technical Survey
<b>3. Ways of addressing the remaining problem</b>		
Release (full clearance)	672	70% of Confirmed areas + 10% of Suspected & Residual areas
Release (TS+NTS)	1,864	30% of Confirmed areas + 90% of Suspected & Residual areas
Release (BLS)	2,008	Superseded in database through Baseline Survey
<b>Total:</b>	<b>4,544</b>	

#### 4.1.4. National Clearance Projection

Based on Article 5 Extension Request (1<sup>st</sup> version), Cambodia plans to release up to 672 km<sup>2</sup> of mined areas through full clearance, by achieving an annual clearance of approximately 90 km<sup>2</sup>, starting from 2011. Higher productivity will be achieved by deploying increased and improved demining resources, technologies (such as demining machines) and all clearance tools, and through improving SOPs, methodologies, training, and quality management. Capacity of field staff will be increased to more effectively coordinate, plan and execute operations.

In addition, according to the same Extension Request, Cambodia will also need to release approximately 1,864 km<sup>2</sup> of suspected areas and approximately 2,008 km<sup>2</sup> through technical, non technical and baseline surveys. Land release policy and standards will be developed and adopted. Its practice will be promoted to demining operators; and the



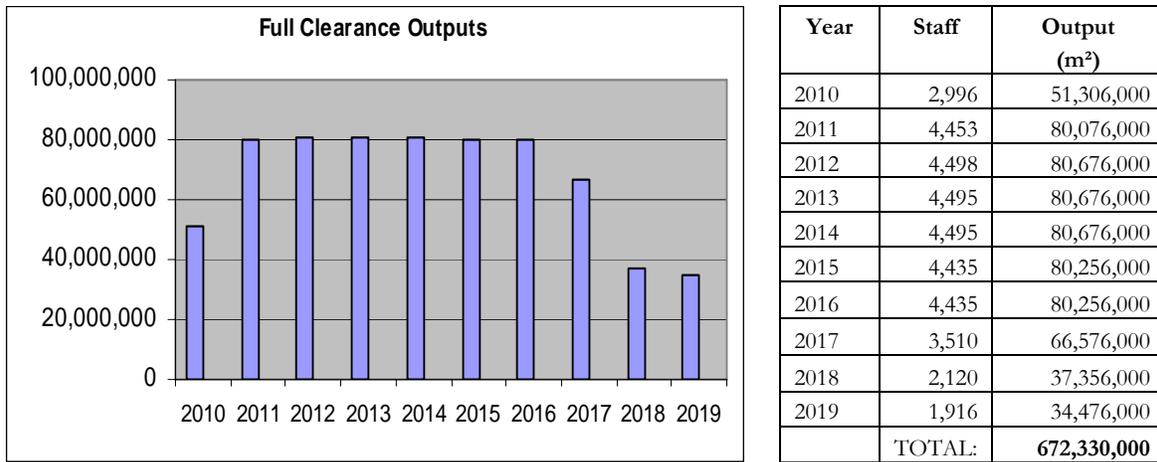
<sup>4</sup> Kingdom of Cambodia Request for an extension of the deadline for completing the destruction of anti-personnel mines in mined areas in accordance with Article 5 of The Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction, (30 April 2009), p.59.

mixed use of survey capacity and resources with integrated demining tools will be strengthened. The national database system will also be strengthened so it is able to capture all information from baseline, technical and non technical surveys.

It is very important for CMAC as a national and leading demining organization to make a major contribution to achieving this ambitious plan to address the remaining problems as well as to contribute to the socio-economic developments in line with the Royal Government’s Rectangular Strategy. At the same time this effort will also contribute to meet the international obligation stipulated in the APMBT (article 5).

Based on current resources and capacity, as well as past achievements, CMAC will remain committed to making a significant contribution to achieving the national clearance plan projection.

Chart 1: Source: CMAA, Extension Request 1<sup>st</sup> version, p.54, Full clearance output



Consistent with the aforementioned national clearance projection, the Royal Government of Cambodia, considering CMAC as a leading national demining institution comprising of long experience in mine action and the largest contingent of capable demining force, it is expected CMAC to be able to release 322.6 km<sup>2</sup> through full clearance and 1,304.8 km<sup>2</sup> through technical and non-technical survey methods with integrated tools in the next 10 years.

Table 6: Source CMAA: Cambodia Article 5 Extension Request 1<sup>st</sup> version, p.59: Share of Work between Operators

Method of Release	CMAC		RCAF		MAG		Halo Trust		Total	
	%	km <sup>2</sup>	%	km <sup>2</sup>	%	km <sup>2</sup>	%	km <sup>2</sup>	%	km <sup>2</sup>
Release by clearance	48%	<b>322.6</b>	35%	235.2	5%	33.6	12%	80.6	100%	672
Release by TS-NTS	70%	<b>1,304.8</b>	0	-	10%	186.4	20%	372.8	100%	1,864
Release by BLS	70%	<b>1,405.6</b>	0	-	10%	200.8	20%	401.6	100%	2,008

Chart 2: Source CMAA: Expected Demining work by operators

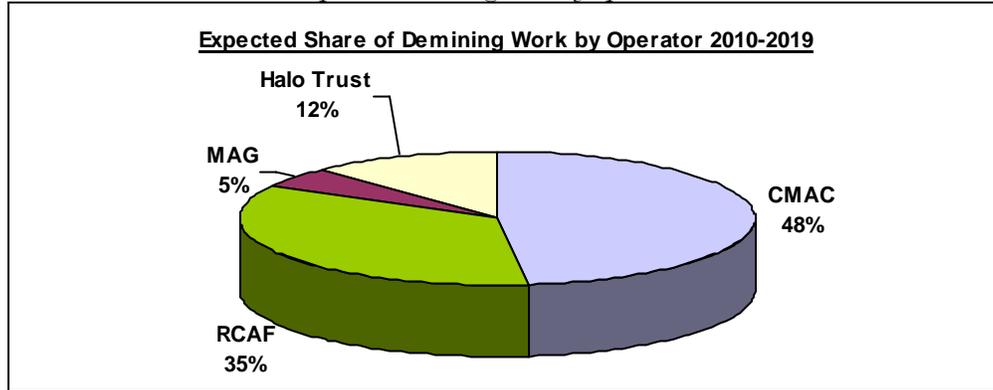
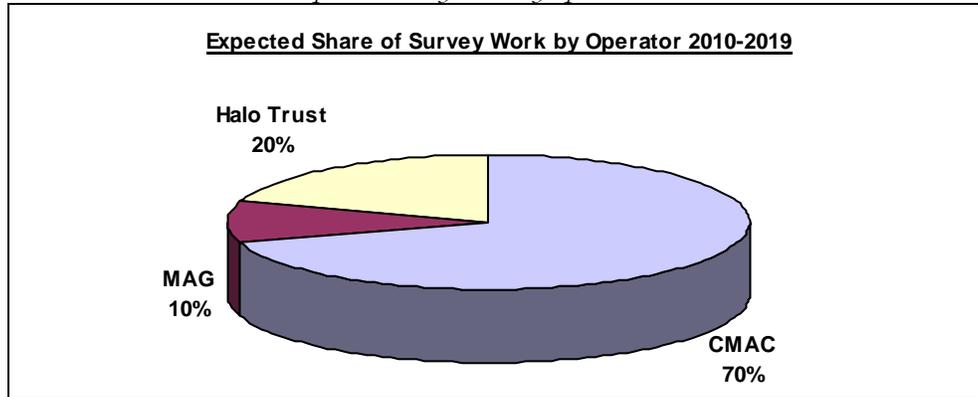


Chart 3: Source CMAA: Expected Survey work by operators



#### 4.1.5. Analysis of CMAC’s current capabilities to meet the challenge

As a national demining agency, CMAC has several strengths to tackle the remaining mine/ERW problem: CMAC has developed strong trust and confidence of its donors; its organizational strengths and capacity (operational and managerial), systems and processes were well in place, and its innovation and flexibility were noticeable through the past years of operations. CMAC’s management acknowledged that although there were numerous strengths, there were also many weaknesses and that if they were to be addressed, CMAC could become a much better organization.

As mine action sector evolved and mine/UXO risk remained, more challenges and opportunity arises. Opportunity in terms of doing a better and more efficient and effective demining works; addressing development needs and facilitating commercial contractual requirement; the introduction of newer and more effective methodologies and technologies; international cooperation and collaboration for exchange of skills and lesson learnt and work. These are few opportunities that can be tapped.

There will be many challenges ahead of CMAC in addressing its future mine action intervention. From trying to survive the Global Financial crisis to donor fatigue, from border tension to cooperation; from motivating aging staff to sustaining productivity. From adapting

to the ever changing mine action context to supporting new legislative guidelines; and from the rigid of SOP compliance to the flexibility of operational demands (but without compromising worker safety).

The future is there to arrive at and it is overwhelming. CMAC plans to get there by design as well as by way of on-going consultation and reflection. Going forward, CMAC is keen on enhancing every aspect of its operational, managerial and leadership practices to stay on as leader in mine action community, nationally as well as globally.

## 4.2. STRATEGIC OPTIONS

In light of the CMAA's 10 year projected outputs required of CMAC (Extension Request 1<sup>st</sup> version), three different options were thought through, analysed and assessed according to (1) productivities in terms of clearance and survey expected to achieve 10-year projection, with the first 5-year focus, (2) level and capacity of staff required, (3) level of demining machines and enhanced equipment needed, and (4) level of funding required for the next 5 years. Table 7 provides a snapshot overview of each of the three options.

Tables 7: A snapshot of criteria for each of the three options.

Description	Option 1	Option 2	Option 3
<b>Situation</b>	Meeting the required 10 year productivity with straight level output with consistent effort in the first 5 years	Meeting the required 10 year productivity with straight level output with increasing effort first 5 years and lower last 5 years	Will not meet the 10 year or 5 year productivity requirement. Adapted to the current funding experience
<b>Level of Productivity</b>	meeting 5 year expectation with equal annual productivity in the first 5 years	Exceeding 5 year expectation with increasing the first 5 year annual productivity	Lower productivity than 5 year expectation
<b>Level of Staff meeting productivity</b>	Generally about the same as current deployment with enhanced skill	Gradually Increase over the current deployment with enhanced skill	Gradually Decrease over the current deployment
<b>Demining Machine and equipment</b>	Moderate need to increase the use of demining machine and enhanced equipment	High need to increase the use of demining machine and enhanced equipment	Generally the need to maintain about the same as current deployment
<b>Funding required</b>	Generally about the same as current spending with moderated increase of funding for procuring equipment	High increase over the current spending with high increase of funding for procuring equipment	Generally about the same level of the current spending on operations and equipment acquisition

Option 1 was considered the best option; option 2 was viewed to be ideal, but impractical; and option 3 was practical but will not meet productivity expectation.

Even though option 1 is the best option, much effort will be needed to enhance staff technical and managerial capacity, to undertake further research and development to improve

demining tools and equipment, to acquire more demining machines and other equipment, to engage in active communication and fund raising campaign to meeting up the level of funding needed, and to further enhance the management of the overall mine action program.

This option calls for a sustaining 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; closely to 3 million USD for baseline survey, around 2 million USD for mine action training, and close to 27 million USD for equipment.

Table 8, 9, and 10 provide a snapshot look on each of the three options of the level of staff required, productivities envisaged, cost by activities across four cost centers (1) land release through full clearance and survey (FC+TS), (2) Baseline survey (BLS), (3) Training, and (4) Equipment.

Table 8: Option 1 – Selected Option

**OPTION 1:**

**Staff and Outputs (m<sup>2</sup>)**

Year	Staff	Land Release by Clearance	Land Release by Survey	UXO/Mines Destroyed	# of EOD Responses
Year 1: 2010	2,174	33,810,000	178,200,000	155,760	11,844
Year 2: 2011	2,172	37,974,000	178,200,000	167,400	12,780
Year 3: 2012	2,143	38,274,000	132,000,000	167,520	12,780
Year 4: 2013	2,143	38,274,000	132,000,000	167,520	12,780
Year 5: 2014	2,118	38,274,000	99,000,000	167,520	12,780
	<b>TOTAL:</b>	<b>186,606,000</b>	<b>719,400,000</b>	<b>825,720</b>	<b>62,964</b>

**Cost by Activity (USD)**

Year	FC+TS	BLS	Training	Equipment	Total
<b>Year 1: 2010</b>	12,586,220	1,120,000	411,187	5,482,488	<b>19,599,895</b>
<b>Year 2: 2011</b>	12,983,816	1,120,000	423,114	5,641,526	<b>20,168,457</b>
<b>Year 3: 2012</b>	12,772,952	560,000	399,989	5,333,181	<b>19,066,121</b>
<b>Year 4: 2013</b>	12,772,952		383,189	5,109,181	<b>18,265,321</b>
<b>Year 5: 2014</b>	12,599,252		377,978	5,039,701	<b>18,016,930</b>
<b>Total:</b>	<b>63,715,192</b>	<b>2,800,000</b>	<b>1,995,456</b>	<b>26,606,077</b>	<b>95,116,725</b>

Table 9: Option 2 – Ideal option

**OPTION 2:**

**Staff and Outputs (m<sup>2</sup>)**

Year	Staff	Land Release by Clearance	Land Release by Survey	UXO/Mines Destroyed	# of EOD Responses
Year 1: 2010	2,249	34,710,000	178,200,000	156,480	11,844
Year 2: 2011	2,949	54,354,000	178,200,000	181,920	13,068
Year 3: 2012	3,189	58,914,000	132,000,000	185,400	13,068
Year 4: 2013	3,189	58,914,000	132,000,000	185,400	13,068
Year 5: 2014	3,164	58,914,000	99,000,000	185,400	13,068
	<b>TOTAL:</b>	<b>265,806,000</b>	<b>719,400,000</b>	<b>894,600</b>	<b>64,116</b>

<b>Cost by Activity (USD)</b>					
Year	FC+TS	BLS	Training	Equipment	Total
<b>Year 1: 2010</b>	12,919,508	1,120,000	421,185	5,615,803	<b>20,076,496</b>
<b>Year 2: 2011</b>	17,238,476	1,120,000	550,754	7,343,390	<b>26,252,621</b>
<b>Year 3: 2012</b>	18,300,200	560,000	565,806	7,544,080	<b>26,970,086</b>
<b>Year 4: 2013</b>	18,300,200	-	549,006	7,320,080	<b>26,169,286</b>
<b>Year 5: 2014</b>	18,126,500	-	543,795	7,250,600	<b>25,920,895</b>
<b>Total:</b>	<b>84,884,884</b>	<b>2,800,000</b>	<b>2,630,547</b>	<b>35,073,954</b>	<b>125,389,384</b>

Table 10: Option 3 – Not meeting expectation

**OPTION 3:  
Staff and Outputs (m<sup>2</sup>)**

Year	Staff	Land Release by Clearance	Land Release by Survey	UXO/Mines Destroyed	# of EOD Responses
Year 1: 2010	2,174	33,810,000	178,200,000	155,760	11,844
Year 2: 2011	2,042	34,314,000	112,200,000	138,300	10,404
Year 3: 2012	1,857	33,210,000	132,000,000	138,060	10,044
Year 4: 2013	1,698	30,894,000	99,000,000	134,460	9,684
Year 5: 2014	1,683	29,094,000	99,000,000	133,380	4,860
<b>TOTAL:</b>		<b>161,322,000</b>	<b>620,400,000</b>	<b>699,960</b>	<b>46,836</b>

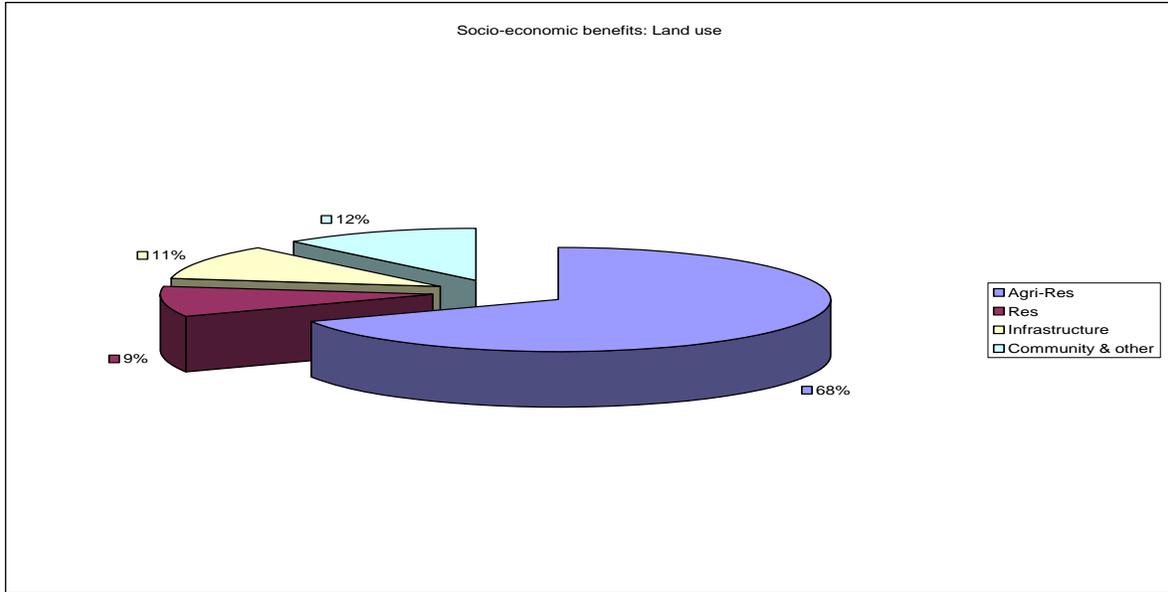
**Cost by Activity (USD)**

Year	FC+TS	BLS	Training	Equipment	Total
<b>Year 1: 2010</b>	12,586,220	1,120,000	411,187	5,482,488	<b>19,599,895</b>
<b>Year 2: 2011</b>	11,853,932	1,120,000	389,218	5,189,573	<b>18,552,723</b>
<b>Year 3: 2012</b>	10,828,604	560,000	341,658	4,555,442	<b>16,285,704</b>
<b>Year 4: 2013</b>	9,794,384	-	293,832	3,917,754	<b>14,005,969</b>
<b>Year 5: 2014</b>	9,549,800	-	286,494	3,819,920	<b>13,656,214</b>
<b>Total:</b>	<b>54,612,940</b>	<b>2,800,000</b>	<b>1,722,388</b>	<b>22,965,176</b>	<b>82,100,504</b>

The selected option is expected to yield the following socio-economic land use benefit: Land Use 68% for agriculture and residence, 9% for residence, 11% for infrastructure, and 12% for community and other purpose.



Chart 4: Socio-Economic Benefits – Land Use



### 4.3. STRATEGIC ASSUMPTION

To ensure relevancy, adaptability, responsiveness, quality, practicability and implement ability of the plan, nine key strategic assumptions were assessed on the followings:

1. To continue to require CMAC inputs in terms of mine action activities/interventions to enhance socio-economic and humanitarian requirement of the affected communities
2. CMAC demining activities will contribute to meet the national socio-economic development and risk reduction needs and international obligations in terms of meeting the APMBT and other legal requirements
3. Given the magnitude of the remaining landmine/ERW problem, there will be continued and escalated commitment from Royal Government of Cambodia and contribution for the international community to support CMAC operations
4. Given its status as a national institution, CMAC will continue to be a key and leading demining operator in Cambodia; it will continue to undertake that leadership role
5. There will continue to have resources which will be made available to CMAC to enable it to undertake the execution of its mission in terms of funding and material (equipment) assistance and quality human capital
6. As mine action evolved and the quest for enhance productivity in the increase, demining technologies and methodologies will also be evolved and enhanced. It is expected that they will be met with innovative interests from individuals, organizations and countries



7. Mine action is not a stand alone activity. To gain their optimum benefits, the landmine/ERW affected communities and local authorities will need to continue playing important roles in planning and prioritization of land release operations and ensuring that post land release’s land will be placed into the most productive use, and that they continue to take ownership of their own community landmine/ERW risk reduction strategy to ensure sustainability for responding to their own community needs.
8. Integrated mine action and development have been seen as one of the most effective way to mitigate landmine/ERW risks as well as enhancing livelihood of the poor and vulnerable and reducing poverty among the affected communities. Cambodia is a leading country in promoting this practice. Its experiences have been widely shared. This partnership practice must continue. Partnership with development and international agencies will be fostered.
9. Mine Action sector is complex, not only mine action activities are needed to be coordinated at the operational and community level; representation and coordination is equally important at provincial and national as well as international level to ensure alignment with national and international strategies, harmonization of funding assistance. Landmine/ERW affected many sector, thus mine action is needed by those sectors as well; well coordinated efforts will lead to aid effectiveness. Hence the national coordination mechanism must remain functional for that matter.



## V. STRATEGIC PLAN

### 5.1. VISION

CMAC is committed to maximizing land release of mines/ERW affected areas and eliminating mine/ERW incidents in Cambodia.

### 5.2. MISSION

Under its organizational mission statement “Saving Lives and Supporting Development of Cambodia”, the Five Year Strategic Plan mission will be as follows:

CMAC is to dramatically reduce the hazards and adverse socio-economic consequences of landmine 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.

### 5.3. KEY VALUE PRINCIPLES TO ACHIEVE THE VISION

To achieve the CMAC five year strategic vision “to maximizing land release of landmines/ERW affected areas and eliminating mine/ERW incidents in Cambodia”, CMAC will adhere to the following key principles.

#### 5.3.1. Mine Action Nature

Mine action is, above all, about the interaction of people and communities with a mine-infested environment and mine/ERW intervention. The purpose of mine action is to recreate a safe environment conducive to normal life and development. Accordingly, mine action refers to all those activities geared towards addressing the problems faced by populations as a result of landmines or ERW contaminations. In the context of CMAC, it encompasses four complementary core components:

- (a) Landmine/ERW risk education;
- (b) Landmine/ERW information including survey, mapping, and marking;
- (c) Landmine/ERW clearance and destruction of stockpiled anti-personnel landmines as required by Laws,
- (d) Training in mine action.

#### 5.3.2. Humanitarian Imperative

Landmines are first and foremost a humanitarian concern and they must be addressed from this perspective. They are also an impediment to rehabilitation and sustainable (socio-economic) development. In dealing with the landmine problem, CMAC will respect the fundamental humanitarian principles of neutrality, impartiality and humanity so that priority is given to those who are most vulnerable. Humanitarian mine-action activities focused on reducing immediate threats to the well-being of affected communities.

#### 5.3.3. Internal Core Values

Following an internal and transparent review process involving CMAC employees and external partners, the Cambodian Mine Action Centre agreed on the following core values

when undertaking its activities: safety, cost-effectiveness, honesty and integrity, appropriate technologies - methodologies and expertise.

#### **5.3.4. Principle of cooperation and partnership**

To ensure the most efficient response to the landmine threats, the Cambodian Mine Action Centre cooperates closely with all its partners involved in mine action, including NGOs, governmental and international organisations with the key aims that collective actions will lead to maximising efficiency and effectiveness in landmine/ERW clearance and best socio-economic benefit to the affected communities.

#### **5.3.5. National Frameworks**

The activities outlined in this strategy document will be implemented within the context of a larger framework of national legislation and policies, development and mine action strategies and guidelines such as those sit under the Sub-Decree 70 on the Socio-economic Management of Mine Clearance Operations and their follow-on guidelines and decisions issued by the CMAA and by the RGC. Cambodian and International Mine action standards will also be employed as a guide to CMAC operational standards.

##### **5.3.5.1. CMAS and IMAS Standards**

The operational aspect of this strategy is designed to be consistent with the Cambodian Mine Action Standards, which has been designed under the general guidance of the International Mine Action Standards. Future development of new or enhanced operational standards will be done within the national and international framework.

##### **5.3.5.2. CMAA Strategies**

This strategy also builds upon the various strategies such as the National Five Year Plan for 2005-2009, the ERW strategy (16 November 2006), the MRE strategy (24 May 2006), the Area Reduction Strategy (24 May 2006) defined by the Cambodian Mine Action Authority (CMAA), and the recent submitted APMBT' Article 5 extension request (1<sup>st</sup> version 30 April 2009), with which it is designed to be consistent with, and with those of the RGC.

## **5.4. KEY OPERATIONAL PRINCIPLES TO ACHIEVE THE VISION**

Consistent with the Cambodia APMBT' Article 5 Extension Request, CMAC assumes its five year operational intervention to rest upon two important platforms, (1) how CMAC prioritize its works, and (2) how its intends to release land. Notwithstanding the lack of reliable information on landmine/ERW remaining problem, quantitatively and qualitatively, CMAC envisages that it will work on these two principles which are consistent with the National Strategy as outline in the Extension request (1<sup>st</sup> version):

### **5.4.1. Priority Areas**

- In Banteay Meanchay, Battambang and Pailin provinces, targeted manual clearance and other demining tools will continue to occur to address high density mine concentrations – much of it considered part of the K-5 mine belt and war time strategic defence spots.
- In Oddar Meanchay and Preah Vihear provinces, in addition to targeting manual clearance and other demining tools to address high density mine concentrations – much of it considered part of the K-5 mine belt and war time strategic defense spots efforts will also need to focus on addressing the threat posed by the less well

understood conflicts of the late 1990s, including more detailed investigation and response to ‘in use’ and ‘abandoned’ route alignments, which pose a significant threat to the many migrants entering this province because of both anti-personnel and anti-tank mine threat. Focus is also clearance in support of Social Land Concession and historical sites.

- In various provinces, the mine action planning process will continue to demand consideration of areas of indeterminate threat for clearance. In these areas, CMAC will ensure thoroughly investigate the area using technical and non technical survey procedures as appropriate, to ensure that unnecessary clearance does not occur.
- In Eastern and south-eastern region, CMAC activities will focus on ERW Clearance (ERC) and Battle Area Clearance (BAC) together with ERW awareness initiative (CBURR).

#### **5.4.2. Land Release Methods**

CMAC will undertake different initiatives to release Suspected Hazard Area (SHA) land, through:

##### **5.4.2.1. The Conduct of a Baseline Survey**

The Baseline Survey will support the commencement of a process to release or reclassify land based on knowledge gathered through the Survey process.

This survey will be implemented throughout the mine affected districts identified in L1S. The first phase will be conducted in the top 21 most contaminated districts which spread across six provinces. This activity is implemented in collaboration with CMAA and other Demining Operators

##### **5.4.2.2. Land Release through Non-Technical and Technical Survey**

In support to the national Area Reduction Policy, CMAC will make effort to further reduce SHA without undertaking full clearance in areas where survey can gain enough information to remove the claim of a suspicion of mines in an area. Suspected and residual mine area will need to be released through technical and non technical survey method with integrated demining tools (including manual clearance, mine detection dogs and demining machines).

##### **5.4.2.3. Release through Clearance**

A combination of demining tools will be used to release area through clearance focusing on high priority area identified by the MAPU process. In the future, more Demining Machine (DM) will be used. It is expected that DM will greatly enhance clearance productivities. Technical survey will be employed to support clearance and ensure that unnecessary clearance does not occur.

## **5.5. CMAC CURRENT RESOURCES AND CORE ACTIVITIES TO SUPPORT THE VISION**

### **5.5.1. CMAC Governing Council**

The role of the Governing Council is to oversee the activities of CMAC and to give directions in term strategic directions and internal policies to ensure conformity with government strategies, mandates, legislations and standards. It is also responsible for the approval of CMAC strategies, budgets, work plans, programs, accounts and reports. Other tasks of such as quality assurance of landmine/ERW clearance operations, regulation,

advocacy, victim assistance and other national and international level responsibilities such as dealing with the APMBT will now fall within CMAA mandate.

### 5.5.2. CMAC Executive Unit

CMAC Executive Unit is the core body, which is responsible for demining activities. This body consists of a Director General, Deputy Director General and four departments: Department of Planning and Operations, Department of Support and Human Resources, Department of Finance, and Department of Training Research and Development. The focus to date for CMAC has been on safety, effectiveness and efficiency. CMAC continues to develop sound management capacity for its head quarters and field operations to further enhance the issue of productivity, internal policy and strategy, and standard compliance. With challenges of future scarcity of funding and the increased of project and funding schemes, CMAC sees the necessity to enhance its capability to better sustain old funding sources and access new ones, ensure adequate and appropriate use of marketing and communication messages and tools, and effective management of all projects, a new Deputy Director of Operations and Planning in charge of Project Management has been recruited to oversee the project management aspects and the Chief of Secretariat Office will be entrusted with the Fund Raising, Marketing and Communication agenda.

To support a sound management, gradual improvement has been made in the following areas:

- Financial Management: A fully functional financial management system in operation, with CMAC management at all levels clearly aware of their duties for proper financial management and control, and able to prepare, understand and scrutiny financial reports and data relating to their areas of responsibility.
- Human Resources Management: CMAC human resource planning, staff recruitment, personnel management, and human resources development have fully been functioning throughout the organisation, and with a sound policy and procedures working efficiently.
- CMAC Fixed Assets: CMAC has appropriated equipment for supporting its operations and an appropriate equipment management system, including maintenance, replacement, upgrading and disposal, in operation. These activities have been managing through computerized systems (SunSystem).

### 5.5.3. CMAC Core activities and Existing Resources:

- Mine Risk Education (MRE): CMAC has been strengthening its Mine Risk Education activities by introducing the Community-Based Mine and UXO Risk Reduction as a base for landmine/ERW Risk Reduction Education Program in Cambodia. The CBMRR and CBURR are excellent community based MRE



CMAC Mine Risk Education Activities

initiatives. Another innovated MRE tool was developed and implemented, the Mine/ERW Risk Education and Reduction team (MRER) which has the capability to address micro scale intervention as well as communicating MRE messages.

- Mines/ERW Survey and information: In current situation CMAC has 15 Technical Survey for Clearance teams and 13 Baseline Survey Teams. CMAC has in the last five years refined its technical survey and non-technical survey capability. Associate with this, a Land Release protocol was developed in line with IMAS. Technical and non-technical surveys were piloted in both low and high contaminated districts. A successful land release pilot scheme was undertaken in Battambang under the project ECOSORN using surveys and integrated demining tools. The preparation for a National Baseline survey is in place to resurvey all mine affected districts, starting with the first 21 most landmine casualty districts.



Technical Survey Team

- Mines/ERW Clearance: In this current situation CMAC has 27 platoons and 28 Unexploded Ordnance Teams deployed in 17 provinces. Around 70% of its resources are deployed in the North and North-western provinces: Battambang, Pailin, Banteay Meanchey, Oddor Meanchey and Preah Vihear Provinces. The mechanical Brush Cutters and Demining Machine are very suitable to most terrains and conditions of minefields in Cambodia. It has significantly contributed to speeding up demining activities by double or triple demining outputs if compared with normal manual clearance rate. EOD and Battle Area Clearance (BAC) tasks of both reactive and proactive methods were being intensified with the introduction of ERC, BAT, BAV and CBAT teams. The Mine Detection Dog Teams have found it very difficult to carry out their operations without the support of Brush Cutters. CMAC will have 23 units of brush cutters before the end of 2009. The Mine Detection Dogs could



Demining Platoon and field activities



also be used for quality control and supporting land release project. Explosive Detection Dog capacity has just been introduced and trialed.

- Training in mine action: Training has been in principle delivered to local mine action staff, but negotiations are under way for CMAC to deliver training to mine action programs from other mine/ERW affected countries. The training facility is well developed and provides a very good service for landmine clearance and EOD training and also Middle and Frontline Management training. CMAC has been utilizing the Training Centre for MDD training and certification, trial and evaluation of new technologies. Instructor development is an ongoing process; however, the current Training Centre staffs are in need to improve the necessary training and research skills. Adequate training aids need to be further developed and maintained.



- Research and Development (R&D): CMAC has one of the most professional and well managed R&D facilities. These R&D facilities has host a series of workshops and R&D activities every year, testing and evaluating a wide range of equipment, new technologies as well as new detection and clearance methodologies. R&D activities have been conducted by CMAC staff and by R&D specialised institutions from US, Japan, etc. CMAC has sufficient capacity and experience in research and development to accommodate to R&D in diverse areas including detection technology, mine and explosive ordnance detection dogs, mechanical systems, explosive harvesting program, etc.



Demining Machines and HSTAMID Testing at CMAC R&D Sites in Siem Reap

## 5.6. GOALS/OBJECTIVES TO ACHIEVE THE MISSION AND SUCCESS INDICATORS

At the core of strategic 17 goals and 78 objectives which are Specific, Measurable, Achievable, Realistic and Time bound (SMART), these strategic goals and objectives correspond to the contributions from a wide range of discussions and consultations with all key players, donors and partners. All goals and objectives are intended to be achieved by 2014, unless otherwise specified.

### 5.6.1. Landmine/ERW Information, Marking and Survey

**Strategic Goal 1:** To complete the Baseline Survey by 2012 to more accurately quantify the remaining mine/UXO affected areas

- Objective 1.1:** To complete Baseline survey of 13 high priority districts by 2010 and remaining districts by 2012
- Objective 1.2:** To strengthen coordination and communications between CMAC, CMAA and mine action partners to support Baseline Survey activities.
- Objective 1.3:** To continue supporting the CMAA toward completion the Baseline Survey on all mine/ERW affected districts in the Country.

**Indicators**

- Completion of Baseline Survey on 13 districts as allocated by CMAA
- Baseline Survey on all mine affected districts complete according to CMAA schedule
- Baseline Survey information used for subsequent demining planning

**Strategic Goal 2:** To deploy technical survey to support land release and release 719 km<sup>2</sup> through technical and non technical survey by 2014

- Objective 2.1:** To finalise technical survey standard operational procedures (SOPs) by January 2010
- Objective 2.2:** To integrate demining tools (mine detection dog teams, demining machines and manual) to improve technical survey best practice
- Objective 2.3:** To develop the land release policies in line with the Royal Government's land release protocol by mid 2010
- Objective 2.4:** To provide on-going training and establishing key staff to perform technical survey roles
- Objective 2.5:** To continue strengthening database system to capture all information from technical survey teams
- Objective 2.6:** Release 719 km<sup>2</sup> through technical and non-technical survey with integrated demining tools by 2014

**Indicators**

- All demining tools well integrated and functioned with technical survey
- Land release policies and procedure in place
- 719 km<sup>2</sup> release through technical and non-technical survey by 2014
- Key staff for technical survey trained and functioned, on-going from 2009

**5.6.2. Landmine/ERW Clearance**

**Strategic Goal 3:** To release 186 km<sup>2</sup> of landmine and ERW areas through full clearance by 2014

**Objective 3.1:** To improve skills of manual clearance teams to carry out multiple tasks and functions (Minefield/battle area clearance, survey, mapping and marking).

**Objective 3.2:** To increase demining capacity by mechanical clearance systems (brush cutters and demining machines) from 9 km<sup>2</sup> in 2010 to 12 km<sup>2</sup> from 2011, deploying a total of 8 demining machines and 23 brush cutters.

**Objective 3.3:** To increase explosive remnants of war clearance (ERC) capacity of clearance from 10 km<sup>2</sup> in 2010 to 13 km<sup>2</sup> in 2011.

**Objective 3.4:** To maintain a reasonable MDD capacity and increase UXO detection dog teams from 04 teams in 2009 to 06 teams in 2012.

**Objective 3.5:** To increase EOD capacity to respond to over 10,000 community requested tasks per year by increasing EOD teams from 26 teams in 2009 to 30 by 2011 and expanding Community ERW Based Risk Reduction Network to all districts in Cambodia.

**Objective 3.6:** To continue to improve standard operational procedures and field work practices to be more efficient and effective through quality management process.

**Objective 3.7:** To strengthen and improve integration of demining tools through training and field coordination.

**Objective 3.8:** To improve and strengthen Headquarters staff capacity to plan, communicate, monitor, document and report operation activities, and field staff capacity to coordinate tasks, plan for execute operational order and report operation activities.

**Indicators**

- 186 km<sup>2</sup> clearance achieved
- Realization of 8 new demining machines
- Increased capacity in battle area clearance operations
- 4 UXO Detection Dog (EDD) Teams operational
- All districts in Cambodia consist of CBURR Network
- Over 10,000 emergency tasks responded annually

- Effective utilization of demining tools
- Demining Operations SOPs improved
- Operations effectively coordinated, planned and executed

**Strategic Goal 4: To gradually engage in victim assistance activities and community development services**

**Objective 4.1:** To develop policies and procedures for engaging in victim assistance activities and Community Development services by December 2010

**Objective 4.2:** To conduct a study on the current conditions of the landmines/ERW victims and their families/communities and assess the needs of those victims to develop an appropriate action plan to provide victim assistance services by December 2010.

**Objective 4.3:** To continue promoting and implementing victim assistance related and community development activities to support high priority development initiatives targeted to benefit landmine victims as well as local affected communities

**Objective 4.4:** To develop a victim assistance database by December 2010

**Activities 4.5:** To conduct fundraising and encourage development partners and donors to support local communities affected by landmine/ERW starting from January 2010 onward.

**Indicators**

- Victim Assistance and Community Development policy and procedure developed
- Strong coordination with victim assistance and development partners
- Resources applied to post clearance development
- Victim Assistance Database developed and functional
- Victim Assistance and Community Development project implemented
- Existing CMAC tools utilized to support post clearance development

**5.6.3. Training, Research and Development in Mine Action**

**Strategic Goal 5: To realize CMAC's Training Centre to become a Centre of Excellence for Mine Action by 2014**

**Objective 5.1:** To develop a plan to convert the Training Centre to become the Centre of Excellence for Mine Action, offering regional and international training and research and development services by 2013

**Objective 5.2:** To review, revise and strengthen the Training Centre structure, system, and program to achieve national and international recognition and accreditation by 2014.

- Objective 5.3:** To closely link between training and field operations through strengthening the use of training cycle and roles of quality assurance.
- Objective 5.4:** To review and professionally develop all training courses which are made available through the CMAC Training Centre by 2010.
- Objective 5.5:** To review and improve training centre management, staff and instructors capability including recruiting and employment of new professional instructor to meeting the national and international standard by 2013
- Objective 5.6:** To continue upgrading the Training Centre's facilities to provide a professional training environment by 2013.
- Objective 5.7:** Establish mine action museum and facilities for research and development activities by 2010
- Objective 5.8:** To utilize the Training Centre and related facility to deliver internal and external training ad where possible in partnership with other national and international institution

**Indicators:**

- Training curriculum and material meet CMAC's operational requirements
- Training program received international accreditation
- Quality assurance and training well integrated
- Training Centre management restructured and system revised
- Professional development program in place to ensure instructors' competence both existing and new ones.
- Training centre facilities upgraded
- Museum and research facility established
- Qualified instructors in deliver training at the Training Centre
- International training promoted and implemented in partnership with recognized institutions established

**Strategic Goal 6: To improve mine action efficiency through introducing updated technologies and methodologies**

- Objective 6.1:** To continue cooperation with other institutions/agencies for conducting research and development of demining technologies
- Objective 6.2:** To continue to review and improve methodologies through in depth research and development
- Objective 6.3:** To continue to exchange and share know-how and skills with interested stakeholders.
- Objective 6.4:** To continue to promote demining technologies through participating workshops, meetings and symposium nationally and internationally

**Indicators:**

- New technologies tested and evaluated
- Partnership/s for demining technologies established
- Existing methodologies reviewed and new methodologies introduced
- Participation activities nationally and internationally
- Exchange programmes functional through workshop, field visits course study and study tours.

**Strategic Goal 7: To promote and strengthen international cooperation through policy and technical exchange program**

**Objective 7.1:** To engage in International Mine Action Policy and Technical forum at various International and Regional Mine Action Centre

**Objective 7.2:** To participate in international and regional Mine Action and related training program

**Objective 7.3:** To promote International Mine Action policy dialogue and technical exchange activities in Cambodia.

**Objective 7.4:** To encourage south-south cooperation among mine affected countries to share experience and expertise.

**Indicators**

- CMAC staff attend international and national policy and technical forum
- Exchange visits and training conducted

**5.6.4. Landmine/ERW Risk Education****Strategic Goal 8: To continue improving and introducing new initiatives in landmine/ERW risk education**

**Objective 8.1:** To expand and strengthen Community Based landmine/UXO Risk Reduction (CBM/URR) network in all districts in Cambodia in collaboration with MRE partners by empowering and transferring knowledge and skills to local authorities namely Commune Council members and police officers to be able to support risk education activities

**Objective 8.2:** To review and develop landmine/UXO risk education strategic plan by 2010 in line with the National Mine Action Strategy in close collaboration with MRE partners

**Objective 8.3:** To revise the CBMRR and CBURR Standard Operation Procedures (SOPs) and to deploy CMAC resources correspond to and meet the needs of the affected communities through CBMRR and CBURR network

- Objective 8.4:** To implement and coordinate events/activities for the annual National Mine Awareness Day (24 February) in close collaboration with MRE partners and CMAA
- Objective 8.5:** To continue raising landmine/ERW Risk Education campaign among students of public and private educational institutions
- Objective 8.6:** To implement a landmine/ERW Risk Education campaign for staff of NGOs and other agencies including private, public organizations working in high-risk areas.

#### Indicators

- All landmine/ERW affected districts have CBM/URR system operational
- All landmine/ERW affected commune have appropriate CBM/URR system operational
- New MRE strategic plan developed by 2010
- CBMRR and CBURR SOP revised by 2010
- Mine Awareness Day (MAD) implemented annually
- Schools, NGOs, public and private organization received MRE campaign

#### 5.6.5. National and International Obligation

#### **Strategic Goal 9: To adhere to the Anti-personnel Mine Ban Convention**

- Objective 9.1:** To coordinate and cooperate with CMAA to implement activities required by the APMBC.
- Objective 9.2:** To continue to raising awareness to the people in Cambodia about the Ban on AP Landmine Law.
- Objective 9.3:** To continue cooperating with and supporting relevant organizations to deliver activities as required by the Convention.

#### Indicators:

- Progress made against the Convention
- Cooperate and support provided to relevant organizations on the APMBC and related Laws
- The Cambodian Ban AP mine Law disseminated

#### **Strategic Goal 10: To continue compliance to IMAS and CMAS in CMAC' SOPs and internal policies & procedures**

- Objective 10.1:** To continue revising and developing CMAC' SOPs, internal policies and procedures in line with IMAS and CMAS for achieving the best practice
- Objective 10.2:** To continue contributing to and sharing know-how and experience to support the enhancement of IMAS and CMAS.

**Objective 10.3:** To develop and implement land release methodology in line with IMAS and CMAS.

**Indicators:**

- CMAC' SOPs, internal policies & procedures in line with IMAS and CMAS
- Participation in development of IMAS and CMAS
- Presences in technical workshops/meetings related to IMAS and CMAS

**5.6.6. Corporate Management**

**Strategic Goal 11:** To continue to strengthen operations-driven work practices through continual improvements of the support and finance systems and services

- Objective 11.1: To update and improve the support/finance policies and procedures to ensure effective and efficient support to operations.
- Objective 11.2: To undertake effective asset and supply management practices which reflects the best support to the field operations and achieve adequate maintenance/care.
- Objective 11.3: To continue to improve the functions of the Central Workshop in order to provide effective maintenance and repair services to CMAC's assets.
- Objective 11.4: To continue to improve the management of information system to ensure a smooth communication as well as data management, sharing and safe storage.

**Indicators**

- Support and Finance policies and procedures updated
- Field operations timely and effectively supported
- Equipment and assets well maintained
- Information well managed, shared and safely stored

**Strategic Goal 12:** To continue strengthening Total Quality Management

- Objective 12.1** To continue reviewing and establishing sound policies and procedures within CMAC in line with the Total Quality Management System.
- Objective 12.2** To maintain ISO 9001-2000 certification for CMAC's operations and planning department
- Objective 12.3** To establish policies and procedures in line with Strategic Goal 5 for Training Centre to obtain ISO certification by 2013
- Objective 12.4** To continuously strengthen quality assurance and internal audit practices of all CMAC activities to ensure compliance with the systems

**Indicators:**

- All policies and procedures in line with ISO
- ISO certification for operations and planning department maintained
- ISO Certification for Training Centre achieved
- Quality system well maintained

**Strategic Goal 13: To improve corporate and project management systems and practice to ensure effectiveness and efficiency of project implementation**

- Objective 13.1:** To improve and strengthen senior managers' capabilities and capacities to develop, implement and control overall strategic plan.
- Objective 13.2** To continue developing staff capacity through donor technical assistance programs (Technical advisers to counter parts)
- Objective 13.3:** To review and enhance project management policy and procedures to ensure efficiency in project implementation, resources (HR, Finance, Asset) management, M & E, and reporting
- Objective 13.4:** To improve the quality of project design and project management (implementation, coordination and reporting)
- Objective 13.5:** To provide sufficient project management training to key project management staff in order to enhance their project management ability.

**Indicators**

- Senior Manager involved in developing and implementing strategic plan
- Staff capacity enhance through Technical Assistance program
- Practical Project Management Policy and Procedure implemented
- Timely and effective project implementation, control and reporting
- Project implementation internal and external coordination harmonized
- No donor complaints

**Strategic Goal 14: To strengthen CMAC human resource development and management**

- Objective 14.1:** To establish appropriate human resource development strategic and action plans
- Objective 14.2:** To conduct overall assessment and analysis and taking action to improve CMAC' staff occupational, health and safety and socio-economic situation

**Objective 14.3:** To review and improve Human Resource policies and procedures to maintain high retention and staff motivation

**Objective 14.4:** To cooperate with other agencies for providing training through local, regional and international institutions to enhance staff capacity both technically and in general skills.

**Objective 14.5:** To establish succession planning for all key staff positions

**Indicators:**

- Number of key staffs received national and international professional and technical qualifications
- Reliable human resources development system in place
- Better occupation, health and safety systems and best practices
- Human Resources Policies and Procedures updated
- Staff socio-economic well being improved
- Succession planning in place

**Strategic Goal 15: To develop and implement effective Communication, Marketing and Fund Raising activities**

**Objective 15.1:** To continuously improve and update CMAC's information through websites and media.

**Objective 15.2:** To actively engage in national and international symposiums, workshops, meetings and campaigns to promote supports to mine action

**Objective 15.3:** To continue strengthening relationship with development partners and donors through enhancing communications and requirements.

**Objective 15.4:** To strengthen relationship with CMAA and Government Ministries through participating in meetings, workshops and regular communications.

**Indicators:**

- Sustained donor contributions
- Updated information and disseminated
- Good relationship with development partners and donors
- Activities related to CMAA and Governmental Institutions well coordinated

**5.6.7. Cross-Cutting Issues**

**Strategic Goal 16: To continue promoting gender in mine action**

**Objective 16.1:** To promote gender in mine action by nurturing equal opportunity for women to work in CMAC.

**Objective 16.2:** To provide gender friendly working environment, policies and procedures

**Objective 16.3:** To continue to encourage female presence in management positions

**Objective 16.4:** To promote gender mainstreaming in all CMAC's mine action activities

**Indicators:**

- More women employed by CMAC
- Policies, Procedures and working environment reviewed
- More women in management role

**Strategic Goal 17:** To continue to promote HIV/AIDS awareness within CMAC organization and communities living nearby CMAC Operations.

**Objective 17.1:** To provide and strengthen HIV awareness by coordinating with HIV/AIDS National Authority and NGOs to deliver HIV/AIDS awareness to all CMAC staff.

**Objective 17.2** To develop and integrate HIV/AIDS awareness within Mines/UXO awareness program where CMAC operations take place.

**Indicators:**

- HIV/AIDS awareness programmes delivered
- Community living nearby CMAC's site received

## 5.7 RESOURCE MOBILIZATION

Manual deminers will remain the core demining force of CMAC. They compose of normal platoons, mobile platoons and other small mobile teams such as Community Mine Clearance Team (CMC), Technical Survey Team for Clearance (TSC), Battlefield Clearance Team (BAT, CBAT and BAV), ERW Clearance Team (ERC). Small teams are more flexible and mobile and can respond to clearance, marking, explosive ordnance disposal and removal and mine risk reduction task requirements quickly.

Mechanical Demining (MD) and EOD teams will be expanded to a considerable extent. CMAC plans to deploy as many as 8 Demining Machines and 30 EOD teams. The MD is very effective and productive tool; it speeds up the demining work substantially. Manual vegetation cutting, which takes around 75% of the total manual demining time, will be eliminated through the use of mechanical vegetation cutters/ Mechanical Demining. The EOD, ERC and BAV teams are deemed very essential as the mine/UXO problem remains a serious issue and impact on the human lives and community development in all former battle areas around the country.

The total staff will be around 2,200, of whom around 95% will be field staff. CMAC will maintain its support staff to a minimum level. Demining Unit headquarters will be reduced, as well as the number of large multiple platoons demining sites. This means that most of the budget will be channelled to support demining operations.

The selected strategic option 1 will see that CMAC delivered land release through full clearance of 186 km<sup>2</sup>, and 719 km<sup>2</sup> through technical and non-technical survey. Chart 6 provides the break down of land release productivities annually. Chart 6 provides the level of staff needed to meet the option 1 requirement, broken down annually. And Table 10 provides brake down of the level of financial support needed including the projected RGC and International Donors' contribution.

Chart 5: Level of Clearance Productivity from 2010 to 2014

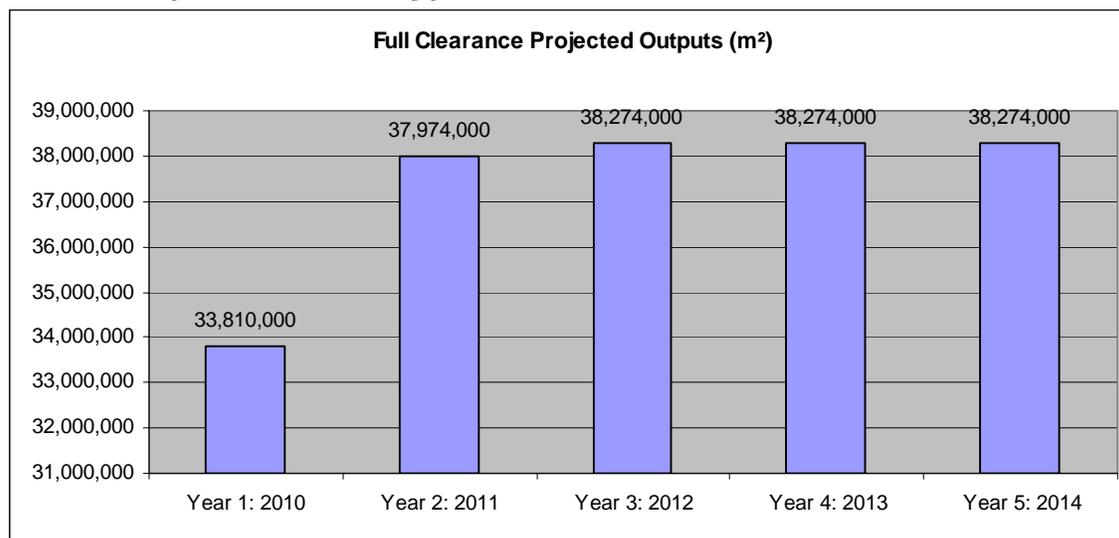


Chart 6: Level of staff required from 2010 to 2014

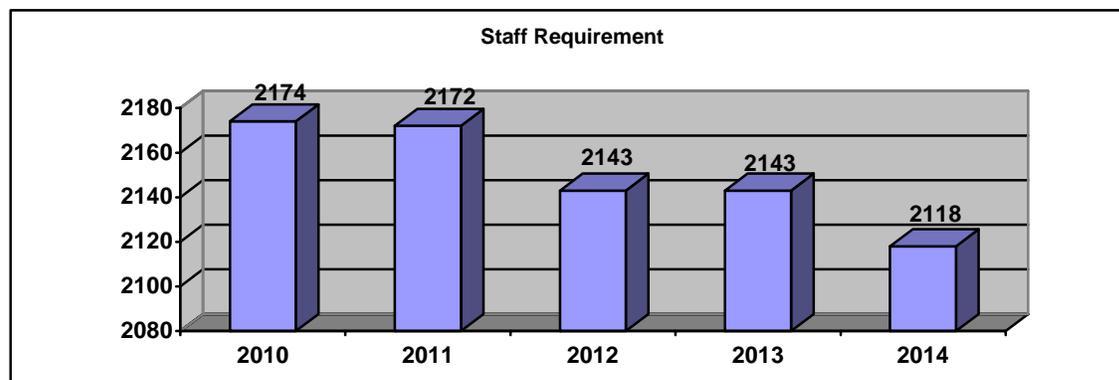


Table 10: Projected Level of financial inputs needed under option 1: broke down between RGC and International donors

Table 10:

Year	Donor	Government	Total	Donor	Govt
Year 1: 2010	17,639,905	1,959,989	19,599,895	90.0%	10.0%
Year 2: 2011	18,151,611	2,016,846	20,168,457	90.0%	10.0%
Year 3: 2012	16,206,203	2,859,918	19,066,121	85.0%	15.0%
Year 4: 2013	15,525,523	2,739,798	18,265,321	85.0%	15.0%
Year 5: 2014	15,314,391	2,702,540	18,016,930	85.0%	15.0%
<b>TOTAL:</b>	<b>82,837,633</b>	<b>12,279,091</b>	<b>95,116,725</b>	<b>87.1%</b>	<b>12.9%</b>

Chart 7: Projected Level of Financial Input

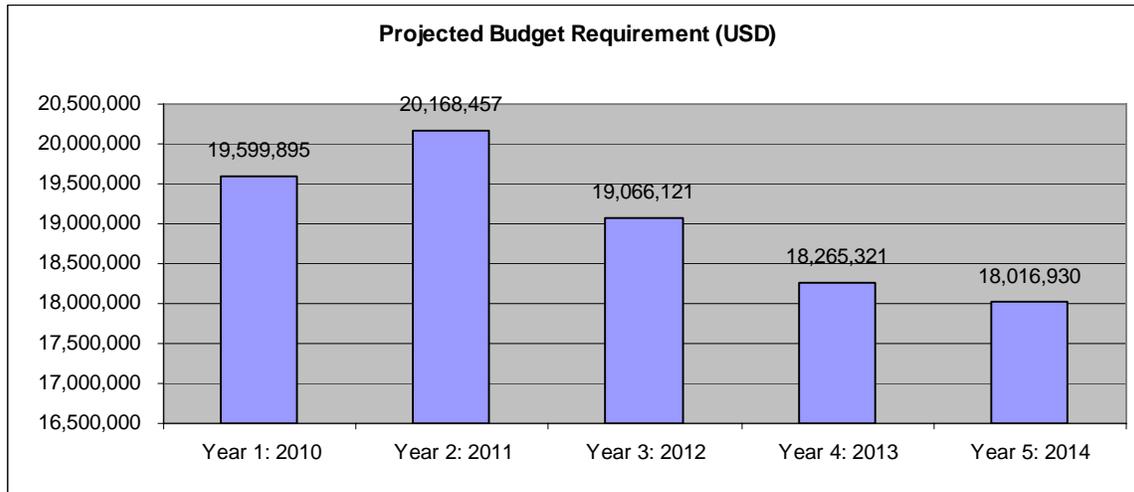
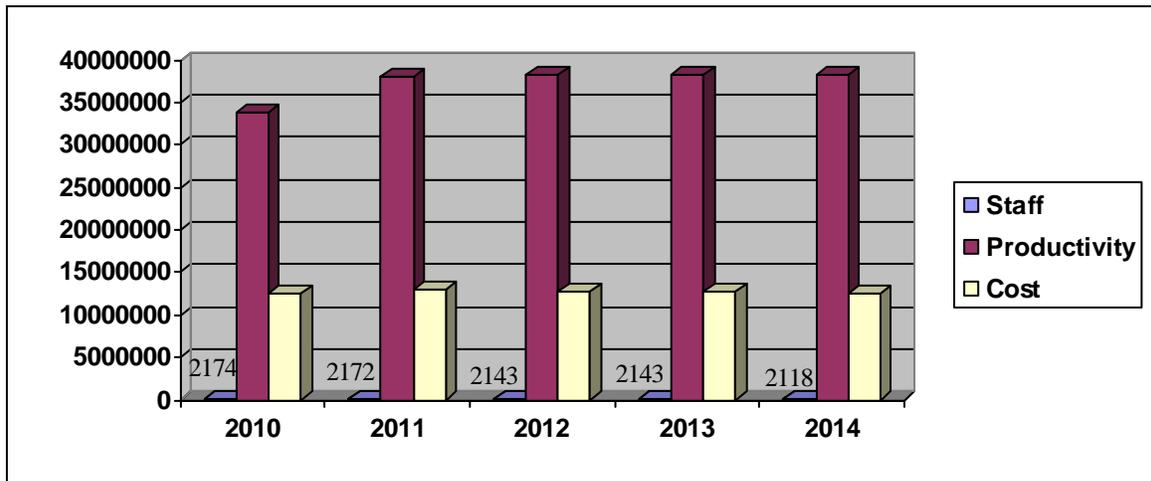


Table 11: Resources statistics by year and expected productivity

Year	Staff	Productivity (m <sup>2</sup> )	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
<b>TOTAL:</b>		<b>186,606,000</b>	<b>719,400,000</b>	<b>825,720</b>	<b>63,715,192</b>



## VI. RISK MANAGEMENT

Like any plans, the implementation of the Strategic Plan may encounter some unexpected issues; they can be internal or external. The following risks may arise from the implementation of this Plan:

1. **Funding Issue:** As indicated in the plan, CMAC will need a budget between 12 to 13 million US dollars per year. Raising this large amount of money will require several donors/Government to consistently contribute to the program. CMAC relies mostly upon international assistance, which accounts of 95% of its total budget annually. If a donor or donors decide to pull out their financial support, CMAC will no longer be able to deliver its mission as planned. Funding (international) is a crucial issue for CMAC. Mitigating this risk, required (1) proactive communication policy and actions with existing donors, seeking their understanding and communicating CMAC needs; (2) establish fund raising and marketing campaign regime targeting both existing and potential future donors; (3) enhance communication and relationship with the RGC to both communicate CMAC needs and seek funding support through all available means; and (4) continue delivering good performance in management and demining productivity to sustain Government, donors and commercial contractors confidence.

2. **Demining Technology:** Manual demining is a slow and painstaking job and need supporting technology to speed up the work. So far, some progresses have been achieved in research and developing new generations of demining technology to assist demining work. In the last 10 years CMAC has benefited from many researches and development initiatives that have contributed toward enhancing the pace and quality of demining works undertaken. The risk is that if the international community reduce or stop its spending on research and development in mine action technologies and making them available to CMAC, demining productivity will not be enhanced. Mitigating this risk, CMAC will continue to encourage the international community to invest in new technologies by making CMAC staff and facility available for mine action research and development initiatives.



3. **Environmental Factor:** Weather condition (such as rain, flood) could become serious issues, which affect demining operations; it restrict accessibility and deter movement of demining tools risking the lost of time and expanding unnecessary resources. To mitigate this risk, CMAC will continue to enhance its operational mine action planning toward a more flexibility system as to avoid team



standing down in adverse weather condition.

- 4. Equipment Supply:** CMAC currently does not build depreciation into its operational cost, as doing so would considerably increase the cost for operations. CMAC has been receiving in-kind donations from donor countries such as Japan, the United States, etc. If these in-kind contributions cease to come, CMAC will face a formidable problem of equipment shortage as it has not reserve fund for their replacement. This can affect the demining operations to a considerable extent. To mitigate this risk, CMAC will make all efforts to encourage donors' equipment contribution in form of new purchase or surplus donation.

- 5. Staffs Capacity:** This is an important factor, which needs to be addressed appropriately to accommodate changes arising from the implementation of the Plan and the prevailing mine action environment. If people are not ready, the Plan would not be successfully implemented. Therefore, a capacity building programme needs to be in place and effectively implemented. The risk is that not having sufficient funding to support capacity development. Mitigating this, CMAC will use all means internally available and encourage financial and in-kind support for this initiative.



- 6. Continued Border Tensions:** This may affect CMAC's full ability to clear or survey border area. It may risk the security and safety of its workforce. Mitigating this risk, CMAC intent to remain closely in communication with the relevant military establishment at all level and with the Cambodia-Thai border committee. CMAC units will remain vigilant when operating near border area.
- 7. Partnership with development** has been one of the successful indicators for mine action. It is also assumed that current partnerships with international and national organizations, NGOs and development agencies will continue and expand in order to support CMAC activities going into the future years with financial and in-kind resources, sharing of knowledge, experience and expertise. There may be a foreseeable risk of losing this partnership through fatigue and other competing interests. Mitigating this, CMAC will strengthen it cooperation and collaboration and improving it communication practice. At all possible work to integrate mine action and development.

## VII. CONCLUSION

It is the CMAC’s intention to use this Five Year Strategic Plan as a road map for CMAC continued fulfilling its mission as mandated set by the Royal Government of Cambodia.

For this next five years, this document outlines 17 goals and 78 objectives for CMAC to meet. They will be revised on an annual basis as required in coping with the changing mine action landscape, socio-political-economic and development environment, through open consultations with relevant key stakeholders in mine action and other sectors. Once communicated, this ‘Plan’ will be served as a SMART guide for the development of a more detailed operational plan by each of the CMAC functions.

It is no doubt that through the course of implementing this ‘plan’, CMAC will encounter with multi-facet challenges. Many of them are out of its sphere of control such as the recent global financial crisis. Nevertheless, CMAC management team and staff are committed to the way forward to expand its sphere of influence and control toward successful operations.

Taking the available resources and commitment of CMAC staff and its senior management efforts into account, and together with the capacity building plan and the trust of CMAC donors/Government, it is highly expected that the current Five-Year Strategic Plan will be achievable, successful and effective.

With this ‘Plan’ in hand, CMAC will be in an advantageous position to mobilize all possible resources to sustain its demining activities, to enhance its clearance productivity and to achieve its mission.

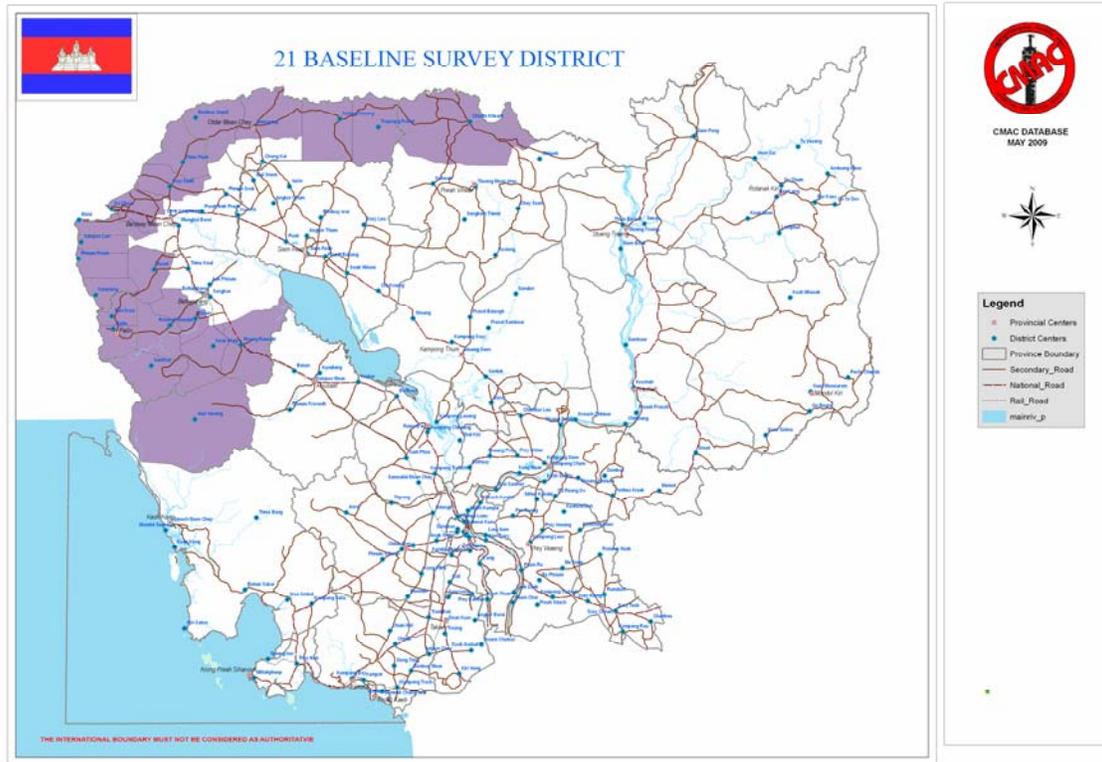


Landmine victims struggling for their new lives

## VIII. ANNEXES

### Annex 1

### MAP of top 21 Casualties Affected Districts



21 Prioritized districts for Baseline Survey: Sala Krau, Malai, Ou Chroy, Thma Puok, Kamrieng, Samlout, Phnum Proek, Rotanak Mondol, Pailin, Veal Veang, Samraong, Svay Chek, Choam Khsant, Sampov Lun, Banteay Ampil, Trapeang Prasat, Bavel, Koas Krala, Banan, Anlong Veang, Moug Ruessei

## Annex 2:

## Abbreviations and Acronyms

CBAT	Community Battle Area Clearance Team
CBMRR	Community Based Mine Risk Reduction
CC	Commune Council
CMAA	Cambodian Mine Action and Victim Assistance Authority
CMVIS	Cambodian Mine Victim Information System
CRC	Cambodian Red Cross
DFP	District Focal Point
DU	CMAC De-mining Units
Ha	Hectare
IMA	Integrated Mine Action
IMAS	International Mine Action Standards
LIS	National Landmine Impact Survey
M&E	Monitoring and Evaluation
MA	Mine Action
MAP	Mine Action Planning
MAPU	Mine Action Planning Unit
MDD	Mine Detection Dog
MRE	Mine Risk Education
MUC	Mine and UXO Committee
NGO	Non-Governmental-Organization
PC (CBMRR)	Provincial Coordinator
PMAC	Provincial Mine Action Committee
QA	Quality Assurance
QC	Quality Control
RGC	Royal Government of Cambodia
SOP	Standard Operating Procedures
UXO	Unexploded Ordinance



# Five-Year Strategic Plan 2010-2014

