ASEAN REGIONAL MINE ACTION CENTER

Integrated Approaches to Explosive Ordnance Risk Education in ASEAN Member States

EORE organised by Spirit of Soccer reinforces school-based safety messages in Cambodia, photo credit: ARMAC

With support from:

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Foreword and Acknowledgements

ASEAN's Kuala Lumpur Declaration ASEAN 2025: Forging Ahead Together contains a commitment "to promote the ASEAN Regional Mine Action Center to study, document and share best practices to address humanitarian aspects of landmines and explosive remnants of war".[1]

In pursuit of ASEAN's commitment, this Study is an initiative of the ASEAN Regional Mine Action Center (ARMAC). ARMAC is a center of excellence established under the ASEAN Political-Security pillar to encourage the efforts to address landmines and explosive remnants of war (ERW) for interested ASEAN Member States (AMS). Inaugurated on 25 May 2016, the Center aims to collectively tackle the humanitarian aspects of landmines and ERW through an integrated approach of experiences sharing, skills training and other capacity building activities.

ARMAC gratefully acknowledges the funding for the Explosive Ordnance Risk Education (EORE) Project from the Japanese Government through the Japan ASEAN Integration Fund (JAIF) to develop a comprehensive and integrated approach to EORE that will build on the best practices of ASEAN Member States in educating their populations on the dangers of explosive ordnance.

The full title of this Study is "Integrated Approaches to Explosive Ordnance Risk Education in ASEAN Member States". For convenience hereafter, it is abbreviated to "The EORE Study".

The EORE Study was based on 12 months of consultations with over 180 explosive ordnance risk education experts in the affected ASEAN Member States as well as specialised international sources. There are too many knowledgeable contributors to mention here, however Ms Dwi Prameswari, ARMAC's Senior Technical Officer, played a lead role in facilitating the consultations and Mr Oum Sang Onn, independent adviser, provided strategic guidance.

In the development of the substance of this Study, ARMAC acknowledges the numerous contributions and support of the mine action community within and beyond the ASEAN region. The Study brought key EORE stakeholders from the five explosive ordnance affected ASEAN countries together to share their knowledge and experiences to build a regional approach to EORE. The official Focal Points, designated by ASEAN in each country, played a crucial role in coordinating intensive consultations, with experts and stakeholders and providing professional advice during 2019-2020.

[1] *ASEAN 2025: Forging Ahead Together,* page 42, www.asean.org/storage/2015/12/ASEAN-2025-Forging-Ahead-Together-final.pdf

Abbreviations and Acronyms

AMS	ASEAN Member States
APMBC	Anti-Personnel Mine Ban Convention
ARMAC	ASEAN Regional Mine Action Center
ASEAN	Association of Southeast Asian Nations
AXO	abandoned explosive ordnance
BCC	Behaviour Change Communication
C4D	Communication for Development (UNICEF)
CCM	Convention on Cluster Munitions
CCW	Convention on Certain Conventional Weapons
CMAA	Cambodian Mine Action and Victim Assistance Authority
CMAC	Cambodian Mine Action Centre
DCA	Danish Church Aid
EORE	explosive ordnance risk education
EOD	explosive ordnance disposal
ERW	explosive remnants of war
GICHD	Geneva International Centre for Humanitarian Demining
HALO	Hazardous Areas Life-support Organisation Trust (The HALO Trust)
HI	Humanity & Inclusion (formerly Handicap International)
HMA	humanitarian mine action
ICBL	International Campaign to Ban Landmines
ICRC	International Committee of the Red Cross
IED	improvised explosive device
IDP	internally displaced person
IMAS	International Mine Action Standards
IMSMA	Information Management System for Mine Action
INGO	international non-governmental organisation
JAIF	Japan ASEAN Integration Fund
KAP	Knowledge, Attitude & Practice
MAC	mine action centre
MAG	Mines Advisory Group
MRE	mine risk education
NGO	non-governmental organisation
NMAA	national mine action authority
NMAS	national mine action strategy
NSAG	non-state armed group
NPA	Norwegian People's Aid
NRA	National Regulatory Authority for UXO/Mine Action Sector in the Lao PDR
NTS	non-technical survey
PWD	persons with disabilities
SHA	suspected hazardous area
SOP	standard operating procedures
TDA	Thai Civilian Deminer Association
TMAC	Thailand Mine Action Centre
ToC	Theory of Change
UNDP	United Nations Development Programme
UNICEF	United Nations International Children’s Emergency Fund
UNMAS	United Nations Mine Action Service
UNOCHA	UN Office for the Coordination of Humanitarian Affairs
UXO	unexploded ordnance
VA	victim assistance
VNMAC	Vietnam National Mine Action Centre

1. EXECUTIVE SUMMARY

In May 2019, the ASEAN Regional Mine Action Center (ARMAC) initiated a research and consultation project to develop integrated approaches to improve explosive ordnance risk education (EORE) for affected communities in ASEAN Member States (AMS). The project builds upon the successes of EORE in some countries and shares these with the broader community so that all AMS, and in particular those individuals most at-risk, can be educated on how to avoid explosive ordnance and what actions to take when encountering them.

Five AMS have been heavily affected by explosive ordnance, namely Cambodia, Lao PDR, Myanmar, Thailand, Vietnam. ARMAC's consultations during 2019-2020 with stakeholders in these nations clearly revealed that there are a wide variety of approaches to integrate of EORE. This is not surprising given these countries' unique national contexts, including the complexity and extent of explosive ordnance contamination, governance and institutional arrangements, cultures and beliefs, phases of mine action and available resources.

The EORE Project consultations in the EORE affected AMS indicated wide support by stakeholders for integrating and connecting EORE with many other associated activities. These nations have integrated, mainstreamed and linked EORE in different and creative ways to reinforce EORE efforts and influence risk behaviours.

Nevertheless, it should be noted that complex challenges come with integrated approaches, particularly central coordination between organisations, accreditation, reporting, monitoring and evaluation. Integrating EORE is not a 'one size fits all' activity. Countries in an early phase of mine action need to consider what sectors and humanitarian actors can be targeted. They can draw on the advice of specialist international agencies and other countries with experience in the field of behaviour change in the mine action and protection sector.

The reality is that EORE programmes have to compete for limited resources, often diminishing. Globally, EORE has been given lower priority by the mine action sector for the last decade and has received limited attention, resources and donor funding, according to the GICHD.[2] However, each of the affected AMS have found inventive ways of integrating or mainstreaming EORE to leverage the resources of other programmes, harness volunteer networks and reach wide audiences through mass media and new communications technology.

While there is no single model to integrate EORE that should be imposed or implemented for all countries, this Study illuminates effective practices, lessons learned, and innovative approaches from the explosive ordnance-affected AMS as well as valuable international standards, perspectives and theoretical frameworks.

Based on ARMAC's research, consultations, and international perspectives, this Study offers a number of recommendations about effective EORE practices and approaches to integrate EORE. The recommendations cover all stages of EORE from theory to implementation including: casualty data collection, needs assessment, risk profiling, community liaison, theories of change, monitoring and evaluation, innovation and technology, beneficial connections through integrating EORE, principles for integrated EORE and coordination and cooperation. In considering the various recommendations in this Study, it is important to assess the particular needs of each country, and specific approaches be developed to EORE based on the local realities. More EORE in each case is not necessarily better, when a more analytic approach can lead to cost-effective targeting of resources.

ARMAC hopes that this Study will promote dialogue and contribute to continuous improvements in the effectiveness of explosive ordnance risk education to reduce casualties in the affected communities of the AMS and in other countries with similar problems.

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[2] "Explosive Ordnance Risk Education Sector Mapping and Needs Analysis", GICHD, Geneva, November 2019.
Note that GICHD now uses the term 'Explosive Ordnance Risk Education' (EORE) instead of 'Mine Risk Education' (MRE).

2. INTRODUCTION

The presence of explosive ordnance in the soil poses constant threats to the safety of the people, hinders socio-economic development and aggravates humanitarian problems in the five affected ASEAN Member States (AMS). The absolute numbers of casualties reported over the past years is considerable. The official data reveals the following reported estimates of casualties:

- Cambodia: 64,855 (1979-2019)[3]
- Laos: over 50,000 (all known)[4]
- Myanmar: 725 (2015-2018)[5]
- Thailand: 3,469 (all known)[6]
- Vietnam: 100,000 (all known)[7]

Fortunately, explosive ordnance casualties have been reduced dramatically in the AMS. This reduction is the result of a number of factors including: local coping mechanisms by the at-risk communities, massive clearance operations, mine field marking, degradation of certain types of landmines and particularly effective explosive ordnance risk education (EORE). However, the reduction in casualties implies no room for complacency in continuing to deliver EORE, particularly because the messages, methodologies and approaches need to be adapted and reinforced with current at-risk communities/groups, new generations and moving populations. Furthermore, internal armed conflicts persist in some regions of ASEAN.

This does not necessarily imply large and costly EORE campaigns in countries where casualties have gone down substantially (for example Lao PDR which reported 302 in 2008 and 24 in 2018), but to do EORE smarter and targeted based on evidence.

Despite the concerted efforts and achievements by mine action stakeholders over the decades, explosive ordnance remains a menace to civilians, often including the most vulnerable and marginalized people in their countries and communities.

There is consensus in the mine action sector within AMS and globally, that EORE activities should, where possible, be integrated with wider humanitarian, development, protection and education efforts, as well as with ongoing survey, clearance and victim assistance activities to reduce the risk to the affected population and decrease their need for risk-taking.[8] This Study investigates the diverse linkages and organisational machinery of integration in each of the five explosive ordnance affected AMS and focusses on the practices that appear to be most effective and appropriate for the time and place.

Details about the impact and context of explosive ordnance is outlined in Annex A: Country Papers: Cambodia, Lao PDR, Myanmar, Thailand, Vietnam.

Scope and Process

This Study is one of the efforts contributing to the ASEAN Political-Security Community Blueprint 2025 to "Promote the ASEAN Regional Mine Action Centre to study, document and share best practices to address humanitarian aspects of landmines and explosive remnants of war." Therefore, the essential purpose of this Study is to improve the effectiveness of risk education for affected communities in AMS by developing integrated approaches to EORE and sharing good practices.

[3] Cambodia Mine/ERW Victim Information System (CMVIS)
[4] National Regulatory Authority for UXO/Mine Sector in Lao PDR
[5] Myanmar Mine Risks Working Group
[6] Thailand Mine Action Centre
[7] Vietnam National Mine Action Centre
[8] Oslo Action Plan 2020-2024, Action #28, www.osloreviewconference.org

Geographically, the Project focussed primarily on the explosive ordnance affected communities in the ASEAN Member States of Cambodia, Lao PDR, Myanmar, Thailand and Vietnam.

EORE aims to ensure that people in the affected communities are aware of the risks from explosive ordnance and are encouraged to behave in a way that reduces the risk to people, property, and the environment. The objective is to reduce the risk to a level where people can live safely, and to create an environment where economic and social development can occur free from the constraints imposed by contamination.

EORE plays a very crucial role in reducing casualties. EORE activities have been implemented in affected AMS for many years during and after the conflicts. The activities can be grouped into four main components: (i) public information dissemination; (ii) education and training; and (iii) community mine action liaison and (iv) new communications technology.

The study, developed through 12-month consultation and research process involved, in summary:

- defining project terminology and scope
- a fact-finding field visit to a province experiencing high casualties in Cambodia
- review of international EORE research and resources
- a preparatory questionnaire to EORE experts
- National Consultative Meetings with EORE stakeholders in the capital cities of the five affected ASEAN Member States
- presentation of the Preliminary Results of the research and consultations to a side event on 26 November 2019 at the Fourth Review Conference of Anti-Personnel Mine Ban Convention in Oslo, Norway
- international feedback and perspectives in response to the Preliminary Results
- preparation of the draft Study on integrated approaches to EORE
- presentation of the final Study to the ASEAN Regional Consultative Meeting on 6 February 2020.

For further details see Annex B: Project Research Approach and Methodology.

3. EXPLOSIVE ORDNANCE RISK EDUCATION FRAMEWORK

3.1. International Frameworks

International conventions outline obligations for States Parties and also provide guidance to other non-signatory nations regarding EORE. The Action Plans are States Parties' road maps for five-year periods and are reviewed and updated at Review Conferences. The main ones are:

- Anti-Personnel Mine Ban Convention (1999)
  - Cartagena Action Plan (2010-2014)
  - Maputo Action Plan (2015-2019)
  - Oslo Action Plan (2020-2024)
- Protocol V to the Convention on Certain Conventional Weapons (2006)
- CCW Amended Protocol II on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices
- Convention on Cluster Munitions (2008)
  - Vientiane Action Plan (2011-2015)
  - Dubrovnik Action Plan (2016-2020)
- International Mine Action Standards (IMAS), particularly IMAS 12.10 on EORE

- IMAS Mine Risk Education Best Practice Guidebooks[9] (UNICEF/GICHD) (2005)

For further details see Annex C: EORE Related International Conventions and ASEAN States Parties and Signatories to United Nations Treaties.

3.2. Oslo Action Plan 2020-2024

In response to the disturbing global increase in the number of civilian casualties from explosive ordnance since 2013, EORE was a priority issue at the 4th Review Conference of the APMBC held on 25 to 29 November 2019 in Oslo, Norway. There was momentum around the EORE pillar and acknowledgement that the sector needs to revitalize its practices and work more closely with other sectors (in line with the integrated approach). Also, for the first time, EORE has a separate section in an Action Plan thereby increasing visibility of the thematic and States Parties' commitments towards EORE.

The Review Conference adopted the Oslo Action Plan 2020-2024[10] which commits States Parties to the Mine Ban Convention to several key MRE actions outlined in Chapter VI:

- Action#28 Integrate mine risk education activities with wider humanitarian, development, protection and education efforts, as well as with ongoing survey, clearance and victim assistance activities to reduce the risk to the affected population and decrease their need for risk-taking.
- Action #29 Provide context-specific mine risk education and reduction programmes to all affected populations and groups at risk. Ensure that such programmes are developed on the basis of a needs assessment, that they are tailored to the threat encountered by the population, and that they are sensitive to gender, age, disability and take the diverse needs and experiences of people in affected communities into account.
- Action #30 Prioritise people most at risk by linking mine risk education and reduction programmes and messages directly to an analysis of available casualty and contamination data, an understanding of the affected population's behaviour, risk pattern and coping mechanisms, and, wherever possible, anticipated population movements.
- Action#31 Build national capacity to deliver mine risk education and reduction programmes with the ability to adapt to changing needs and contexts, including the delivery of such programmes to affected communities in the case that previously unknown mined areas are discovered.
- Action #32 Report on mine risk education and other risk reduction programmes in Article 7 reports, including the methodologies used, the challenges faced and the results achieved, with information disaggregated by gender and age.

3.3. Integrating Explosive Ordnance Risk Education

For convenience in this Study the term 'landmine and explosive remnants of war risk education' is abbreviated to 'Explosive Ordnance Risk Education (EORE)'. The International Mine Action Standard (IMAS) 12.10 on Mine Risk Education is currently undergoing a substantive revision. The revised IMAS 12.10 is expected to be adopted by the IMAS Review Board in early 2020 and be re-named 'Explosive Ordnance Risk Education' (EORE) instead of 'Mine Risk Education' (MRE) to better describe the scope of devices that the mine action community is addressing, including the proliferation of improvised explosive devices.

[9] www.gichd.org/en/resources/publications/detail/publication/international-mine-action-standards-for-mine-risk-education-best-practice-guidebook/

[10] Oslo Action Plan 2020-2024, www.osloreviewconference.org

IMAS 12.10[11] emphasises that EORE should be well coordinated to enable consistency of risk education content, optimise the use of resources, and minimise any duplication of effort. EORE activities should be fully integrated with the other mine action, humanitarian, protection and development activities to achieve a synergistic effect. Mine action planning should be integrated with all relevant sectors and organisations working in explosive ordnance impacted areas. Mine action authorities should coordinate with other national institutions and government bodies for integrating EORE into their programmes and services, e.g. education and health. IMAS 12.10 refers to the importance of integration of EORE in various contexts:

- EORE integral part of mine action
- EORE within comprehensive risk-reduction strategy
- EORE support for victim assistance
- EORE in schools and curriculum
- Coordination mechanisms and tools
- National Mine Action Authority and Mine Action Centre responsibilities including to ensure that EORE is integrated into overall mine action
- According to IMAS, EORE organisations should be accredited by the National Mine Action Authority and should apply IMAS or national standards and adapt their Standard Operating Procedures to conform to those standards.

IMAS 12.10 outlines the benefits of integrated approaches to EORE, through:

- Communication of safety messages
- Data gathering in at-risk communities
- Community liaison
- EORE support for demining and explosive ordnance disposal
- EORE support for victim assistance
- EORE support for advocacy
- EORE in schools targets a very large number of children
- Child-to-child approach
- Strengthening community capacities for EORE

This comprehensive IMAS model of integrated EORE can be visualized in the diagram below:

[11] IMAS 12.10 Mine/ERW Risk Education, edition 2, 23 May 2018, www.mineactionstandards.org/en/standards/document-detail/standard-document/1527082292-mineerw-risk-education/action/show

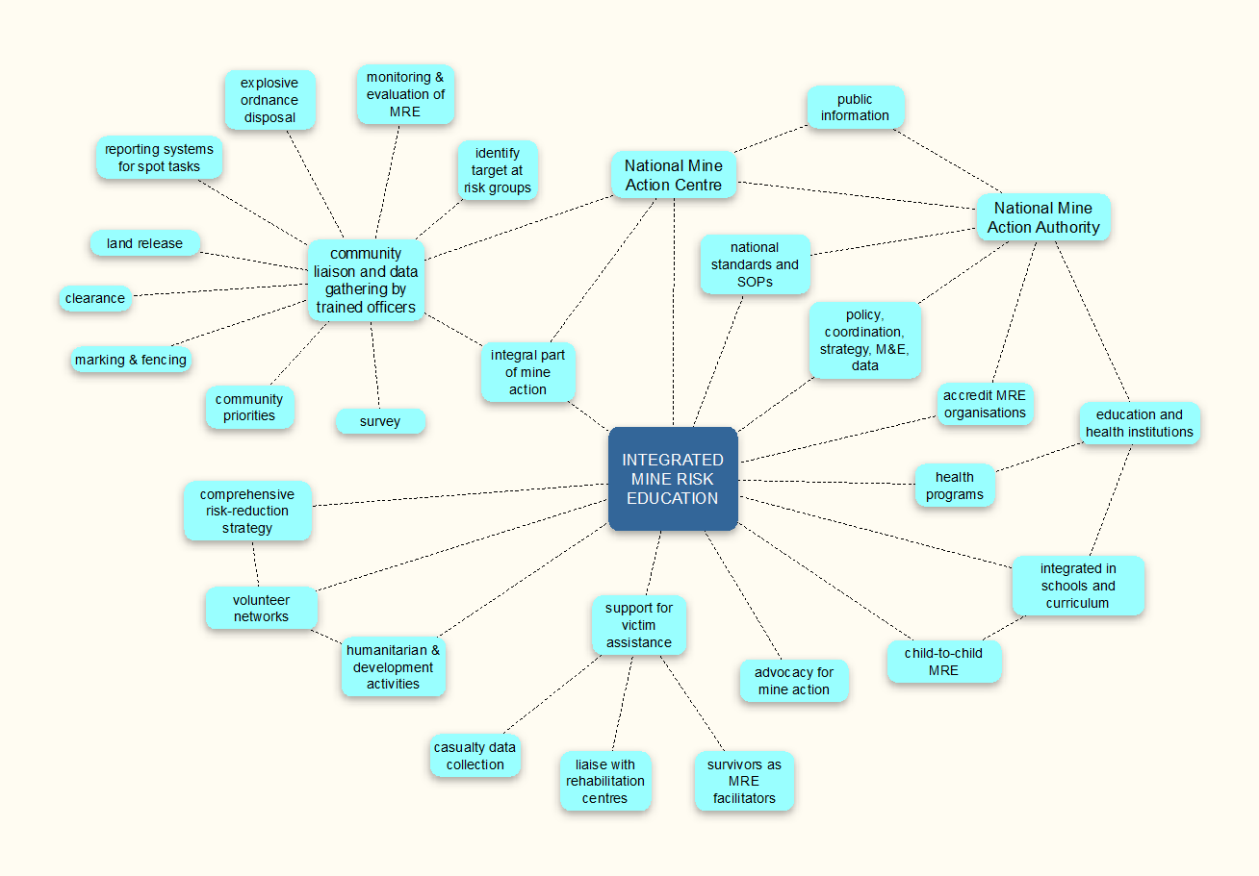


Figure 1: IMAS 12.10 model of integrated EORE

In the context of this Study, integrated approaches to explosive ordnance risk education (EORE), the meaning of the term 'integrated' is understood as:

a) combining or coordinating separate elements so as to provide a harmonious, interrelated whole,
b) organized or structured so that constituent units function cooperatively and more broadly,
c) advantageous or beneficial connections between EORE and other activities, programs and institutions.

With the intention of exploring all possibilities and approaches that have emerged from the combined long experience of mine action in the region, from the outset of the ARMAC research, a broad interpretation of 'integration' of EORE was adopted, beyond the usual humanitarian mine action parameters. The definition of the term 'integrate' essentially means to combine one thing with another to form a whole. However, in the context of mine action, integration has taken many different forms in ASEAN countries. A liberal definition of 'integration' could be simply to 'link' or 'connect'. This approach enabled the study to examine and map the wider advantageous links and the organisations involved in the connections.

ARMAC's consultations in 2019 revealed that the explosive ordnance affected AMS have implemented many, and in some cases more, than these elements of integrating and reinforcing EORE activities. This is not surprising given their unique national contexts, including the particular extent of explosive ordnance challenges, long experience, available resources, historical evolution and phases of mine action.

Consultations in the explosive ordnance affected ASEAN Member States indicated wide support for integrating EORE. Details of how EORE has been integrated in the ASEAN nations is mapped in the five diagrams shown in Annex A: Country Papers: Cambodia, Lao PDR, Myanmar, Thailand, Vietnam. These diagrams show the diverse connections between EORE and other actions and the machinery of the links to organisations involved.

3.4. EORE Theories and Concepts

Theory is an integral part of designing effective interventions such as EORE. A theory presents a systematic way to understand, explain and predict human behaviours. The main advantages of using behavioural change theories are to:

- precisely identify problems and specific at-risk groups
- identify how to bring about positive change in behaviour
- provide a theoretical framework in narrative or diagram forms
- articulate principles and values
- understand causal and correlational relationships
- develop effective methodologies, tools and messages
- critically challenge and test approaches to improve their outcomes / impact
- ensure everyone is 'on the same page' contributing to the same goals
- justify the need for allocation of resources (donor, government, private, philanthropic)

Effective behaviour change methodologies for explosive ordnance risk reduction can be designed and enhanced by adapting theories and conceptual tools from various fields. Of particular relevance to this Study are:

- Theory of Change (ToC) from the international development aid and humanitarian sector
- Behaviour Change Communication (also known as Communication for Development (C4D) from UNICEF's work
- Socio-Ecological Model frameworks to help understand the multifaceted and interactive effects of personal and environmental factors that determine behaviour
- Strategy Mapping for project management planners to realistically 'join all the dots' i.e. the causal connections, using diagram tools
- Solutions Fluency, a new participatory methodology from the education field
- Multi-media communications theories and strategies, particularly harnessing rapidly changing communications technology and social media

A Theory of Change (ToC) is a structured explanation of how certain activities or interventions are understood to produce a series of results, which in turn contribute to achieving final intended impacts. ToC can be developed for any level of activity or intervention, such as for, an event, a project, a programme, a policy, a strategy or an organisation.

Professional organisations engaged in EORE should have a clear statement of their planning framework which explains the rationale for their interventions and underlying assumptions. This rationale guides their actions, is generally required by donors and useful to stakeholders.

There are many behaviour change theories which can be used to improve EORE communication approaches. Ultimately policy makers and practitioners have to integrate EORE more widely with other (non-communication) activities to facilitate behaviour change amongst those who have no other options (the 'forced') which cannot be done by means of communication alone.

For further details see Annex D: EORE Theories and Concepts.

4. EXPLOSIVE ORDNANCE AFFECTED ASEAN MEMBER STATES

4.1. Explosive Ordnance Contamination in ASEAN Member States

The complex nature of explosive ordnance contamination afflicting the sub-Mekong nations differs due to the technological weaponry used in past conflicts. An overview of the main types of landmines and explosive remnants of war are shown in the figure below:

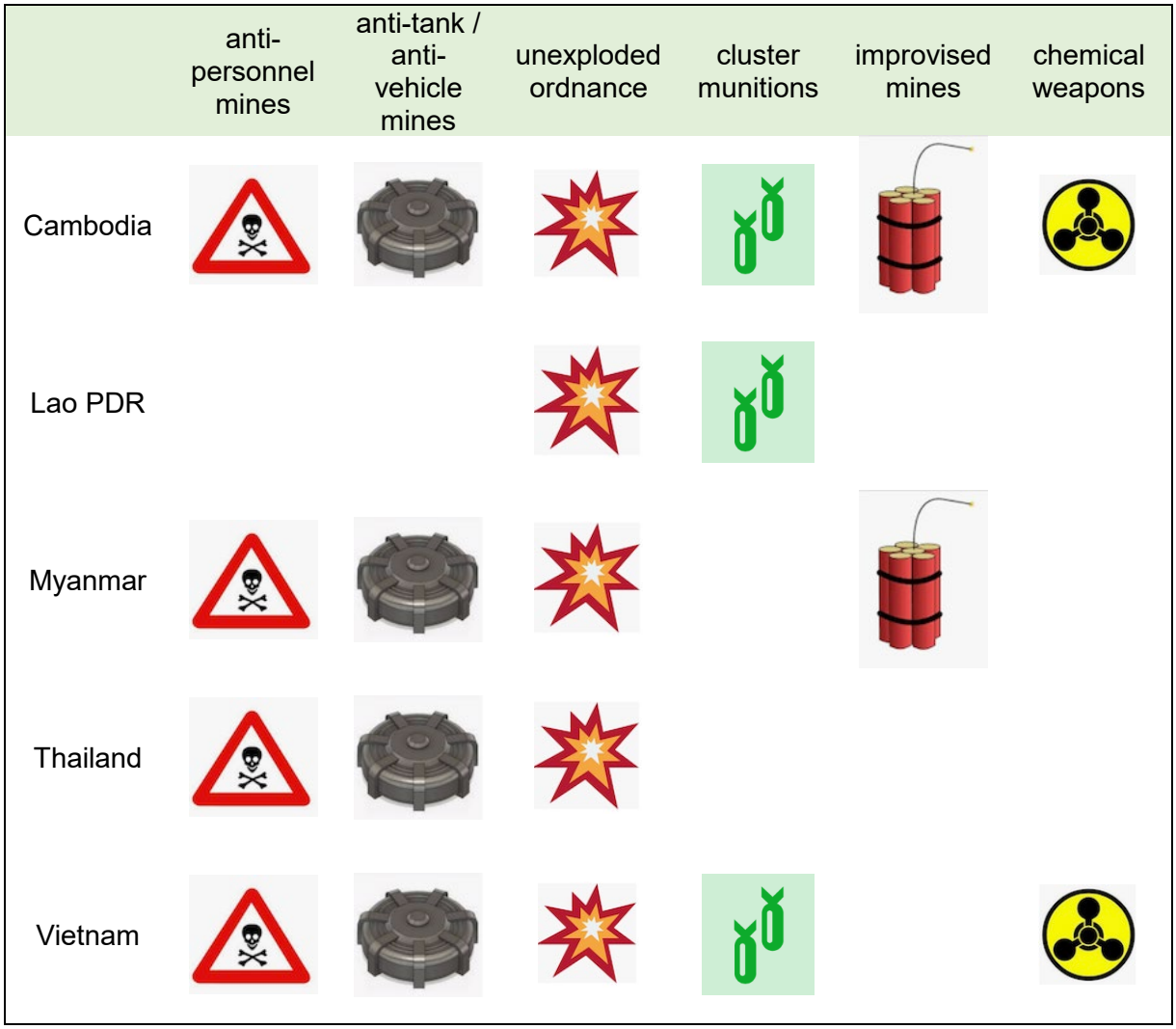


Figure 2: Explosive Ordnance Impacts in ASEAN Member States

The information collected in the five Consultation Meetings enabled ARMAC to build mind maps (see Annex A) of the diverse integrated EORE connections within each country, examine key issues and analyse risk profiles of high-risk groups.

4.2. The Diversity of Integrated Approaches

Through ARMAC's consultations, the research adopted a broad understanding of 'integration' to investigate all the diverse ways that EORE has connected beneficially with other associated activities. This broad interpretation of 'integration' revealed many kinds of links which complement and/or offer reciprocal advantages between EORE and other programs, interventions and institutions. A few of the examples documented in explosive ordnance affected AMS were:

- Mine Action Centres *train* EORE organisations
- Mine Action Authorities *accredit* EORE organisations
- Mine Action Operators *consult and inform* local community leaders
- Leaflets and posters *explain* EORE messages
- Ministries *coordinate and make policy* for EORE agencies
- Phone apps cost-effectively *create awareness* and enable real time *reporting* of explosive ordnance
- Development aid projects *build cooperation* with EORE organisations
- Police *inform* local communities about laws
- Education *mainstreams* EORE
- Volunteer networks *disseminate* EORE cost-effectively
- Health programs *leverage resources* and *mainstream* EORE
- Sports programs *reinforce* EORE messages
- TV and Radio programs *disseminate* EORE messages widely
- United Nations agencies and INGOs *provide standards and resources* for EORE
- Donors *provide resources and monitor* EORE
- Events *promote* EORE and *build* networks

4.3. Risk Profiles

To be effective, integrated responses to EORE must be based on a detailed understanding of the choices people make and the risks they take as well as the factors that affect them. Systematic collection and analysis of reliable gender and age-disaggregated casualty data is necessary to help shape a 'risk profile'. The 'risk profile' informs the approaches that should be taken to change behaviour and reduce risk. Casualty data should also be disaggregated by disability—using the Washington Group Short Set of Disability Questions[12]—because certain people have difficulties participating (e.g. walking, seeing, hearing, cognition, self-care and communication).

In each of the five explosive ordnance affected AMS, the participants at the Consultative Meetings identified specific groups of people at high-risk of casualties and examined their unique motivations. The experts also discussed possible solutions to change risk behaviour aimed at specific high-risk groups, including EORE augmented with other integrated interventions. The summary of high-risk groups and activities in Table 1 (below) combines knowledge from the experts and presentations at the Consultative Meetings as well as government reports.

[12] Washington Group Set of Disability Questions, www.washingtongroup-disability.com/washington-group-question-sets/short-set-of-disability-questions/

Cambodia	Lao PDR	Myanmar	Thailand	Vietnam
People: • Men (67%) • Boys age <18 (22%) • Women (9%) • Girls age <18 (2%) Risk activities: • People handling ERW including for fishing (41%) • ERW bystanders (25%) • Collecting food (7%) • Clearing land for new settlement / farming (8%) • Travelling (4%) • Making fire (4%) • Collecting / cutting wood (4%) • Farming (5%) • Military activity (1%) • Demining (1%) (CMVIS data[13]) --- The most economically insecure: primarily men, farmers and fishers • People in landmine and former battle areas: using heavy agricultural machinery, logging, hunting, collecting vegetables • Army forces patrolling border • Children guarding cattle in suspected area • Internally displaced people • People who improvise mine/UXOs	In the last decade over 40% of casualties were children. Young children find UXO while playing, collecting forest products or scrap metal. Workers and farmers, Scrap metal dealers/collectors, People living in high-risk areas Farmers (mostly boys and men); Risk takers usually are aware of the risks posed by UXO but decide to take risks in their daily life (collecting forest products, making fire, playing with UXO, try to salvage UXO) Extreme poor who own no land collect scrap metal (particularly men). This is under-reported as government financial support is not given to victims whose accident occurred as a result of deliberately collecting UXO. Recent accidents result of people lighting fires over UXO buried in the ground – often to stay warm and cook.	• Children • Men, especially farmers, villagers, fishermen • Single and elderly women-headed households living in conflict areas • Local people unaware of risks • IDPs / refugees • Poor people living in conflict areas doing livelihood activities --- Key findings of KAP survey[14]: • 47% of villagers report they are a problem in daily lives. • 24% of respondents stated that there are places they cannot go around their village area due to explosive device. • Broader drivers of conflict and poverty reinforce risk taking behaviours. • Accidents during the collection of forest products 65%, forced labor 10%, travelling, 4%; • 90% of children said the village did not know how to protect themselves from explosive devices. • 83% of respondents have never received information on explosive device.	• Accidents during the collection of forest products 65%, forced labour 10%, travelling, 4%; • Villagers who collect forest products • Illegal migrants • Deminers • Local patrol officers • Forest rangers • Security forces • Local government officers, land development authority; • Holiday travellers. Under-privileged local people living in border areas in the proximity of mined areas. Most are poor and so economic forced to enter into mined areas to fetch forest products for consumption and sale. In many cases, people from other places come to collect mushrooms unaware of mined areas.	• Scrap metal collectors and dealers • Farmers in central and border areas • Primary and secondary school students There is currently no nationwide casualty data collection mechanism, however data is available from three of the most contaminated provinces.

Table 1: High-risk groups and activities

[13] Cambodian Mine Action and Victim Assistance Authority, CMVIS data, January 2018 to December 2019, www.cmaa.gov.kh/en/documents?cbocateflie=15

[14] Myanmar Mine Risk Education National Working Group, "Knowledge Attitude & Practice Survey: The Impact of Landmines and other Explosive Remnants of War in South Eastern Region of Myanmar, February 2013-June 2014"

Table 1 reveals many similarities between the high-risk groups and their activities at the time of the accident in the AMS, including:

- scrap metal collectors and dealers
- fishermen salvaging explosives
- curious young children
- adolescent boys
- moving populations
- farmers using deeper agricultural machinery
- villagers who move explosive ordnance off their fields
- deminers
- former soldiers
- security forces patrolling borders
- bystanders near people tampering with UXO
- extreme poor people collecting forest products

To design appropriate and effective interventions, it is useful to profile these high-risk groups into categories (consistent with international research[15]) as follows:

Of these five categories, the first four can be directly targeted by risk education. The Theory of Change is basically that if these people are appropriately advised about the nature of the danger, the probability of the incidence and about safer behaviour, then they are likely to avoid risk taking behaviour, thus reducing the number of casualties.

The fifth behaviour category is deliberate risk-taking behaviour by people who believe they have no choice. This intentional 'forced' category is more challenging to address because these people are already aware of the risks. A more integrated, collaborative, multi-sectoral and multi-level response is needed. Some possible integrated approaches to influence the dangerous behaviour of the 'forced' category were suggested at the Consultative Meetings:

- enable risk takers to define problems and explore solutions themselves
- use participatory processes to influence people
- assist with offering alternative livelihood options
- identify alternative employment

[15] Risk Profile from Efficiency, Effectiveness and Impact in Mine Action by Mines Advisory Group, February 2015, https://1.shocasecdn.com/Shm16ntagq8d4S174ahrlvgjpxl.pdf

- provide access to micro-loans
- provide skills training
- prioritize land release for the most vulnerable people
- mobilize resources for infrastructure development and private public partnerships
- use influencers and leaders to convince people that the benefit is not worth the risk
- coordinate with police to explain the laws regarding handling explosives
- adopting the principles and of a public health approach which might involve a shift in emphasis from zero risk to risk reduction

4.4. Effective Practices and Innovations in Integrating EORE

Many examples of innovations and best practices have emerged from the ASEAN explosive ordnance-affected countries. Where appropriate, these initiatives could be emulated, adapted or scaled up in other explosive ordnance affected countries / regions. For further details about these practices, see Annex A. Country Papers: Cambodia, Lao PDR, Myanmar, Thailand, Vietnam.

4.5. Challenges and Issues

During the consultative meetings in five ASEAN Member States (Cambodia, Lao PDR, Myanmar, Thailand and Vietnam), the discussion regarding mine action and EORE programs, complexity, challenges, lessons learned, key issues in those countries resulted as defined under Table 2 below:

Comparison of mine action and EORE programs, complexity, challenges, lessons learned, key issues

Mine Action and EORE Programs				
Cambodia	Lao PDR	Myanmar	Thailand	Vietnam
The Cambodian Mine Action and Victim Assistance Authority (CMAA) coordinates the implementation of the National Mine Action Strategy 2018-2025[16]. Cambodia is a signatory to the Anti-Personnel Mine Ban Convention. Cambodia has developed extensive well established and integrated EORE networks to address the complexity and widespread nature of contamination across the country.	The National Regulatory Authority for the UXO/Mine Action Sector in the Lao PDR (NRA) coordinates the implementation of the National Strategic Plan for the UXO Sector in Lao PDR 2011-2020 "The Safe Path Forward"[17]. Lao PDR is a signatory of the Convention on Cluster Munitions and has consented to be bound by Protocol V to the Convention on Certain Conventional Weapons. Lao PDR has developed many EORE multi-sector networks through its long history of dealing with massive UXO contamination.	A national Mine Risks Working Group (MRWG), comprised of ministries, international, and national organisations and four state-level coordination agencies, takes the lead on risk education and victim assistance. Myanmar currently does not have a national mine action strategy. Although Myanmar is in the early phase of mine action, it has skipped ahead of institutional approaches to EORE, by developing and promoting a customised EORE smart phone app.	The National Committee for Humanitarian Mine Action (NMAC) and Thailand Mine Action Centre (TMAC) are the leading authorities. Thailand's Second Article extension request has a plan for Mine Action Plan for 2017-2023. Thailand is a signatory to the Anti-Personnel Mine Ban Convention. Thailand no longer retains anti-personnel mines and declared 85% of the total contaminated area mine free.[18] Thailand has a very low casualty rate due to progress of mine clearance and effective EORE.	The Vietnam National Mine Action Centre coordinates the Prime Minister's Program 504 (April 2010) and National Mine Action Plan for the Period 2010-2023[19]. Until recently mine action in Vietnam has been more independent than many other countries and more centralised and Government funded. To tackle extensive contamination of explosive ordnance, Vietnam has reached a wide audience through mass communication and EORE mainstreamed in primary school education. EORE is integrated in all primary and secondary schools in 4 project provinces (total 1,160 schools) by Catholic Relief Service.
Complexities				

[16] National Mine Action Strategy 2018-2025, www.cmaa.gov.kh/en/strategy/national-mine-action-strategy-2018-2025

[17] National Strategic Plan for the UXO Sector in Lao PDR 2011-2020: The Safe Path Forward www.nra.gov.la/resources/UXO%20Sector%20Strategy/SPFII%20%20Eng.pdf

[18] Thailand MOFA press release 9 August 2019, www.mfa.go.th/main/en/news3/6886/107586-Thailand-Mine-Action-Centre-Disposed-Anti-Personne.html

[19] National Mine Action Plan for the Period 2010-2023 – Vietnam, https://commons.lib.jmu.edu/cisr-globalcwd/188/

Cambodia	Lao PDR	Myanmar	Thailand	Vietnam
Complex messaging Interagency and intra-sector coordination and synchronisation of these services Analysis of sudden increase in casualties in Cambodia in early 2019 EORE supports increased knowledge of risk, but it cannot remove the drivers of unsafe behaviour completely	Need to assess the needs of the different areas / provinces Local language barrier in raising awareness and campaigning Solutions to risk behaviour of people who know about safe behaviour but ignore it (reckless) and people who have little or no option but to intentionally adopt unsafe behaviour (forced)	Coordination between government officials / departments. Number of different armed groups Adopting safe behaviours is difficult especially in the areas of current armed conflicts	How to define audiences and design messages How to coordinate effectively between agencies Information management: collection, assessment, analysis and dissemination Communicating to different languages	While EORE is improving in disseminating information and raising awareness, even when aware of mine risks, people may face livelihood barriers in adopting risk avoidance behaviours
Challenges				
Cambodia	**Lao PDR**	**Myanmar**	**Thailand**	**Vietnam**
Budget / funding limits for EORE Declining or stagnant interest of donors Limited geographical coverage of EORE due to poor road condition Expand the role of police beyond 16 provinces Strengthen role of MRE Technical Working Group Policy consistency Coming up with new methods of EORE	Prioritising spending of limited funds Language/dialect barriers. Illiteracy Difficulty to implement new technology Limitation of EORE teams Bridge the gaps of generation and focus on missing targets (teenagers) Presentation methods and materials are not conveying the key messages to the community	Ongoing conflict Language barriers Quality of translation of EORE messages into many different ethnic languages. Restricted areas by specific ethnic armed groups Coordination and cooperation between authorities and Mine Action stakeholders Lack of data collection	How to persuade scrap metal dealers to avoid risks Coordination of ministries to integrate EORE Sustainable EORE How to introduce EORE to people who bypass official checkpoints Impact on tourism industry of information about landmine danger	Lack of national mine action guidance/standards Scrap metal dealers and collectors Livelihood pressures Coordination issues How to effectively integrate EORE in school system. Teachers' limited knowledge on the explosive ordnance EORE is a less prioritised component in terms of resource allocation in mine action

30cm threshold for detecting anti-vehicle mines insufficient for deeper building developments Villagers become desensitized (complacent) about mine risks. Heavy compliance requirements of donors More outreach and branding (message)	Methodology of EORE message delivery for moving people Achieving community ownership of risk management to ensure reporting of suspected UXO to the NRA, and ensuring that all villagers are aware of contaminated areas Villagers do not attend safety briefings due to lack of interest or away from their livelihood activities	Difficult to organize the villagers for EORE sessions because their business is first priority for them Less human resources—difficult for one facilitator to handle all the tasks during EORE session		Changes of agriculture equipment which make farmers more vulnerable Ethnic groups' lack of access to EORE in rural and mountain regions Massive contamination area Limited resources
Lessons Learned				
Cambodia	Lao PDR	Myanmar	Thailand	Vietnam
SDG 18: Suggest to provincial Governors to report quarterly on the progress of mine action activity to the Minister Villagers care more about feeding their family, even though they knew the danger but they take risks - If the police authority are involved more, EORE activities may have more positive results EORE results are linked closely with livelihood necessity. All mine actors/operators should follow the national EORE guidelines	Importance of good relations with village chiefs / establish networks with local authorities Different tailored EORE messages delivery to children, adults and specific at-risk groups Before and after evaluation to help with information retention Integrate EORE with sports Provide rewards for learning Use positive messages	Weak monitoring Under-reporting of mine accidents Overlapping of EORE actors in one place Involve all stakeholders Have the dialogue with the village administrators prior to the EORE session Assess the local political/social situation before the EORE session is conducted Videos/visualization are more attractive for the audience Rather than presenting the messages by the facilitators, should have the two-way discussion with the audience	Education and prohibition from entering mined areas. Mixture of EORE, which messages are delivered from outsiders (military, survey and clearance operators) and messages developed / exchanged in communities by communities. Full participation of local authorities and communities Integrate EORE into survey and clearance activities is effective approach Minefield signs in three languages	Data collection technology and database (Digitalisation: CRS study case) Gender balance policy Evaluation methodology NMAC areas of lessons learnt • policy, planning and objectives • EORE approaches and materials • collaboration • coordination, management and monitoring • training • information gathering.

Key Issues				
Cambodia	Lao PDR	Myanmar	Thailand	Vietnam
Enabling / facilitating effective behaviour change National coordination issues Ownership of responsibilities unclear Gender-based considerations Human and financial resource limitations Unawareness of a national EORE guidelines Unclear EORE Theory of Change	Able to use UXO cleared land Decreased resources Different prioritization Behaviour change is difficult to achieve because of the necessity of people to access and use contaminated land for survival Focus on teaching people how to use land safely Achieving community ownership of risk management to ensure reporting of suspected UXO. Community participate in safety briefings – many villagers do not attend.	Broader drivers of conflict and poverty reinforce risk taking behaviours in the target populations. Teachers do not have time to teach EORE Misconceptions about minefield marking due to local customs / beliefs. Myanmar currently does not have currently have a national mine action strategy.	Cooperation with local authorities To ensure that all people that enter into areas with landmines have received EORE Given the low number of causalities, Thailand should prioritise and continue focusing on survey and clearance efficiently Difficult to access EORE resources	Lack of national strategy. Lack of national casualty surveillance reporting system Need for more consistency in EORE materials, messages, methodologies between different organisations working on EORE. Evaluating the impact of EORE. Successes include: • Widespread and systematic activities • EORE sessions provided to about 30 million people • Victims provided with support and assistance for livelihood and community integration • Low (reported) casualties

Table 2: Comparison of mine action and EORE programs, complexity, challenges, lessons learned, key issues

5. INTERNATIONAL PERSPECTIVES

During the 4th Review Conference of the APMBC held on 25 to 29 November 2019 in Oslo, Norway, ARMAC presented the Preliminary Results of its consultations with mine affected AMS at a side event to invite input and ideas from the international mine action community. The panellists included representatives from Afghanistan, Colombia and GICHD. The side event and Oslo Conference added value to the Study in several ways: by hearing about the experiences of other densely contaminated countries and learning of new developments at the international level from specialist organisations (particularly GICHD, UNICEF and the Explosive Ordnance Risk Education Advisory Group).

Global casualties from explosive ordnance declined from the 1990s to 2013, but have increased since then due to armed conflict, improvised explosive devices and massive displacement. The significant increase in recorded casualties has occurred in relatively few countries with intensive armed conflict—including Afghanistan, Libya, Nigeria, Syria, Myanmar and Ukraine.[20]

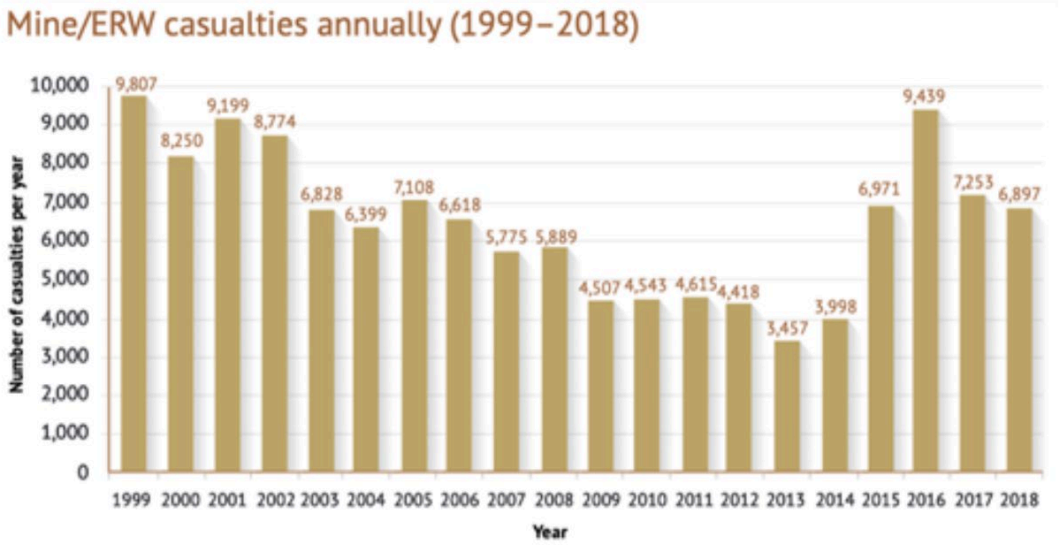


Figure 3[21]

Some of the most explosive ordnance-affected countries do not have national casualty surveillance systems which leads to under-reporting.

5.1. Afghanistan

Mr. Mohammad Shafiq Yosufi, Director, Directorate of Mine Action Coordination (DMAC)[22], commended the insights and comparisons of the key issues within the ASEAN region. He also recommended that AMS: consider the challenges that come with an integrated approach i.e. reporting, monitoring and evaluation etc. through a central body; and consider the complexity of integrated approach i.e. integrated EORE is not a 'one size fits all' activity. Consider what sectors and humanitarian actors can be targeted.

Afghanistan has adopted the term 'Explosive Ordnance Risk Education (EORE)' to include improvised explosive devices. Having founded on a long history of humanitarian mine action, some noteworthy features of integrated EORE in Afghanistan are:

[20] Landmine Monitor, 2019, page 54 http://the-monitor.org/en-gb/reports/2019/landmine-monitor-2019
[21] Ibid.
[22] Directorate of Mine Action Coordination www.dmac.gov.af

- EORE is both relevant and a vital pillar of the Mine Action Program
- Afghanistan Mine Action Standards (adapted from IMAS 12.10) ensure consistency in all EORE processes.
- Monitoring and evaluation is guided by extensive policies and standards to ensure consistent quality and reliable data. Tools like KAP Baseline surveys are used to monitor impact while pre and post testing is made mandatory for any modifications
- DMAC employs a Technical Working Group for EORE involving stakeholders from policy makers to implementing partners, making it a viable intellectual space.
- DMAC does not rely on conventional methods of risk education, instead it involves actors from all relevant sectors to adopt EORE to ensure wider reach through MoUs with many Government Ministries
- The EORE program has four categories:
    1. Formal—direct presentation by accredited partners using the approved EORE materials to groups of up to 25 people
    2. Informal using creative and participatory methods—direct presentation by other humanitarian actors or community volunteers; exhibitions in encashment centres (UNHCR, documented), transit centres (IOM, undocumented), and zero points (border points); school-based; mobile cinema to remote villages; and mass media (TV, radio, print)
    3. Training of Trainers—which created a wide pool of trainers, including community volunteers, across Afghanistan
    4. Landmine Safety Programme—delivered to the office workers, providing them with the ability to practice safe behaviour while working near contaminated areas.
- Hotline cards are distributed during every EORE activity; the hotline is used as a touchpoint for community members to communicate any Mine Action related concerns i.e. reporting suspicious items, explosive ordnances, and other issues which are referred by DMAC. The hotline also serves as means of evaluating impact of EORE related marketing efforts.

EORE in Afghanistan faces a number of challenges:

- Shortage of funds is a challenge in general, it restricts the freedom of planning and testing new methods and approaches. However, DMAC has been able to cope well with the help of its key partners including UNMAS.
- Security and access remain to haunt development efforts throughout Afghanistan as most regions are inaccessible due to presence of armed groups. However, DMAC has been able to access most regions with the help of extensive Community Liaison and its implementing partners.
- Culture is another barrier where the male-dominant spaces restrict reach to female populations. DMAC has responded by focusing on the structure of EORE teams i.e. most EORE teams are one male and one female trainer.

With UNMAS, DMAC is looking at Behaviour Change Communication as a tool to design and develop new EORE materials. As a result, two short video clips for EORE are currently being produced.

5.2. Colombia

Colombia, represented on the panel by Ms. Martha Isabel Hurtado Granada, Deputy Commissioner for Comprehensive Mine Action, Office of the High Commissioner for Peace[23], conveyed some relevant lessons learned from EORE in Colombia:

- to tailor messages with a differential focus of age, gender and ethnicity
- to provide specific information about the characteristics of the threat
- to build community capacities to provide first aid and care for victims in the pre-hospital phase
- to strengthen local leaders as prevention allies
- to coordinate of EORE actors to expand the impact of interventions
- to develop capacities of self-care

5.3. Explosive Ordnance Risk Education Advisory Group[24]

The Explosive Ordnance Risk Education Advisory Group (EORE AG) was launched in May 2019. It provides overall guidance to the sector and identifies ways to improve the integration, effectiveness, efficiency and relevance of EORE. The Advisory Group draws on the expertise of over a dozen UN agencies, international organisations and international NGOs who serve as members or observers to the group. It is co-chaired by UNICEF and a rotating NGO – currently the Mines Advisory Group (MAG) – and the GICHD serves as secretariat. The Advisory Group emphasises that national authorities responsible for mine action and EORE will continue to be the decision makers for plans to be carried out in their respective countries.

The key global principles for EORE[25] espoused by the Advisory Group are consistent with the main findings of this EORE Study:

- It relies on coordination
- It should be integrated with wider humanitarian, development, protection and education efforts, and with ongoing survey, clearance and victim assistance activities
- It should be evidence-based and therefore requires an injury surveillance system
- It should lead to behaviour change

[23] www.accioncontraminas.gov.co
[24] www.gichd.org/en/our-response/risk-education/advisory-group/
[25] Matthieu Laruelle, GICHD, presentation "Current International developments in Explosive Ordnance Risk Education", 6 February 2020, Siem Reap

- It should be gender and diversity sensitive
- It should be based on principles of 'do no harm' and conflict sensitivity

The Advisory Group also believes that risk education is a right.

According to the Advisory Group, it is important to:

- connect EORE practitioners to solve problems
- gain time
- foster collaboration
- overcome silos
- avoid the same challenges constantly having to be re-solved
- tap into the full human capability and collective intelligence across team cultures and geographic locations

5.4. International Explosive Ordnance Risk Education Working Group[26]

Formed in 2000, the International EORE Working Group is an online forum for mine action professionals to discuss issues related to the impact of landmines and explosive remnants of war on civilians, risk education programmes and advocacy issues. The group is co-convened by the International Campaign to Ban Landmines (ICBL) and UNICEF. Membership is open to ICBL members/agencies, other UN agencies, the ICRC, and organisations involved in humanitarian mine action.

5.5. Behaviour Change Communication

Since joining the International EORE Working Group online forum in September 2019, the discussion group has been of great value in exchanging high quality knowledge and ideas with EORE experts around the world. For example, Ms. Angela Gosse, UNMAS Afghanistan, shared her presentation about new research on effective behaviour change methodology in Afghanistan.

Behaviour change communication (BCC), also known as communication for development (C4D), "is the strategic use of communication to promote positive health, education and other outcomes. BCC is a theory-based, research-based, interactive process to develop tailored messages and approaches, using a variety of population-appropriate communication channels to motivate sustained individual-and community-level changes in knowledge, attitudes and behaviours."[27]

UNICEF's 'Communication for Development' (C4D)[28] approaches have been tested successfully in other development and humanitarian fields, and involve understanding people, their beliefs and values, the social and cultural norms that shape their lives. To understand this EORE must engage communities and listen to adults and children as they identify problems, propose solutions and act upon them. There are many behaviour change theories which can be used to improve EORE communication approaches. Ultimately EORE needs to be more widely integrated with other (non-communication) activities to facilitate behaviour change among those who have no other options (the forced) which cannot be done by means of communication alone.

[26] https://dgroups.org/groups/imrewg/

[27] UNMAS in Afghanistan Behaviour Change Communication for Explosive Ordnance Risk Education, UNMAS, November 2019, www.globalprotectioncluster.org/wp-content/uploads/UNMASAFG_EORE_Final.pdf

[28] Communication for Development, UNICEF, www.unicef.org/cbsc

6. ANALYSIS

This analysis of integrated approaches covers the following key topics:

6.1. Evolution of Explosive Ordnance Risk Education

According to international research by GICHD, mine action programmes typically transition through a series of overlapping phases: from a post-conflict stabilisation, including peacebuilding; through reconstruction, to a development phase with assistance from international donors and financial institutions and eventually to shut down, residual capacity or realignment towards other issues. This transition may not be linear and different phases may occur in different areas of a country at the same time. National governments are encouraged to take 'ownership' of the explosive ordnance problem, to pass legislation, abide by international conventions, create national authorities, accredit operators.[29] The five ASEAN countries in this Study are at different phases in their mine action cycles: (i) conflict; (ii) stabilization; (iii) reconstruction; (iv) assisted development; and (v) development.

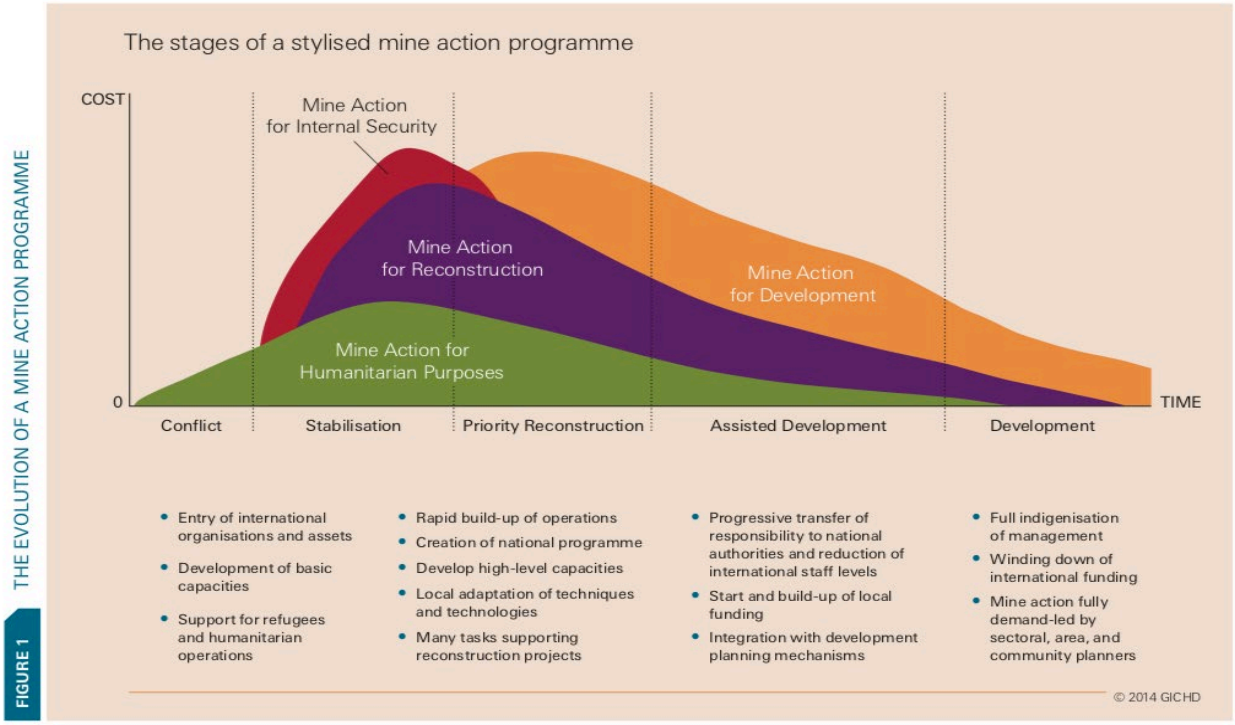


Figure 4: Typical phases of a mine action programme (GICHD)[30]

Along with the phases of mine action, EORE has necessarily evolved to respond to changing needs:

[29] A Guide to Mine Action, Fifth Edition, GICHD, Geneva, March 2014, page 34, www.gichd.org/fileadmin/GICHD-resources/rec-documents/Guide-to-mine-action-2014.pdf

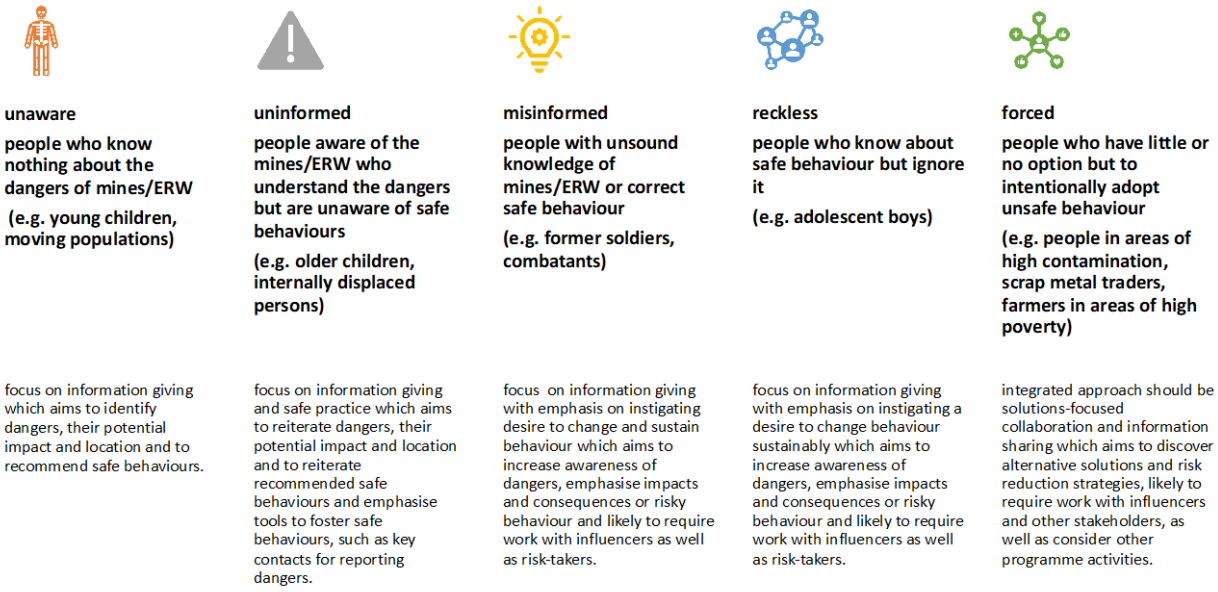
[30] Ibid., page 37

In the mine-affected countries in the Mekong region, EORE has evolved in diversity, sophistication and effectiveness to dramatically reduce casualties.

6.2. Focussing EORE to At-Risk Groups

A recent study by Mines Advisory Group[31] outlined some of the most common profiles for at-risk groups and how this can be used to tailor risk educational activity and focus.

[31] Mines Advisory Group, Efficiency, Effectiveness and Impact in Mine Action, February 2015, figure 3.1, page 71, https://1.shocasecdn.com/Shm16ntagq8d4S174ahrlvgjpxl.pdf



6.3. Effective EORE Messages

Lessons learned from mine affected AMS and international experience in effective targeted and integrated risk education, suggests the following best practices:

- Target towards a clearly defined audience – rather than general awareness messages
- Systematically collect and analyse gender – and age-disaggregated data and information on distinct at-risk behaviours and attitudes – to ensure that groups at risk are appropriately identified and messages and strategies are targeted differently at the different groups
- Follow the guiding principle of ‘do no harm’ – to design the most effective messages
- Encourage positive behaviour and messages which are more personal and appeal to the audiences’ emotions – rather than overly technical and negative consequences
- Convey narratives – the flow of personal stories is both powerful and memorable – rather than facts and figures
- Choose the right media – must be aligned with the audience
- Use multiple and diverse information channels – rather than single source risk education which may only reach a fraction of the audience
- Encourage community participation and sense of ownership – rather than formal settings, hierarchical structured or lecture style presentations showing technical information
- Acknowledge and empathise with the challenges faced by at-risk groups (e.g. livelihood pressures) – rather than unrealistic, impractical or theoretical instructions
- Produce high visual quality risk education materials – rather than information which is less likely to attract attention and credibility

The most effective EORE messages are adjusted to the local context and target population. More targeted messages can include informing communities of the specific risks in their area or to their demographic. EORE messages should be created based on the knowledge, attitude, practice and beliefs of each targeted group.

6.4. EORE Guidelines and Principles

Mine action authorities should develop key principles for integrated EORE to be followed by all EORE organisations, for example covering topics such as these (adapted from Lao PDR[32]):

- Geographic targeting: to better reach areas of high incidence of accidents and high levels of contamination and also areas where there is an active scrap metal trade involving explosive ordnance.
- Identification and targeting of high-risk groups
- Risk minimization for adults: recognising that livelihood needs often force adults to take risks
- Zero risk for children: recognising that children are less able to rationalize risks
- Scrap metal trade: Risk educators will work with scrap metal dealers and collectors to ask to help prevent dangerous items entering he trade, to educate about safe and unsafe practices and to assist with reporting procedures to ensure that hazardous items are removed from the scrap metal yards by response teams
- Local authorities: risk educators should ensure that they coordinate and share information with local authorities regarding RE activities
- Payment: Risk Educators should never pay for information or pay for ordnance
- Village Hospitality: Risk Educators should not take advantage of village hospitality in terms of the provision of food or souvenirs. Risk educators should contribute to food costs while visiting or saying in villages
- Handling explosive ordnance: Risk Educators should never touch, handle or move explosive ordnance in the course of their work, even if they know the explosive ordnance is safe. Explosive ordnance should be marked and reported to the bomb disposal teams.
- Reporting and Response: Risk educators have a duty to educate people how to report the explosive ordnance they find, but it is also important to make sure that there is a response to the report. This requires good coordination at provincial and district level to ensure the reports reach the relevant operators and that the operators send roving teams to respond to requests.
- Legislation: Risk education messages should be in line with relevant legislation. And provincial notices which may provide some guidance on regulation of the scrap metal trade.
- Development Interventions: Where possible Risk Educators and local authorities should try to link contaminated communities with development interventions that could introduce activities that will reduce the need for people to continue to take risk.
- Casualties: Risk Educators and local authorities have a duty to report explosive ordnance incidents to mine action operators working in the area and to the national mine action authority to ensure all incidents are recorded in the national database as soon as possible.

Mine action authorities should develop comprehensive guidelines for EORE educators & facilitators about EORE materials, for example covering topics (adapted from Lao PDR):

- the guidelines and the materials
- where we need to work (target areas)
- who we need to target (target groups)
- the method and approach of training and facilitation
- integrations and cooperation with other actors and services
- guideline structure
- activities for particular risk groups (e.g. scrap metal collectors and dealers, young children, farmers)
- materials for all groups
- measuring change

[32] National Regulatory Authority for the UXO/Mine Action Sector in the Lao PDR (NRA), "Key Principles for UXO Risk Education in Lao PDR, 15 August 2008", www.nra.gov.la/resources/Risk%20Education%20Materials/Key%20principles%20Eng0001.pdf

- clear delivery objectives/stages of competency

6.5. Monitoring and Evaluation

Evaluation should be based on the needs of the relevant stakeholders and the purpose of the evaluation. The criteria used may depend on the constraints of time, limited resources and available data.

In 2019 the Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) updated its core criteria for evaluating development projects: relevance, coherence, effectiveness, efficiency, impact and sustainability.[33]

International Mine Action Standard 12.10[34] sets specific standards for monitoring and evaluation of EORE. According to IMAS 12.10, in general monitoring should quality-assure EORE and the outputs of the project or programme. Evaluations should focus more on the achievement of objectives, the impact of EORE, accountability, and lessons learned.

In 2019, many EORE programmes still tend to be output rather than outcome or impact oriented. However, evaluation of outputs requires a more rigorous and long-term means of measuring that can demonstrate the effectiveness of EORE, and encourages strategies that optimise resources, funding and effort.

IMAS 14.10[35] provides more detailed guidance for evaluation of mine action interventions generally and suggests the following criteria may be employed: relevance, efficiency, effectiveness, impact, sustainability and if applicable safety and quality. Other criteria which may be included are value-for-money, cost-effectiveness, cost-benefit, client satisfaction, beneficiary satisfaction, replicability, and scalability.

Monitoring supports evaluation by providing quantitative and qualitative data on implementation and the achievement of results. IMAS 12.10 advises that at a minimum, monitoring should examine:

- effectiveness and efficiency of EORE delivery;
- perception of EORE projects and programmes by at-risk communities;
- resultant behavioural change;
- geographical coverage;
- reasons for risk-taking, new behaviours, adaptation to the hazard;
- casualties;
- changes in the make-up of the target risk group; and
- meets relevant national and international standards, including any accreditation requirements.

6.6. Integrated EORE Options

To understand how integrated approaches to EORE can enhance risk education for affected communities in AMS, this Study compares current practices in affected AMS, explores theories and conceptual tools relevant to EORE, considers innovations in the region, examines lessons from other densely contaminated regions of the world and takes account of international standards and new developments in the field of EORE in international circles (as shown below):

[33] OECD DAC Evaluation Criteria, December 2019, www.oecd.org/dac/evaluation/daccriteriaforevaluatingdevelopmentassistance.htm

[34] International Mine Action Standard, Mine Risk Education, 12.10 Second Edition (Amendment 2, June 2013)

[35] International Mine Action Standard, Guide for the Evaluation of mine action interventions, 14.10 First Edition (Amendment 3, June 2013)

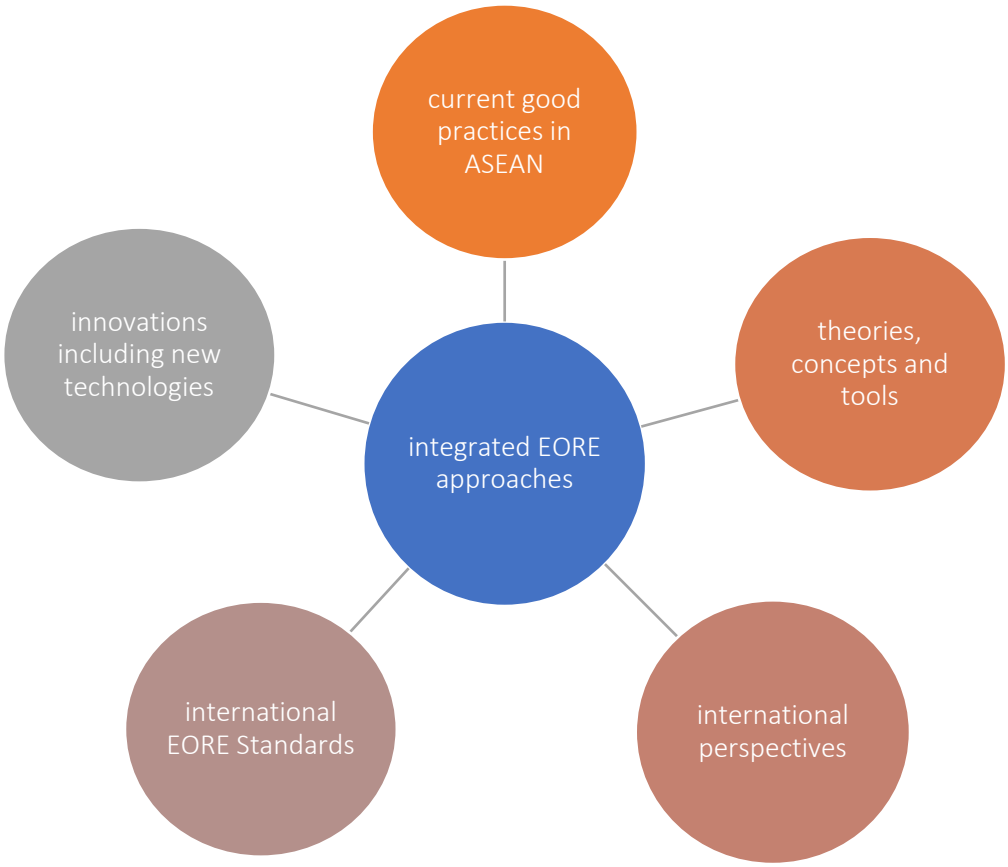


Figure 5

A comparison of AMS' mine action coordination and EORE programs, complexity, challenges, lessons learned, key issues, enabled the following observations:

- Given that affected AMS are all at different phases of mine action, some have well-established national coordination, comprehensive national strategies, national guidelines for EORE, adherence to international disarmament conventions, adaptation of IMAS EORE standards, and different levels of national ownership of mine action.

- In relation to the complexities faced by affected AMS, all share the very difficult task of influencing the forced or intentional risk takers who do not respond to stand-alone EORE because of livelihood / economic pressures. Most AMS share the challenges of limited resources for EORE. Many AMS have to deal with the complexity of addressing illiteracy, different languages/dialects and remote access of at-risk groups.

- Common themes from lessons learned are about the importance of: good local community liaison; professional needs assessment; quality guidelines and standards for positive EORE messages and skilled delivery; cooperation by all stakeholders within the mine action sector; and evaluation of EORE with limited resources.

- There is much similarity in the key issues raised in the consultations with AMS. Recurring problems are lack of resources, coordination difficulties, gender issues and unclear strategy.

To address many of the abovementioned issues, the section on 'Effective Practices and Innovations in Integrating EORE' contains worthy ideas from within the region, which can be adapted or trialled by other AMS, where it is relevant to their circumstances.

An important starting point for planning and integrating EORE across the mine action sector is use the tools of relevant and emerging theories. Some examples are explained in detail in Annex D.

Most professional NGOs and operators have explicit Theories of Changes (ToCs) or similar planning frameworks. However mine action authorities generally have broad strategies and operational plans, which tend to be less comprehensive than ToCs. All stakeholders could benefit from undertaking a participatory exercise to articulate their ToC and to map out each step using methods such as Strategy Mapping to test and improve their plans.

A promising new area of theory applicable to integrating EORE is Behaviour Change Communication (based on Socio-Ecological Models). This is derived from UNICEF's work in other fields and in 2019 was adapted to EORE in Afghanistan for community liaison, needs assessment, message design and communications strategies.

The abovementioned points should be considered by explosive ordnance affected AMS to better achieve behaviour change through integrated approaches to EORE.

Integrated approaches entail costs and complex challenges, particularly in relation to central coordination between organisations, accreditation, reporting, monitoring and evaluation. However, mine affected nations can draw on the advice of specialist international agencies for professional advice and resources. They can also share knowledge and experience within ASEAN and many of the other 60 countries coping with explosive remnants of war.

6.7. Advantages of Integration

The regional consultations and international research undertaken during the EORE Project identified many advantages of integration of EORE within the sub-Mekong countries. In summary they are:

- Integration with mine action: EORE naturally goes hand-in-hand with the other cycles of mine action, because it takes place in the same targeted geographical areas of high casualties/contamination. Deminers have knowledge and experience which is relevant to EORE. Also, EORE includes physical measures e.g. fencing/marking to bring about behavioural changes. Mine action programmes often collect a vast amount of data, which should be shared to prioritize their human and technical resources for best results. Rather than operate in silos, vital information generated by one component can benefit the others.

- Integration can create synergy: EORE projects can be integrated into broader health or education projects and programs (e.g. HIV/AIDS programs) which use similar communication methodologies.

- Leverage resources: If funding for EORE is drying up, EORE can be delivered within the budgets of other programs, e.g. education or health.

- Integrating EORE in education system will reach a huge number of people at early ages where contamination is widespread.

- EORE reaches wider audiences, at low cost, when integrated with mass media e.g. radio.

- Integration of EORE can build mutual community trust with other development activities and is a more effective approach for addressing the needs of mine affected communities.

- In post-conflict situations, EORE can support the overall peace process by bringing communities together to talk about their difficulties and issues.

- EORE linked to victim assistance can enable mine casualty survivors to be real life risk educators.

- Communications technology: EORE can harness emerging communications technologies, e.g. smart phone apps to reach people faster, cheaper and further and GIS mapping technology given that inherently landmines are an intrinsically spatial issue – they alter geographic access.

- Probably the most important benefit of integrating EORE comes from the realization that often stand-alone EORE is not enough. Even the highest standards of EORE may not deter risk taking behaviour. There is a real gap between mine risk awareness and risk behaviour.

Wherever possible, EORE should be integrated, associated, harmonised, or at least coordinated with other interventions.

6.8. The Way Forward

The participants from ASEAN Member States who participated in the concluding ASEAN Regional Consultative Meeting on 6 February 2020, expressed support for working together to implement key recommendations from the EORE Study. Participants prioritized the following areas for future action (explained in more detail in the Recommendations section of the Study):

Figure: 6

The plenary of the Regional Consultative Meeting proposed the following needs in the region to enhance awareness programme on the dangers of explosive ordnance:

- Develop a directory of resources and stakeholders in ASEAN
- Coordinate and publish further ARMAC Magazines
- Share updates and articles through ARMAC's website
- Arrange exchange visits
- Organise regular high-level mine action forums/conferences in the region to discuss enhancing the impacts of EORE programmes and other relevant programmes to reduce the casualties from explosive ordnance

- Mobilise resources to provide grants for EORE operators to provide EORE to vulnerable people in high-risk areas
- Use the term of ‘Explosive Ordnance Risk Education (EORE)’ as a broader and inclusive definition of Mine and UXO in the context of risk education

7. RECOMMENDATIONS

The following recommendations are based on lessons learned, good practice and innovations in the ASEAN region, International Mine Action Standards and international research and/or practices.

It is suggested that mine action authorities and organisations consider adapting these recommendations where appropriate to their own particular national or regional circumstances, such as culture and beliefs, types of explosive ordnance, the extent of hazards, current phase of mine action, casualty levels and resources available. Therefore, it is important that the needs of each country be assessed and specific approaches be developed to EORE based on the local realities.

The recommendations fall under the following topic headings:

1. Casualty Data Collection
2. EORE Needs Assessment
3. Community Liaison in Co-design of Integrated EORE Solutions
4. Theory of Change for Integrated EORE
5. Monitoring and Evaluation
6. Innovation and Technology
7. Beneficial Connections Through Integrating EORE
8. Principles and Practices for Integrated EORE
9. Coordination and Cooperation

Casualty Data Collection

Recommendation 1: Casualty information should be systematically gathered and analysed in a national explosive ordnance victim information system by trained staff to ensure risk education is targeted and based on evidence and to inform interventions by other sectors to provide an integrated response.

1.1: At minimum, data should record casualty and incident reports about target groups – both social and geographical, particularly

(a) demographic data, i.e. age, gender, occupation, disability
(b) activity by explosive device type
(c) activity at time of accident
(d) motivation
(e) awareness of risk
(f) exact location where people are injured.

1.2: The national explosive ordnance victim information system should be updated continuously, and detailed data posted monthly on the national mine action authority website for access by all relevant mine action stakeholders.

EORE Needs Assessment

Recommendation 2: EORE programmes should be developed on the basis of a needs assessment to ensure risk education is effective and relevant to the affected populations and groups at risk.

2.1: Research (e.g. interviews, KAP surveys data analysis, focus groups, workshops, data analysis) should be undertaken periodically to analyse main factors affecting each at-risk group.

2.2: A risk profile should be undertaken of at-risk target audiences, such as the typical five categories: the unaware, uninformed, misinformed, reckless and forced (or intentional) to help tailor appropriate EORE communication tools, content of messages methods of delivery and integrated approaches likely to bring about behavioural change by the relevant audience to reduce casualties.

2.3: The first four of the typical five at-risk categories (unaware, uninformed, misinformed, reckless) can generally be directly targeted by risk education reinforced by other programs and activities as has proven successful in the ASEAN mine-affected countries.

2.4: The fifth behaviour category is deliberate risk-taking behaviour by people who believe they have no choice. A more integrated, collaborative, multi-sectoral and multi-level response is needed for this more intractable forced category because they are already aware of the risks.

2.5: The psychological, sociological and environmental drivers and barriers of behaviour should be considered:

a) psychological – individual attitudes, over-confidence, perceptions, and interests, this also includes where people are likely to go in their daily lives, as this is relevant in terms of how and where to reach them with messages;
b) sociological – status within family, peer attitudes, gender roles, community expectations, religious influences, role models, social norms; and
c) environmental – wider influences such as economic drivers, poverty, gender dynamics, limited literacy, lack of education, information sources, media, positive influencers, local governing bodies, policies and laws.

2.6: EORE should be tailored to the threat encountered by the population, sensitive to gender, age, disability and take into account the diverse needs and experiences of people in affected communities.

Community Liaison in Co-design of Integrated EORE Solutions

Recommendation 3: Community-based liaison approaches should be used to identify barriers and benefits, design EORE strategies, pilot test EORE approaches and messages, monitor and evaluate, and adopt safe behaviour.

3.1: EORE methodologies and approaches likely to induce behavioural change should be carefully considered and applied. Community input should be sought in assessing any existing local safety practices. Engaging target groups depends on ability to understand people's attitudes, cultural practices and norms and engage in meaningful dialogue with them.

3.2: Community-based liaison approaches should be a two-way process for sharing ideas and knowledge using a range of communication tools and approaches that empower individuals and communities to take actions to improve their lives.

3.3: Learnings and concepts from the social, behavioural and communication sciences, should be considered, such as UNICEF's Behaviour Change Communication, also known as 'Communication for Development' (C4D) approaches, which have been tested successfully in other development and humanitarian fields.

3.4: Innovative approaches to effective behavioural change should be explored where stand-alone EORE has not been successful for the more intractable categories of risk-takers (particularly the reckless and forced or intentional), such as participatory community liaison approaches drawing from new educational theories, such as 'Solutions Fluency' which facilitates the risk takers to define the problem and think critically from multiple perspectives to discover possible solutions.

3.5: Emerging international best practice in effective targeted and integrated risk education, should be examined, including research by UNICEF, GICHD, UNMAS, ICRC and the International EORE Working Group.

Theory of Change for Integrated EORE

Recommendation 4: All organisations involved in any aspect of EORE should articulate their Theory of Change (ToC) to describe how their activities or interventions are intended to produce a series of results and impacts.

4.1: EORE ToC needs to be realistic, comprehensive and integrated with other actions.

4.2: The ToC should be developed through a participatory process rather than a top down directive.

4.3: ToCs can be developed for any level of activity or intervention, such as for, an event, a project, a programme, a policy, a strategy or an organisation.

Monitoring and Evaluation

Recommendation 5: Organisations involved in EORE should monitor and evaluate EORE against a range of criteria, especially focussing on the achievement of objectives, the impact of EORE, accountability, and lessons learned—within the constraints of available data and resources.

5.1: Organisations should develop a Project Design and Monitoring Guide with the following suggested elements: objectives, guidelines, activities, input indicators, output indicators, outcome indicators, Theory of Change (ToC), Results Framework, integration links, direct beneficiaries, indirect beneficiaries, baseline, typical milestones, end-line, expected impact, lessons learned, end-line.

5.2: Organisations should consider the international guidelines for monitoring and evaluation particularly the OECD DAC criteria for evaluating development projects; IMAS 12.10: Mine Risk Education; and more generally IMAS 14.10: Guide for the Evaluation of Mine Action Interventions.

Innovation and Technology

Recommendation 6: The Mine Action Sector should develop, field test, monitor and share innovation and best practices, when relevant and favoured, to improve reach, effectiveness and targeting of EORE.

6.1: Interactive smartphone apps (e.g. Myanmar and Vietnam) based on KAP survey can capitalise on potential for:

(a) rapid increase in usage of smartphones
(b) cost effective communication compared to printing materials
(c) reach to remote affected communities
(d) monitoring potential
(e) easy to update and transmit newsfeed
(f) sharing the app off-line
(g) real time precise location reporting of explosive ordnance and casualties

6.2: Hotline cards could be distributed during every EORE activity (e.g. Afghanistan) as a touchpoint for community members to communicate any mine action related concerns i.e. reporting explosive ordnances.

Beneficial Connections Through Integrating EORE

Recommendation 7: In the context of reduced resources for traditional EORE activities, strategies should be implemented to mobilize resources and integrate EORE.

7.1 The following strategies should be considered:

(a) utilize and train established extensive volunteer network organisations
(b) broadcast messages through radio
(c) facilitate village leaders to set up localised phone app chat groups to share information about hazards
(d) build smartphone apps to reach mass audiences
(e) mainstream EORE in education system
(f) integrate EORE in all mine action activities
(g) integrate EORE and leverage resources of other programs, e.g. health, development, humanitarian and sports programs—This implies the mine action sector needs to work more closely with other sectors to ensure that EORE is delivered through channels and by actors other than the usual mine action ones
(h) attract free radio and TV media at festivals and events, e.g. Mine Awareness Day
(i) mobilize resources for infrastructure development
(j) negotiate contributions from private sector
(k) increase the national contribution

Principles and Practices for Integrated EORE

Recommendation 8: Mine action authorities should develop key principles for integrated EORE to be followed by all EORE organisations based on best practice and International Mine Action Standards.

8.1: Mine action authorities should develop comprehensive guidelines or national standards for EORE educators and facilitators about EORE materials, including minimum requirement for accreditation of the training organisation (educators and facilitators), not only the materials.

8.2: EORE should be sensitive to gender, age, disability and the diverse needs and experiences of people in affected communities. EORE should take into account the different needs, vulnerabilities and perspectives of women, girls, boys and men to be effective, relevant and targeted.

8.3: All EORE related activities should consider the need for conflict–sensitivity as a cross-cutting issue. Amongst others, this means that assessment should take into consideration views and experiences of diverse groups of people, in an effort to also understand conflict dynamics that could be at play in putting one group more at risk of an accident with an explosive ordnance than others.

8.4: Explosive ordnance affected AMS should consider adapting the initiatives described in this Study in the section on ‘Effective Practices and Innovations in Integrating EORE’.

8.5: AMS and ARMAC should consider the implications of the recent international shift in the terminology of ‘Mine Risk Education’ (MRE) to ‘Explosive Ordnance Risk Education’ (EORE) to better describe the scope of devices that the mine action community is addressing, including the proliferation of improvised explosive devices. This term has been adopted by the Explosive Ordnance Risk Education Advisory Group and other international expert organisations.

Coordination and Cooperation

Recommendation 9: All stakeholders in the mine action sector should, wherever possible, pro-actively cooperate and coordinate with complementary activities, programs and institutions, recognising the benefits of effective coordination at local, regional, national and international level in the best interests of reducing explosive ordnance casualties.

9.1: Strong national ownership and international cooperation and assistance are essential for the continued success of all aspects of mine action.

9.2: Explosive ordnance affected AMS should adapt International Mine Action Standards to their National Mine Action Strategies including EORE policies and programs.

9.3: ASEAN, through ARMAC, should develop a regional platform(s) to facilitate exchanges of innovative / good practices, including implementing recommendations of this Study where relevant.

9.4: This Study should be disseminated through ARMAC, ASEAN, and mine action stakeholders' communications channels.

9.5: In consultation with ASEAN Member States and other stakeholders, ARMAC should establish a process to facilitate, monitor and evaluate progress in implementing the recommendations of this Study over the next three years.

8. CONCLUSION

ARMAC's research and consultations in 2019 in the five mine-affected AMS revealed a richness of different approaches and confirmed that there is no single 'one size fits all' approach to integrate of EORE. These five nations have integrated, mainstreamed and linked EORE in different and creative ways to reinforce EORE efforts and reduce risk behaviours.

There is consensus within the ASEAN mine action sector that EORE activities should, where possible, be integrated with the other four pillars of mine action (clearance, survivor assistance, advocacy and stockpile destruction) and with wider humanitarian, development, protection and education efforts to reduce the risk to the affected population and decrease their need for risk-taking.

However, it is recognised that integrated approaches entail costs and complex challenges, particularly in relation to central coordination between organisations, accreditation, reporting, monitoring and evaluation.

Fortunately, mine affected nations can draw on the advice of specialist international agencies for professional advice and resources. They can also share knowledge and experience within ASEAN and many of the other 60 countries coping with explosive ordnance.

This Study attempts to compile, compare and analyse information about effective practices, lessons learned, and innovative approaches from the Mekong region as well as valuable international standards, perspectives and theoretical frameworks.

For most complex behaviours, such as explosive ordnance accidents, multifaceted approaches are essential. Regulation is not always popular but sometimes does work. Laws can be passed but not enforced because police lack resources or villages are unaware of the laws. Information can change behaviour, but we cannot assume that it will. Many studies across different fields, show that education alone often has little or no effect upon sustainable behaviour.

To tackle this, EORE must wherever possible be integrated, associated, harmonised, or at least coordinated with other interventions.

EORE Theories of Change need to be realistic, holistic and integrated with other actions. Planning EORE must be based on reliable evidence to quantify the gap between what is intended and what actually happens. Therefore, EORE planners need to identify particular mix of circumstances of specific high-risk groups for effective interventions.

Authentic community-based liaison can support regulation and information campaigns to identify barriers, benefits, design strategies, pilot, evaluate and change risk behaviour.

The regional consultations and international research undertaken during the EORE Project identified many advantages of integration of EORE within the sub-Mekong countries. Probably the most important benefit of integrating EORE comes from the realization that often stand-alone EORE is not enough. Even the very highest standards of EORE may not deter risk taking behaviour. There is sometimes a real gap between mine risk awareness and risk behaviour.

The ASEAN Regional Consultative Meeting held in the final stage of the EORE Study, encouraged support from ASEAN Member States in working together to implement key recommendations from EORE Study, in particular those relating to casualty data collection, EORE needs assessment, community liaison, sharing innovation and technology; adopting or adapting principles and practices for integrated EORE.

Against this background, ARMAC hopes that this Study will promote dialogue and contribute to continuous improvements in the effectiveness of risk education to reduce casualties in the affected communities of ASEAN Member States and in many other countries coping with similar challenges.

ANNEXES

Annex A: Country Profiles

Cambodia

The Cambodian Mine Action and Victim Assistance Authority (CMAA) coordinates the implementation of the National Mine Action Strategy 2018-2025[36]. Cambodia is a signatory to the Anti-Personnel Mine Ban Convention. Cambodia remains one of the most heavily contaminated explosive ordnance countries in the world in terms of human impact. According to CMAA[37]:

- Cambodia's landmine contamination is the result of a protracted sequence of internal and regional conflicts that affected the country from the mid-1960s until the end of 1998. Therefore, the contamination is very complex and extensive.

- The north western regions bordering Thailand have some of the highest concentrations of anti-personnel mines in the world. Other areas of the country, mainly in the east, have been impacted primarily by the presence of other explosive ordnance, including cluster munitions.

- According to bombing data provided by US State Department from 1965 to 1973 an estimated 2.75 million tons of US bombardment including cluster munitions 27.9 million pieces. Some 30% of the bombs did not explode on impact as intended, leaving a deadly legacy of explosive ordnance contamination to this day. Chemical bombs were also dropped on Cambodia.

- Explosive ordnance have killed and injured more than 64,800 people in Cambodia since 1979. Although the number of annual casualties has been brought down from 4,320 in 1996 to 58 in 2018, there has been an alarming trend of increasing casualties since then. Casualty rates remain highest in Battambang, Siem Reap and Banteay Meanchey provinces.

- Explosive ordnance prevent reconstruction and development from taking place in a safe environment. Most community, provincial and national development projects would not have taken place without the support of explosive ordnance clearance. In a mine affected country like Cambodia, explosive ordnance clearance is important, and is the backbone for rural and national economic development.

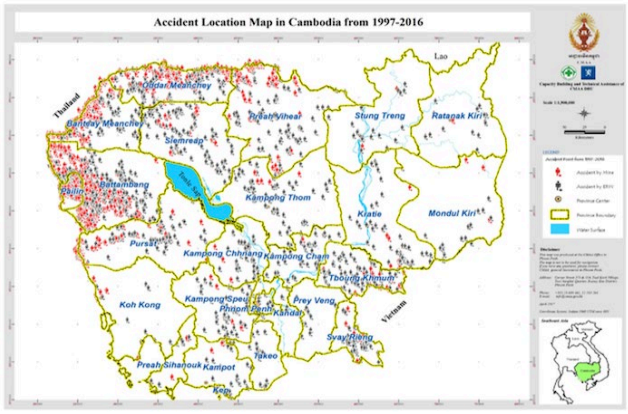


Figure 7

- In 2018 CMAA estimated massive remaining contamination: 936 km^2 of landmines, 737 km^2 of cluster munitions and 468 km^2 of other explosive ordnance.[38]

[36] National Mine Action Strategy 2018-2025, www.cmaa.gov.kh/en/strategy/national-mine-action-strategy-2018-2025
[37] Cambodian Mine Action and Victim Assistance Authority (CMAA), www.cmaa.gov.kh/en
[38] Landmine and Cluster Munitions Monitor, www.the-monitor.org/en-gb/reports/2019/cambodia/mine-action.aspx

The term 'mine action' originated in Cambodia in the early 1990s when Canadian Army engineers suggested that the body set up to administer and coordinate mine-related activities in the country be named the Cambodian Mine Action Centre, with a view to stressing the dynamic nature of the enterprise. It is now in general use, although the term 'humanitarian demining' is often used.[39]

Explosive Ordnance Risk Education has been implemented in Cambodia since 1993. Cambodia has developed extensive well established and integrated EORE networks to address the complexity and widespread nature of contamination across the country.

Some interesting examples of effective practices and innovations in Cambodia include:

- The Cambodian Mine Action and Victim Assistance (CMAA) manages an extremely thorough, systematic and continuous process for collecting explosive ordnance casualty data. The Cambodia Mine/ERW Victim Information System (CMVIS) contains a high level of demographic and technical detail which provides a sound basis for analysis of high-risk groups and behaviours. This is essential for designing and adapting well targeted and integrated EORE programs. CMVIS was originally established in 1994 by the Cambodian Red Cross with technical and financial supported by Handicap International Belgium and UNICEF. Detailed data from CMVIS is shared on CMAA's website.[40]

- The Cambodian Mine Action Centre (CMAC) applies Immediate Response of EORE and community-based EORE in a sustainable approach. This leads to community explosive ordnance risk reduction through building effective and sustainable community networks to respond to needs of risk education for safety behaviour, consultation for behaviour changes and report on landmine and explosive remnants of war threats. This also facilitates the access of explosive ordnance affected communities to appropriate mine action, victim assistance services and community development assistance. CMAC identify and select high risk communities, build the capacity of community people, local authorities, competent police, monk on risk education and reporting skills to enabling them to effectively transfer safety messages to people at risk and report on the risk. CMAC also provide risk education skill to their professional demining staff to deliver risk education to the people within their demining operational site.

- Cambodia Ministry of Education Youth and Sport (MoEYS) mainstreams EORE key messages in national school curriculum. In targeted schools in seven provinces, EORE messages are reinforced through child-to-child theatre and sports activities organised by Spirit of Soccer.

[39] A Guide to Mine Action, Fifth Edition, GICHD, Geneva, March 2014, pp 26-27

[40] Cambodia Mine/ERW Victim Information System (CMVIS), www.cmaa.gov.kh/en/documents?cbocateflie=15

- The HALO Trust and Mines Advisory Group recently developed a comprehensive and rigorous EORE evaluation methodology. Two surveys are undertaken to measure both the level of understanding people have of risks associated with explosive ordnance, and whether having that understanding actually makes them change their behaviour. Specially the surveys:

  - measure immediate increase in knowledge after the session
  - measure if that knowledge is retained 3-6 months later
  - record how people behave before they are educated
  - record if their behaviour has changed because of EORE

- CMAA and UNICEF are currently working with the National Police to integrate EORE as part of the on-going police post training and also integrate it with the village and commune safety policy of Ministry of Interior. Police posts will be trained to work with local de-miners and population to educate them on the illegality of extracting explosives from landmines and ERW for hunting or fishing. Recently UNICEF and CMAA worked with the National Police and MRE Technical Reference Group to develop a TV spot on the enforcement of the law on the prohibition on the use of weapons, including explosive ordnance.

The diagram below illustrates how EORE activities are integrated and connected in Cambodia:

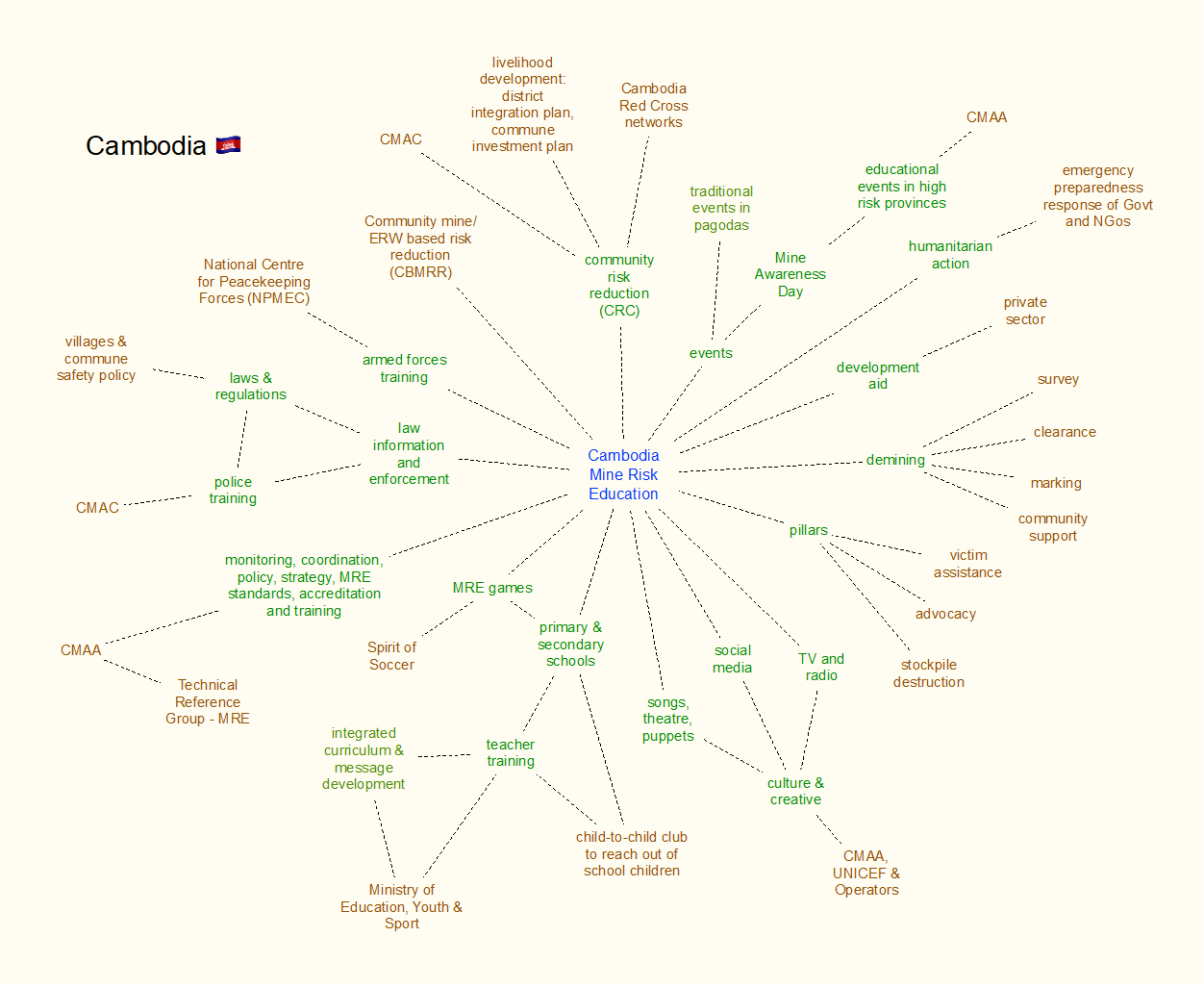


Figure 8

Specific benefits of integrating EORE in Cambodia are:

- The EORE sector in Cambodia has been remarkable in adapting its response to the different phases. Overall, coverage has been good with the most affected areas targeted. The program has also been effective in raising awareness and knowledge of risk avoidance

strategies. Messages while relevant in the early stages of the program are less relevant in the current context and need some revision to ensure they are more contextually specific.

- In Cambodia EORE is part of all stages and pillars of mine action. EORE is integrated into primary and lower secondary school curriculum, community liaison processes, humanitarian activity, sport activity, child-to-child EORE to reach out-of-school children, culture/religion, performance, police training and army operations. The benefits are sustainability, cost-effectiveness, extendibility, diverse methods and of course, impact.

- CMAC integrated their EORE programmes with the clearance through the delivery of risk education to the affected communities by community liaison to build local ownership in planning and prioritization for mine action and community development. This raises their awareness towards the dangers of explosive ordnance in their area. Also, collaborating with the Police Department to enforce Law on rehabilitation on the use of ammunition, CMAC promote the development of safety village as part of Government policy on village and commune safety Policy.

- The Cambodian Self Help Demining organisation's community liaison teams found it easy to invite villagers to pay attention to EORE messages.

- ICRC considers that EORE education alone will not have a big impact unless it is supplemented with other programs like mine clearance policy and social welfare programs and using a mix of different delivery methods (face to face sessions, social media, advertising etc) depending on the context.

- The HALO Trust works with several development organisations to deliver risk education to their beneficiaries, specifically targeting farming development agencies and more recently, construction workers. The benefits include wider exposure of key messages and helping these organisations to be aware of threats in their areas of operations. It is also important for key risk education staff to remain informed of technical knowledge related to explosive ordnance. All HALO risk education staff have first worked as a technical staff member, whether deminer or survey/EOD, before joining the risk education team to ensure they are appropriately informed and experienced. HALO believes face-to-face to be the most effective and participatory way to deliver risk education. In addition to providing quality EORE, teams are increasingly involved in the monitoring and evaluation of the effectiveness of sessions through the use of two evaluative methodologies; knowledge surveys and focus group discussions (FGDs). These methodologies enable operators and donors to understand the impact of EORE and serve as tools by which to monitor and improve the quality and focus of sessions.

- Multi-sector integrated approaches involving the local community, police networks, monk volunteers, mine action planning processes achieve better outcomes in terms of behaviour change and value for money.

Lao PDR

The National Regulatory Authority for the UXO/Mine Action Sector in the Lao PDR (NRA) coordinates the implementation of the National Strategic Plan for the UXO Sector in Lao PDR 2011-2020 “The Safe Path Forward”.[41]

Lao PDR is a signatory of the Convention on Cluster Munitions and has consented to be bound by Protocol V to the Convention on Certain Conventional Weapons.

To illustrate the immensity of the contamination problem, Lao PDR is a poignant case. Lao PDR is the most heavily bombed country, per capita, in history. According to the National Regulatory Authority[42]:

- 3,860 (25%) of villages in Laos are contaminated with UXO.
- 15 out of 18 provinces in Lao PDR suffer with UXO contamination.
- Over 2 million tons of ordnance were dropped on Laos between 1964 and 1973. 580,000 bombing missions were flown over Laos.
- Cluster submunitions or ‘bombies’ are the most common form of UXO found in Lao PDR. More than 270 million bombies were dropped on Laos and up to 30% of these failed to detonate. Approximately 80 million unexploded bombies remained in Laos after the war.
- Over 50,000 people have been killed or injured since 1964. There were 41 new casualties in 2017. In the last decade, over 40% of all casualties were children.

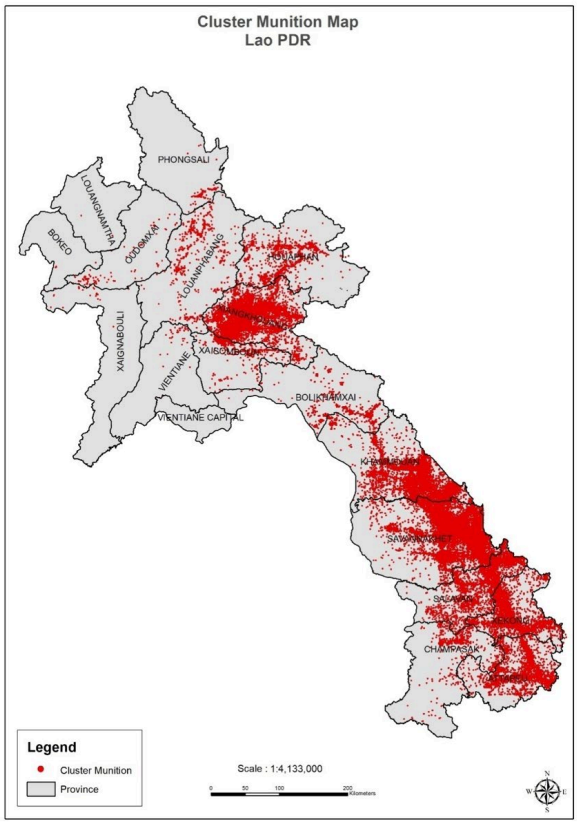


Figure 9

Lao PDR has developed many EORE multi-sector networks through its long history of dealing with massive UXO risks.

Some interesting examples of effective practices and innovations in Lao PDR include:

- Over the last decade Lao PDR has significantly reduced causalities by integrating UXO risk education through a wide variety of channels—reaching a total audience of over 3.5 million people (2008-2019):

[41] National Strategic Plan for the UXO Sector in Lao PDR 2011-2020: The Safe Path Forward www.nra.gov.la/resources/UXO%20Sector%20Strategy/SPFII%20%20Eng.pdf

[42] National Regulatory Authority for UXO/Mine Action in Lao PDR (NRA), Unexploded Ordnance Annual Report 2017, www.nra.gov.la/resources.html

- in primary school curriculum (conducted by World Education Lao and Ministry of Education and Sport),
- mobile teams (conducted by Spirit of Sport, The HALO Trust, UXO Lao, Mines Advisory Group, Humanity & Inclusion and MMG),
- extensive village volunteer networks (conducted by UXO Lao and Lao Youth Union),
- radio programmes (conducted by Ministry of Information, Culture and Tourism),
- private companies contributing to risk education,

- The National Regulatory Authority for UXO/Mine Sector in Lao PDR in 2007-08 pioneered the development of comprehensive key principles, guidelines and other resource materials for UXO risk education in Lao and English languages.[43]

The diagram below illustrates how EORE activities are integrated and connected in Lao PDR:

[43] National Regulatory Authority for the UXO/Mine Action Sector in the Lao PDR (NRA), MRE resources, www.nra.gov.la/resources.html

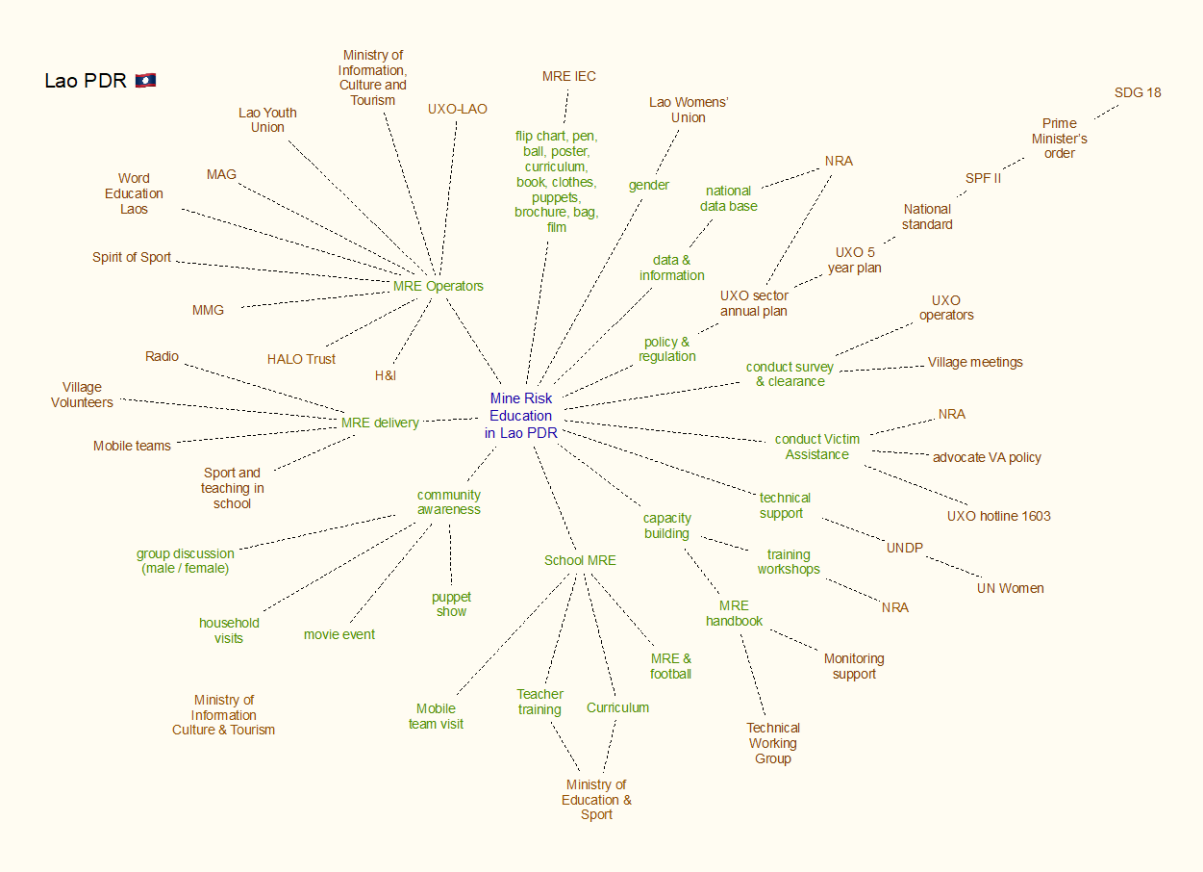


Figure 10

Some of the specific benefits of integrating EORE in Lao PDR:

- The National Regulatory Authority sees benefits in the integration of explosive ordnance risk education (through school curriculum, media and community liaison) to reduce accidents and provide information to support to Non-Technical Surveys (NTS).

- Humanity & Inclusion believes that explosive ordnance risk education should be integrated at every relevant moment: such as through explosive ordnance briefing to partners when relevant and as part of the Non-Technical Survey process. Usually the risk of explosive ordnance is not the most important priority for communities, so it should be part of a broader risk management approach that could include other risks such as road safety, disaster risk reduction, health etc. EORE is integrated into HI's Comprehensive Approach to Mine Action project, which implements survey and clearance, explosive ordnance education, victim assistance and advocacy within a single project. A combined NTS/Risk Education team visit target villages together. Community safety briefings and household visits are used to deliver EORE messages, while also conducting community liaison to collect information and evidence of possible explosive ordnance contamination. Risk education officers will assist to identify explosive ordnance survivors and persons with disability through their activities, passing on information to the HI victim assistance team. The benefits of this approach are long term sustainability – EORE messages continue to be delivered once specific EORE efforts from Mine Action organisations stop. Also, this approach offers better value for money to integrate with other activities.

- Mines Advisory Group sees advantages in their community liaison approaches which can combine risk education with NTS and EOD surveys.

Myanmar

A Mine Risks Working Group (MRWG), comprised of ministries, international, and national organisations and four state-level coordination agencies, takes the lead on risk education and victim assistance.[44] Myanmar currently does not have a national mine action strategy.

Myanmar is the third most landmine-contaminated country in the world after Afghanistan and Colombia. Myanmar is heavily mine-affected as a result of conflicts between the Tatmadaw (government forces) and numerous non-state armed groups (NSAGs) affiliated with ethnic minorities. The violence started after the country's independence in 1948. According to Landmine and Cluster Munitions Monitor[45]:

- Mined areas are located in areas of Myanmar adjacent to borders with Bangladesh, China, and Thailand, and pose a particular threat in northern and eastern parts of the country.
- Some 78 townships (out of a total of 325) in 10 states and regions are believed to suffer from some degree of mine contamination; primarily antipersonnel mines.
- The total number of casualties in Myanmar is unknown due to the lack of an official data collection mechanism. All known casualties from 1999-2017 total 4,193 people (537 killed; 3,538 injured; 118 unknown) caused mainly by antipersonnel mines and improvised explosive devices. The vast majority of casualties were civilian. In 2017, there were at least 202 known casualties.

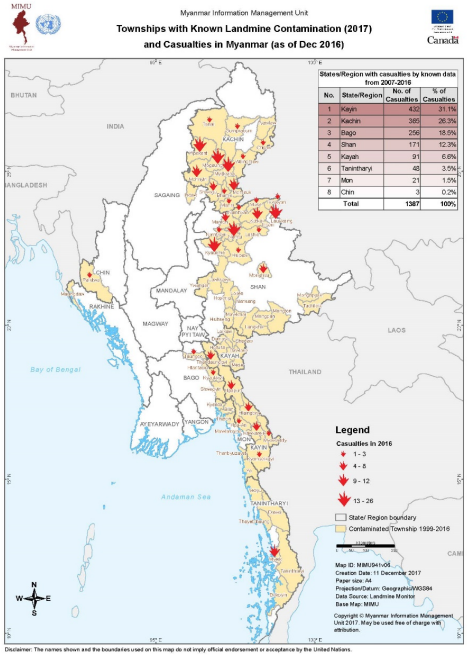


Figure 11

- In the past few years, contamination has increased in the north. A United Nations Fact Finding Mission reported in September 2018 that despite the signing of the Nationwide Ceasefire Agreement in October 2015, new landmines continue to be laid by all sides of the conflicts.
- The total number of casualties in Myanmar is unknown due to the lack of an official data collection mechanism. All known casualties from 1999-2017 total 4,193 people (537 killed; 3,538 injured; 118 unknown) caused mainly by antipersonnel mines and improvised explosive devices. The vast majority of casualties were civilian. In 2017, there were at least 202 known casualties.

At ARMAC's Regional Workshop in Siem Reap, November 2018, the Myanmar representative reported the following official data on casualties:

[44] www.the-monitor.org/en-gb/reports/2019/myanmar_burma/mine-action.aspx

[45] Landmine and Cluster Munitions Monitor, Myanmar - Burma Mine Action, November 2018 and Casualties, October 2018, www.the-monitor.org/en-gb/reports/2019/myanmar_burma/view-all.aspx

- 9 out 14 States and regions are contaminated. The level of contamination not clear. Ongoing conflicts are leading to more contamination, posing new challenges and risks.

- There is no comprehensive surveillance system in place, but data-collection system improved. Casualties are still under-reported in conflict areas due to lack of access and sensitivity. The total number of casualties reported from 2015 to 2018 was 725 of whom about 25 percent were children.

Although Myanmar is in the early phase of mine action, it has advanced ahead of institutional approaches to EORE, by developing and promoting a unique customised EORE smart phone app.

- Myanmar's interactive MRE app[46] capitalises on new communications technology. Based on KAP survey, a common MRE tool kit was developed, field tested and approved by the government. Over 40 organisations have been using tools. In 2017 it reached over 200,000 people. Part of the MRE tool kit is the interactive MRE phone app. This is a unique tool developed for computer and mobile. Myanmar now has at least 33 million active mobile subscriptions in a country with an official population of 53 million. The advantages of this app include:
  - ▽ cost effective compared to printing materials
  - ▽ lighter to transport when no access of roads to reach remote affected communities
  - ▽ monitoring potential
  - ▽ easy to update
  - ▽ important MRE messages can be sent via a newsfeed
  - ▽ enables sharing the app without Wi-Fi or mobile data on any type of document of several MBs
  - ▽ available in Burmese and English languages

The diagram below illustrates how EORE activities are integrated and connected in Myanmar:

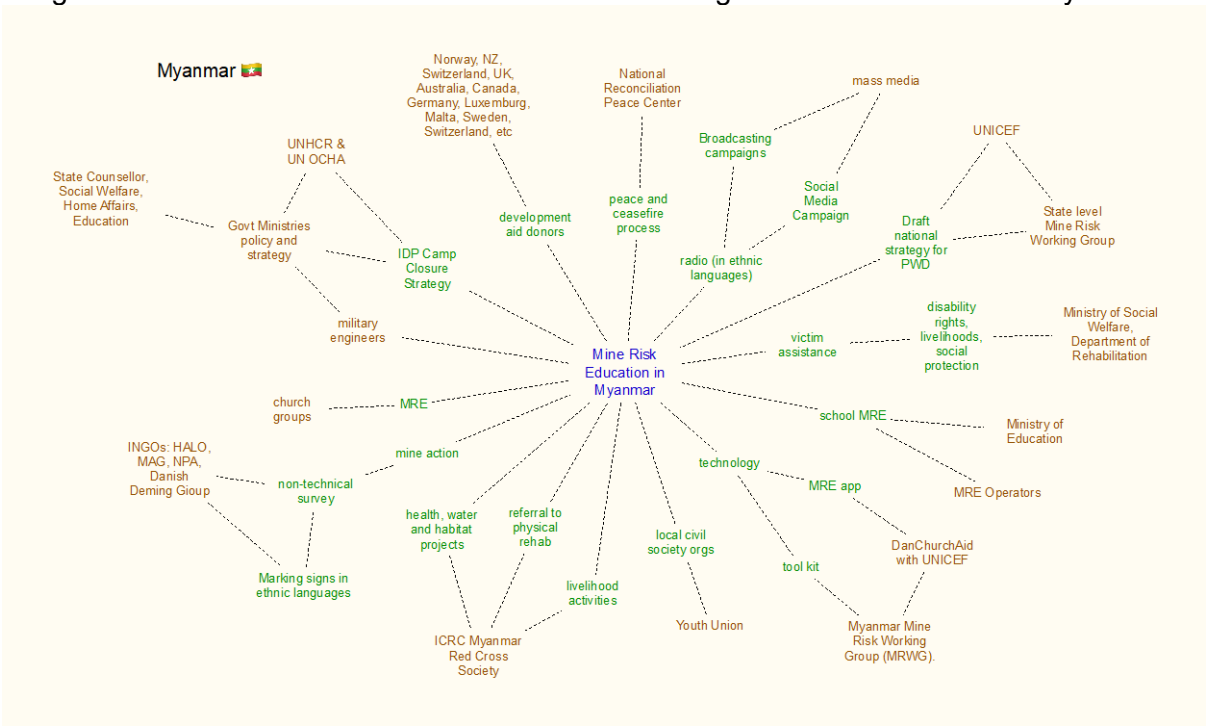


Figure 12

Specific benefits of integrating EORE in Myanmar are:

[46] UNICEF & DCA, The Myanmar Interactive MRE Application, https://mineaction.org/sites/default/files/documents/ndm-un_presentation_myanmarmre.pdf

- The HALO Trust believes that the benefits of integrating EORE are advocacy, protection and support for mine action. EORE is a pillar of mine action integrated into village development activities, school awareness sessions, community liaison processes, general community awareness and NTS processes.

- According to DanChurchAid (Myanmar), EORE is integrated into victim assistance and advocacy pillars. The child protection projects also raise the awareness of threats posed by explosive ordnance. Humanitarian workers/staff also delivering EORE messages to the conflict-affected communities as they are the first responders to every crisis and also in the best position to pass EORE messages on to a large number of target beneficiaries. Also government staff from departments which have the direct contact with the public such as the department of agriculture, forestry, general administration, public relations, etc had also been trained on EORE. The potential advantages of integration are:

    - cost-effectiveness of time, money and human resources
    - reach greater numbers of target beneficiaries
    - gain more attention from the other sectors' workers
    - especially, EORE is very important in saving lives when the development and rehabilitation activities are being introduced in the once conflict-affected areas
    - advocacy effort to let the key stakeholders know on how EORE saves lives

- EORE becomes sustainable rather than standalone when it is integrated with wider projects like health, water and habitat, referral to physical rehabilitation programme, and livelihood activities etc.

Thailand

National Committee for Humanitarian Mine Action (NMAC) and Thailand Mine Action Centre (TMAC) are the leading authorities. Thailand's Second Article extension request has a plan for Mine Action Plan for 2017-2023.

Thailand is a signatory to the Anti-Personnel Mine Ban Convention. On 6 August 2019 the Government announced that Thailand no longer retains anti-personnel mines and declared 85% of the total contaminated area mine free.[47]

Thailand is affected by mines as well as by other explosive ordnance, the result of conflicts on its borders with Cambodia, the Lao PDR, Malaysia, and Myanmar. Re-survey in recent years has sharply reduced estimates of the extent of contamination.

According to the Thailand Mine Action Centre (TMAC):

- Thailand has significantly reduced mine affected areas from 2,557 square kilometres and 27 Provinces in the year 2000 down to only 245 square kilometres and 10 Provinces (Aug. 2019)

According to Landmine & Cluster Munitions Monitor (October 2019)[48]:

- The total of all known casualties to 2017 was at least 3,865 casualties from mine/unexploded remnants of war. By 2017 the number of casualties was down to only 11 people.
- The greatest challenge to completion of Thailand's clearance is the high proportion—around 90%—of remaining contamination located in border areas that are subject to demarcation disputes or are inaccessible due to insecurity

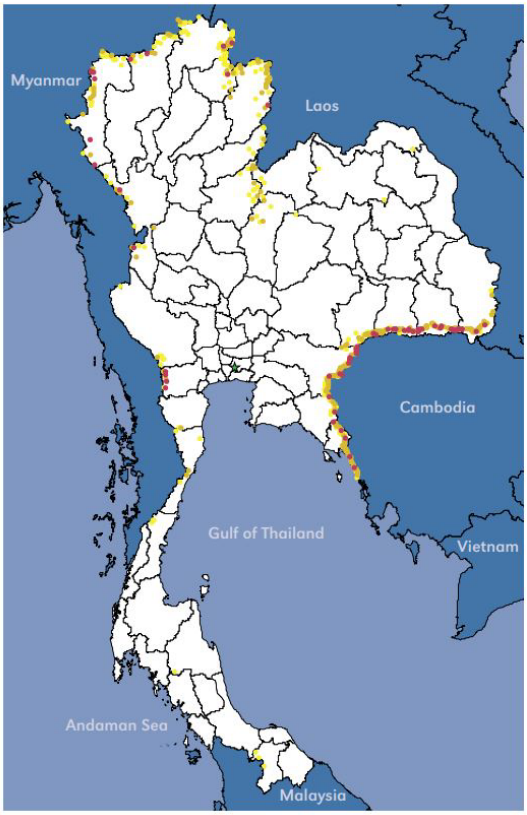


Figure 13: Location and Impact of Landmines/UXO at Village Level (TMAC, August 2019)

Thailand has a very low casualty rate due to its advanced progress with mine clearance and effective EORE. An interesting example is Thailand's initiative to encourage village leaders in high-risk areas to enhance mine awareness through local groups using the LINE Chat phone app.

[47] Thailand MOFA press release 9 August 2019, www.mfa.go.th/main/en/news3/6886/107586-Thailand-Mine-Action-Centre-Disposed-Anti-Personne.html

[48] Landmine & Cluster Munitions Monitor: Thailand, 10 October 2018, www.the-monitor.org/en-gb/reports/2019/thailand/view-all.aspx

Some examples of effective practices and innovations in Thailand include:

- Thailand focuses on participation of local communities as well as networks near landmine contaminated areas. Usually, the EORE activities are embedded into community activities or local school curriculum. Such attempts resulted in significant drop of new victims. The indirect benefit from this network is obtaining information for non-technical surveys.

- Thailand Mine Action Centre (TMAC) mobile units train village leaders and volunteers to set up local instant message LINE chat app groups—a simple and low cost EORE communication solution.

- Along the borders of neighbouring countries, minefield warning signs are displayed in locally recognized languages.

The diagram below illustrates how EORE activities are integrated and connected in Thailand.

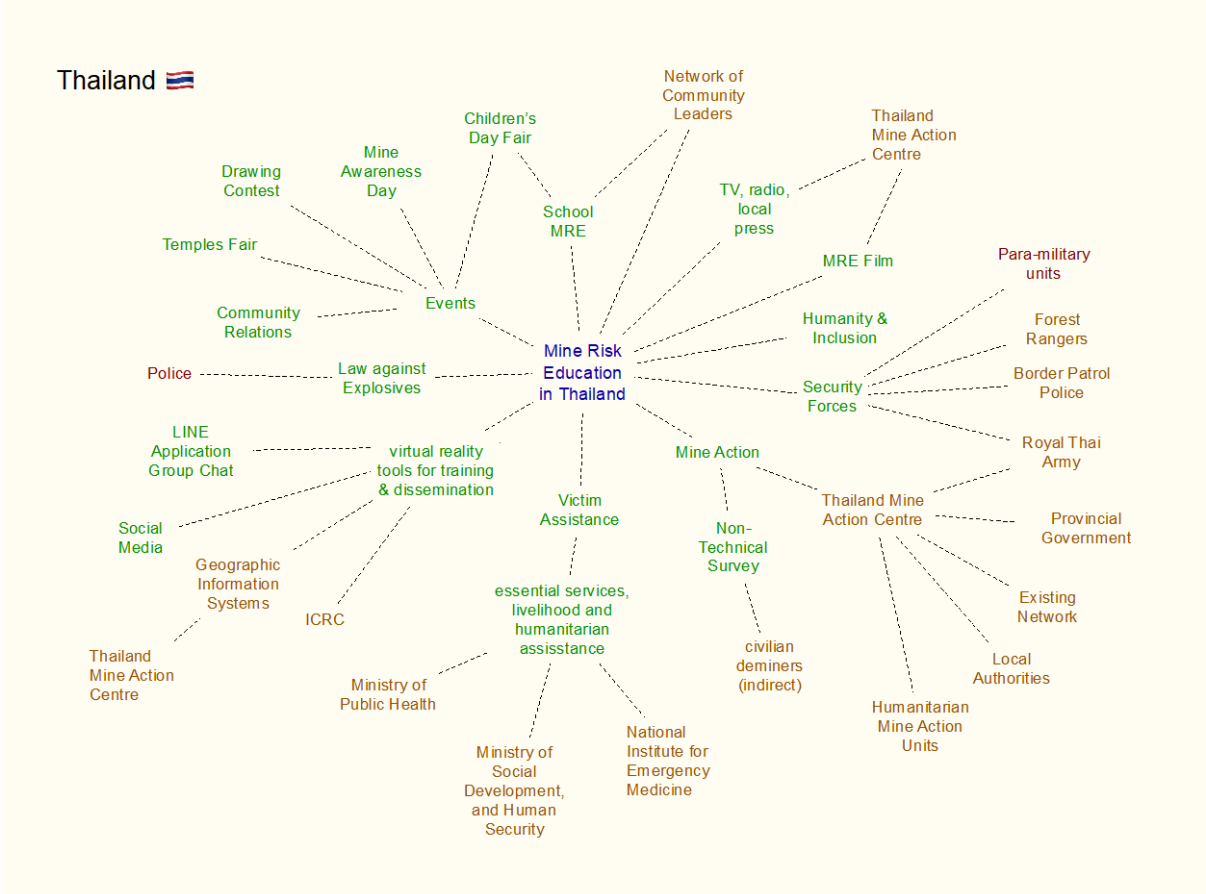


Figure 14

Some specific benefits of integrating EORE in Thailand are:

- According to Thailand Mine Action Centre (TMAC), EORE has been integrated into Non-Technical Survey (NTS) process, especially at the community level with stakeholders in villages. To start the NTS process, surveyors, who have been trained on EORE by TMAC, will visit the villages to meet with the local people, in order to interview, organise or attend meetings to obtain information on landmines and give information on EORE. After the meetings with locals, the surveyors will conduct field visits in order to collect and analyse information on contaminated areas and target groups. The surveyors will then debrief the locals of the survey result. Warning signs will be posted near the landmine locations. Information on landmine locations will be distributed to the Chiefs of villages. Integration of the EORE into the NTS process, involving all stakeholders, especially local people is practical, cost efficient and successfully helps reduce numbers of casualties among target groups.

- The Thai Civilian Deminer Association (TDA) also supports the integration of EORE by visiting targeted areas to meet and interview locals in order to (1) gather information on contaminated areas and provide such information to relevant authorities to proceed with appropriate action and (2) provide EORE not only to villagers in mine effected areas but also people nearby. TDA’s work complements the work of TMAC which helps save lives and increase mine free areas.

Vietnam

The Vietnam National Mine Action Centre coordinates the Prime Minister's Program 504 (April 2010) and National Mine Action Plan for the Period 2010-2025, known as the Program 504.[49]

Vietnam is heavily contaminated by explosive ordnance, mainly UXO and mostly dating back to the war with the USA in the 1960s and the first half of the 1970s. This includes extensive and widespread cluster munitions.[50]

- The US scattered a total of 413, 130 tons (4.1 million kilograms of submunitions over Vietnam during the war.
- Mines are a lesser problem, mostly left by conflicts in the 1970s with China and Cambodia.

The latest figures from Vietnam National Mine Action Centre (VNMAC) (16 August 2019) indicate that

- Almost all of Vietnam's 63 provinces and cities are affected by explosive ordnance
- 9,116 of total 11,134 communes are contaminated
- The contamination area is about 6.1 million hectares, equivalent 18.8% of Vietnam's mainland

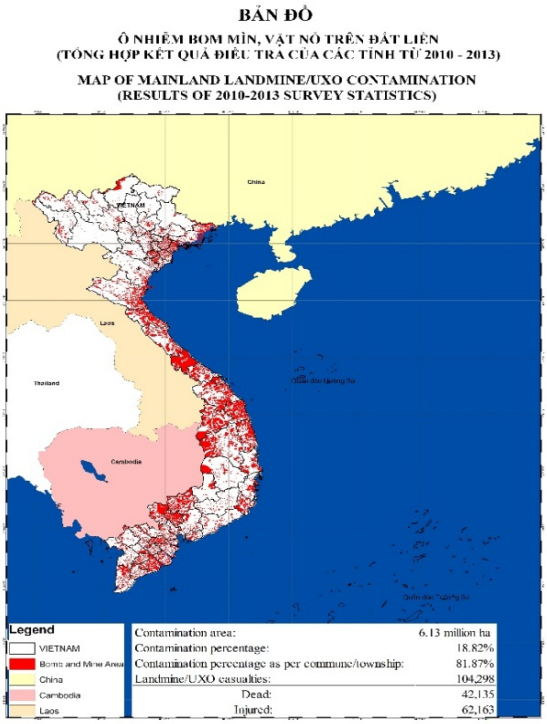


Figure 15

From the end of the war in 1975 to the end of 2007, the Ministry of Labor, Invalids and Social Affairs (MoLISA) recorded 104,701 explosive ordnance casualties, including 38,849 killed and 65,852 injured. The total number of casualties is not known due to the absence of a nationwide casualty data collection mechanism. However casualty data is now available from three of the most contaminated provinces, Quang Binh, Binh Dinh and Quang Tri.[51] In 2019 an official database on persons with disabilities and UXO survivors in Quang Binh and Binh Dinh provinces was launched, funded by the Korea International Cooperation Agency (KOICA) and implemented by the VNMAC and UNDP).

Until recently mine action in Vietnam has been more independent than many other countries and more centralised and Government funded. To tackle extensive contamination of explosive ordnance, Vietnam has reached a wide audience through mass communication such as high-quality TV ads well targeted at high-risk groups, including adolescent boys and scrap metal collectors.

[49] National Mine Action Plan for the Period 2010-2023 – Vietnam, https://commons.lib.jmu.edu/cisr-globalcwd/188/
[50] Landmine & Cluster Munitions Monitor, 4 October 2010, www.the-monitor.org/en-gb/reports/2010/vietnam/casualties-and-victim-assistance.aspx
[51] Statistics on landmine/ERW casualties in Quang Tri Province from 1975, http://qtmac.vn/en-us/FACTS-AND-FIGURES/By-Mine-Action-Component/Accidents-and-Victims

Some new examples of effective practices and innovations in Vietnam include:

- Because of the extensive contamination of explosive ordnance, the Vietnam National Mine Action Centre (VNMAC) implements widespread and systematic EORE activities, including mass media, EORE sessions and communications technology. EORE sessions have been provided to about 30 million people. VNMAC and UNDP recently produced two high quality 45 second television advertisements in Vietnamese language with English sub-titles. One advertisement is aimed at scrap metal collectors about dangers and need to report UXO. The other is aimed at young boys about dangers and need to report cluster munitions.

- In 2018 Vietnam Catholic Relief Services and the Government launched an interactive smartphone app that helps children identify landmines and other UXO, and report them to proper authorities. Designed for the high-risk cohort of curious children ages 8-12, it is the first such app to be offered in the Vietnamese language and complements classroom lessons.[52]

The diagram below illustrates how EORE activities are integrated and connected in Vietnam:

[52] Catholic Relief Service, www.crs.org/media-center/news-release/new-app-helps-children-vietnam-avoid-injury-war-era-explosives

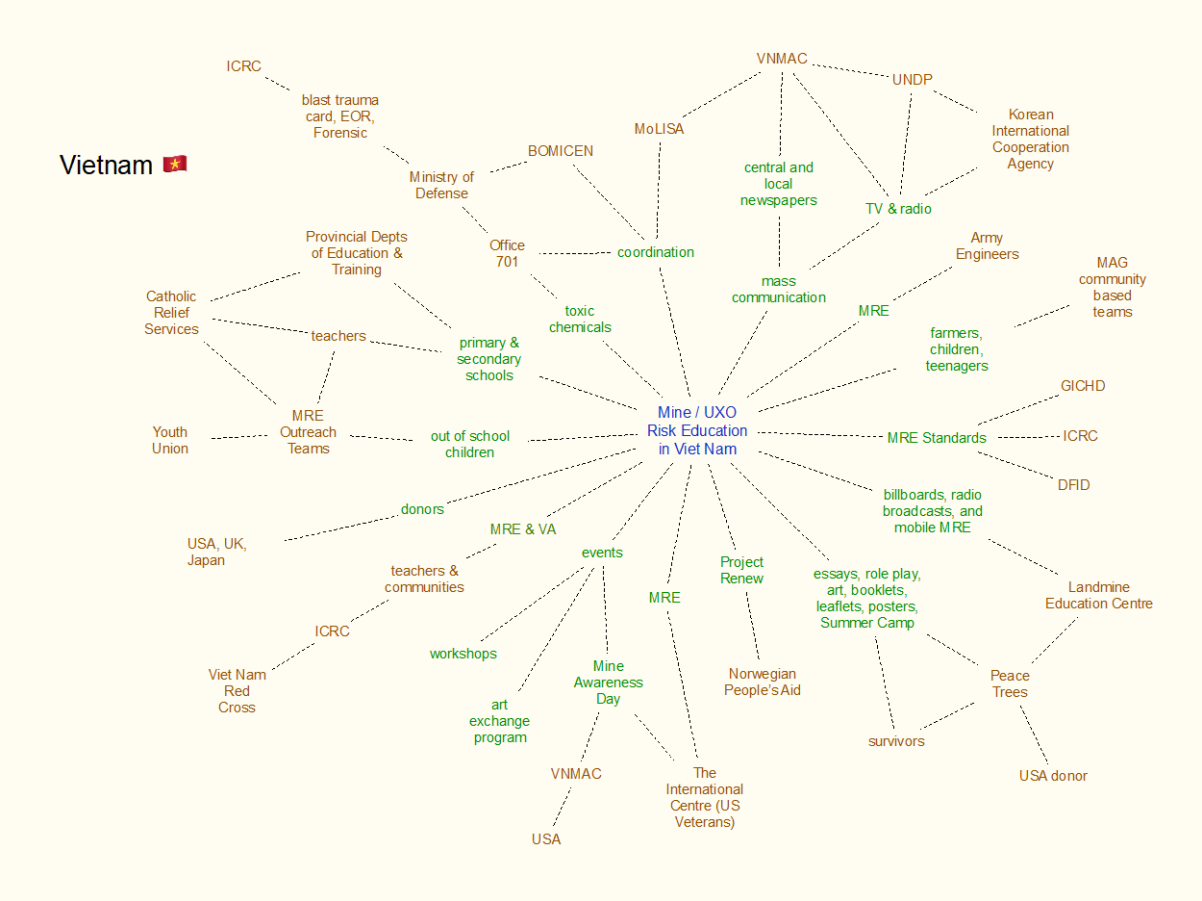


Figure 16

Some particular benefits of integrating EORE in Vietnam:

- Mines Advisory Group (MAG)'s Community Liaison Teams deliver EORE sessions according to the International Mine Action Standards. MAG believes that when EORE is integrated with community liaison, it can gain a better understanding of the needs of the community, which will result in better EORE materials, methodologies etc.

- A recent case study[53] of successful EORE in Vietnam found that integrated approaches to EORE applied, implicitly if not consciously, certain theories of communication such as theory of (i) diffusion of innovations: applying more than one communication channel particularly interpersonal efforts engaging opinion leaders and peer groups and (low cost) networks such as the Youth Union, reinforced by mass media messages, is more likely to increase receptiveness of the target audience; the (ii) health belief model: focus on advantages and the compatibility of socio-cultural values, and combining (iii) a fear appeals model with a self-efficacy message in risk communication, e.g. children's EORE drama which balances perceptions of danger consequences and severity as well as benefit

[53] Hue, Duong Trong, "Using Communication Theories in Mine-Risk Education Campaigns: The Case of Vietnam" (2018). Global CWD Repository. 179, https://commons.lib.jmu.edu/cisr-globalcwd/179

Annex B: Project Research Approach and Methodology

The EORE Project objective was "to develop integrated approaches to EORE to improve explosive ordnance education for affected communities in ASEAN Member States". The research and consultation towards achieving this objective involved the following stages:

1. Definition of the scope of the 12-month project in May-June 2019. With the intention of exploring all possibilities and approaches that have emerged from the combined long experience of mine action in the region, from the outset of the ARMAC research, the project team decided to take a broad interpretation of 'integration' of EORE, beyond the usual humanitarian mine action parameters. The definition of the term 'integrate' essentially means to combine one thing with another to form a whole. However, in the context of mine action, integration has taken many different forms within ASEAN countries. A liberal definition of 'integration' could be simply to 'link' or 'connect'. This approach paid off.

2. Participation by the ARMAC Project Team in a fact-finding field visit and community consultation on 26-27 June 2019 in Battambang Province in Cambodia to investigate whey casualties were increasing. The visit was well organized and facilitated by the Cambodian Mine Action and Victim Assistance Authority and UNICEF.

3. Continuing literature search and review of EORE research and resources from ASEAN Member States, expert INGOs--particularly GICHD, ICRC, UNICEF, MAG, HALO and the International Explosive Ordnance Risk Education Working Group.

4. Circulation of a Preparatory Questionnaire to EORE stakeholders in the five explosive ordnance affected ASEAN Member States in July-September 2019. This has yielded high value and detailed insights from experts from Government and INGOs.

5. Exploration of Theories of Change for effective behaviour change.

6. Intensive one day National Consultative Meetings with EORE stakeholders in Phnom Penh, Naypyidaw, Bangkok, Vientiane, Hanoi in August and September 2019 co-organised by Focal Points in each country. These valuable consultations included discussion of international EORE guidelines, analysis of high-risk groups, discussion of key issues, mapping of integrated EORE models in each country and examination of the advantages of integrating EORE with other programs and interventions

7. Based on all the previous inputs and insights, preparation of the Preliminary Results of research and consultation on integrated approaches to EORE in October-November 2019.

8. International inputs on the Preliminary Results at the ARMAC side event on 26 November 2019 at the Fourth Review Conference of Anti-Personnel Mine Ban Convention in Oslo, Norway.

9. Development of the draft integrated approaches to EORE in November-December 2019.

10. Regional Consultative Meeting representing all ASEAN Member States on 6 February 2020 to finalise the project Study on integrated approaches to EORE.

Given the wide geographical scope of the research project across five explosive ordnance affected South East Asian countries, meta-analysis was required. The ARMAC EORE Expert employed conceptual tools including:

- Analysis of casualty data
- Analysis of profiles of high-risk groups

- Drawing on behavioural change theories and communication theories from a number of fields including mine risk education, development education, public health education and environmental education
- Layers of social influence
- Examination of EORE implementation issues including: challenges, complexities, lessons learnt, innovative approaches, best practices, key issues, evaluation in each the five countries
- Mind mapping linkages of integrated approaches to EORE
- Adaptation of EORE Theories of Change to incorporate other integrated interventions
- Examination of various evaluations of EORE in the region
- Cross-nation comparisons between the five countries

The participants in the five National Consultative Meetings, used a matrix (below) to analyse high-risk groups, behaviours, motivations and appropriate integrated EORE responses. This data assisted in analysing common risk categories:

	risk behaviour 1	risk behaviour 2	risk behaviour 3	risk behaviour 4	risk behaviour 5
who?					
what?					
why?					
risk category	unaware	uniformed	misinformed	reckless	forced / intentional
integrated solutions?					

Table 3

Annex C: EORE Related International Conventions and Legal Frameworks

The main international conventions which outline obligations for States Parties but also guidance to other non-signatory nations regarding EORE are:

- Anti-Personnel Mine Ban Convention[54] (Ottawa Convention) was adopted in 1999 and today has 164 States Parties, bans the use of mines that detonate due to human contact, also known as "victim-activated," including improvised explosive devices that act as antipersonnel mines. The Convention obliges States Parties 'in a position to do so ... to provide assistance for mine awareness programs.' This Treaty provides the best framework for governments to alleviate the suffering of civilians living in areas affected by antipersonnel mines. Two decades after the treaty banning antipersonnel landmines opened, new use of the weapons by states is extremely rare.

- Protocol V to the Convention on Certain Conventional Weapons[55] adopted in 2006, requires that States Parties and parties to an armed conflict take all feasible precautions in the territory under their control affected by explosive remnants of war to protect the civilian population, individual civilians and civilian objects from the risks and effects of explosive remnants of war ... These precautions may include warnings [and] risk education to the civilian population.

- Convention on Cluster Munitions[56] adopted in 2008, provides strong support for programs in areas affected by unexploded submunitions; it specifically obliges affected States Parties to conduct 'risk reduction education' to civilians living near cluster munitions contaminated areas.

- Cartagena Action Plan 2010-2014 adopted in 2009, was intended to strengthen universal adherence to the Mine Ban Convention. In relation to MRE, (Action #19): States Parties that have reported mined areas under its jurisdiction or control, will do their utmost to: provide mine risk education programmes, as part of broader risk assessment and reduction activities targeting the most at-risk populations, which age-appropriate and gender-sensitive, coherent with applicable national and international standards, tailored to the needs of mine-affected communities and integrated into ongoing mine action activities, in particular data gathering, clearance and victim assistance as appropriate.

- Maputo Action Plan adopted in 2014, contained very similar requirements for State Parties to provide mine risk reduction and education programmes.

- Oslo Action Plan 2020-2024[57] adopted in 2019, committed the States Parties to the Mine Ban Convention to MRE actions (Actions #28 to #32), including to integrate MRE activities with wider humanitarian, development, protection and education efforts, as well as with ongoing survey, clearance and victim assistance activities.

- International Mine Action Standards[58] (IMAS). In conducting MRE, States Parties are also required to take into account international standards, particularly IMAS 12.10 which guides MRE.

[54] www.apminebanconvention.org/en/states-parties-to-the-convention/
[55] https://treaties.un.org/pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVI-2-d&chapter=26&clang=_en
[56] https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVI-6&chapter=26&clang=_en
[57] www.osloreviewconference.org
[58] United Nations, IMAS, www.mineactionstandards.org

ASEAN MEMBER STATES: STATES PARTIES AND SIGNATORIES TO UNITED NATIONS TREATIES (2019)

ASEAN Member State	Anti-Personnel Mine Ban Convention	Convention on Cluster Munitions	Convention on the Rights of Persons with Disabilities	Protocol I, II and III to the Convention on Certain Conventional Weapons	Protocol IV to the Convention on Certain Conventional Weapons	Protocol V to the Convention on Certain Conventional Weapons
	The Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction is the cornerstone of the international effort to end the suffering and casualties caused by anti-personnel mines.	This convention prohibits the use, production, transfer and stockpiling of cluster munitions. It also provides a framework of cooperation to: assist survivors and their communities, to clear contaminated areas, to engage in risk reduction education, and to destruct existing stockpiles.	The convention seeks to elaborate on the rights of the disabled persons, establishing a need to view people with disabilities as 'subjects' with rights. The convention is a human rights instrument which clarifies how all categories of rights apply, and areas where adaption is needed.	This legislation endeavours to ban or restrict use of specific inhumane weapons which cause unjustifiable suffering to combatants, or indiscriminately impose suffering upon non-combatants. Protocol I is concerned with non-detectable fragments. Protocol II on mines, booby traps. Protocol III restricts the use of incendiary weapons.	Protocol IV prohibits the employment of laser weapons which seek to cause permanent blindness as a means or method of warfare, as well as their transfer to any state or non-state actor.	Protocol V establishes a commitment to minimise the risks of explosive remnants of war in post-conflict situations.
Brunei	State Party	State not Party	Signatory and Ratification			
Cambodia	State Party	State not Party	Signatory and Ratification	Accession Consent to be bound	Consent to be bound	
Indonesia	State Party	Signatory	Signatory and Ratification			
Lao PDR	State not Party	State Party	Signatory and Ratification	Accession Consent to be bound		Consented to be bound.
Malaysia	State Party	State not Party	Signatory and Ratification			
Myanmar	State not Party	State not Party Never used produced or transferred cluster munitions	Accession			
Philippines	State Party	State Party	Signatory and Ratification	Signatory Consent to be bound	Consent to be bound	
Singapore	State not Party	State not Party	Signatory and Ratification			
Thailand	State Party	State not Party Not produced or exported cluster munitions, but possesses a stockpile	Signatory and Ratification			
Vietnam	State not Party Considers antipersonnel mines as a legitimate weapon of self-defense.	State not Party Never used, produced, transferred or stockpiled cluster munitions	Signatory and Ratification	Signatory		

Table 4

Annex D: EORE Theories and Concepts

Understanding How to Change Behaviour

Theory is important for designing interventions such as EORE. A theory presents a systematic way to understand, explain and predict human behaviours. The main advantages of using behavioural change theories are to:

- precisely identify problems and specific at-risk groups
- figure out how to bring about positive change in behaviour
- provide a theoretical framework in narrative or diagram forms
- articulate principles and values
- understand causal and correlational relationships
- develop effective methodologies, tools and messages
- critically challenge and test approaches to improve their outcomes / impact
- ensure everyone is 'on the same page' contributing to the same goals
- justify the need for allocation of resources (donor, government, private, philanthropic)

Effective behaviour change methodologies for mine risk reduction can be designed and enhanced by adapting theories and conceptual tools from various fields.

Of particular relevance to this current Study are:

- Theory of Change (ToC) from the international development aid and humanitarian sector
- Behaviour Change Communication (also known as Communication for Development (C4D) from UNICEF's work
- Socio-Ecological Model frameworks to help understand the multifaceted and interactive effects of personal and environmental factors that determine behaviour
- Strategy Mapping for project management planners to realistically 'join all the dots' i.e. the causal connections, using diagram tools
- Solutions Fluency, a new participatory methodology from the education field
- Multi-media communications theories and strategies, particularly harnessing rapidly changing communications technology and social media
- Best practice Monitoring & Evaluation of EORE

Key methodologies are outlined below.

Theory of Change[59]

A Theory of Change (ToC) is a structured explanation of how certain activities or interventions are understood to produce a series of results, which in turn contribute to achieving final intended impacts.

Organisations engaged in EORE should have a clear statement of their planning framework which explains the rationale for their interventions and underlying assumptions. This rationale guides their actions, is required by donors and useful to stakeholders.

ToCs can be developed for any level of activity or intervention, such as for, an event, a project, a programme, a policy, a strategy or an organisation.

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[59] For more information about ToC see Van Es, M., I. Guijt and I. Vogel (2015) 'Theory of Change Thinking in Practice. A Stepwise approach', Hivos International, Netherlands. www.theoryofchange.nl/sites/default/files/resource/hivos_toc_guidelines_final_nov_2015.pdf

Comprehensive ToC should include a discussion of the following elements:

- a realistic goal with a measurable result within an achievable timeframe
- a good situation analysis of the context—identifying high-risk groups and analysing their incentives and disincentives through data analysis, effective consultation
- the process or sequence of change expected to lead to the desired long-term outcome and impact
- assumptions about how change will occur, in order to verify that the activities and outputs are likely to achieve the desired behavioural change
- a narrative summary that explains the causal pathways included in the Theory of Change diagram
- an overview of the underlying assumptions and risks

Any ToC should start with a realistic goal with a measurable result within an achievable timeframe. For example, a goal for EORE could be:

> To reduce the number of women, men and children deaths and injuries from landmine and explosive remnants of war to less than 20 casualties per year by 2025 through integration of EORE with existing government ministries and institutions systems, programme priorities and development plans, so that EORE will be owned and implemented by government and the population can live safer in affected communities.

A basic ToC for EORE could be described in words as:

> If we educate the at-risk population about the:
>
> - ✓ nature of the dangers,
> - ✓ dangerous areas not to go,
> - ✓ probability of injury/death, and
> - ✓ safer behaviours,
>
> then there will be a reduction in risk taking behaviour, and there will be a reduction in the number of accidents.

A ToC for EORE can also be represented as a diagram. The assumptions at each level in the causal chain should also be stated.

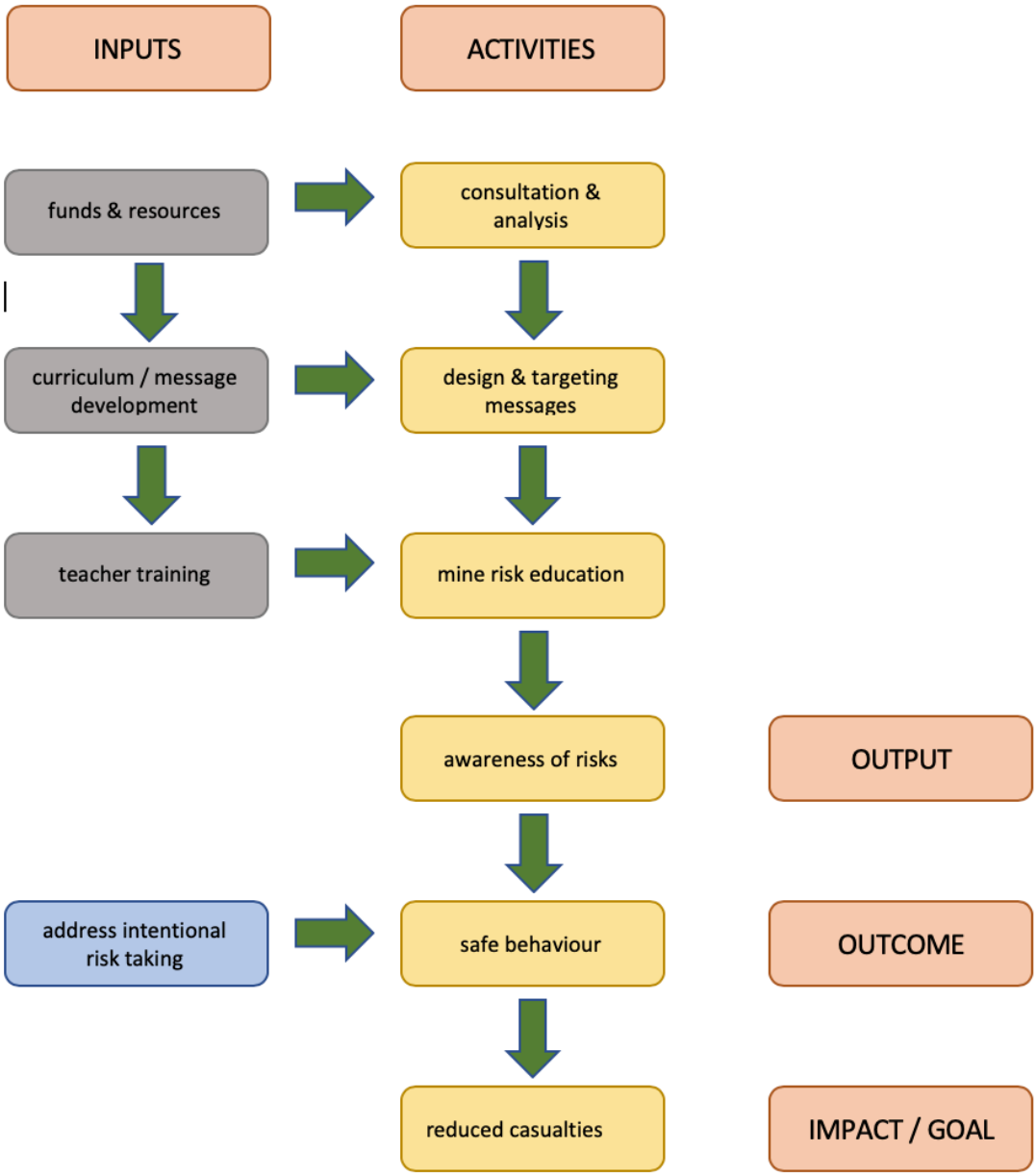

Figure 17: Basic Theory of Change

Communication for Development

Communication for Development (C4D), also referred to as Social and Behaviour Change Communication, is defined by UNICEF as "an evidence-based process that is an integral part of programmes and utilizes a mix of communication tools, channels and approaches to facilitate dialogue, participation and engagement with children, families, communities, networks for positive social and behaviour change in both development and humanitarian contexts."[60]

C4D involves engaging communities and listening to adults and children as they identify problems, propose solutions and act upon them. CDR also involves understanding people, their beliefs and values, the social and cultural norms that shape their lives, particularly guided by Socio-Ecological Model (SEM).

Socio-Ecological Model

Socio-Ecological Model (SEM) frameworks help understand the multifaceted and interactive effects of personal and environmental factors that determine behaviour. "The SEM is a theory-based framework for understanding the multifaceted and interactive effects of personal and environmental factors that determine behaviours, and for identifying behavioural and organisational leverage points and intermediaries for social and behavioural change within organisations. There are five nested, hierarchical and complementary levels of the SEM: individual, interpersonal, community, organisational, and policy/enabling environment."[61]

Adaptation of the Social Ecological Model (SEM) Levels to Integrated Explosive Ordnance Risk Education

Social Ecological Model Level	Factors that determine behaviours	At-risk people e.g. farmers, boys, children, moving populations, salvagers	Profiles unaware, uninformed, misinformed, reckless, forced	Appropriate integrated EORE and aligned communication strategies
1. Individual Knowledge, attitudes, behaviours	Characteristics of an individual that influence behaviour change, including knowledge, attitudes, behaviour, self-efficacy, gender roles, age, religious identity, racial/ethnic/caste identity, sexual orientation, socio-economic status, financial resources, values, goals, expectations, literacy, stigma, etc			e.g. School EORE, child-to-child EORE, role models
2. Interpersonal Families, friends, social networks	Formal (and informal) social networks and social support systems that can influence individual behaviours, including family, friends, peers, co-workers, teachers, religious networks, customs or traditions, law enforcement			e.g. Community liaison, social media, Spirt of Sport
3. Community Relationships between organisations	Relationships among local organisations, institutions, and informational networks, village associations, community leaders, businesses, and transportation.			e.g. Community media, police, chat groups, posters, local festivals

[60] Communication for Development, UNICEF, www.unicef.org/cbsc

[61] UNICEF 2017 Report on Communication for Development (C4D): Global Progress and Country Level Highlights Across Programme Areas, www.unicef.org/media/47781/file/UNICEF_2017_Report_on_Communication_for_Development_C4D.pdf

4. Organisational Organisations and social institutions	Organisations or social institutions with rules and regulations, NGOs, community-based organisations			e.g. Volunteer networks, local phone app
5. Policy/Enabling Environment National, provincial laws	Local, state, national laws on explosives, handling and reporting explosive ordnance, restricted areas. Enforcement of laws			e.g. Mass media smartphone apps

Table 5

Each communication channel has features that are appropriate for specific at-risk groups to achieve specific behavioural change. Use of a combination of activities at all levels of the model is likely to reinforce the efficacy of the message.

Solutions Fluency

Solutions Fluency[62] is a new participatory methodology from the education field. This is a local group dialogue approach which may be effective where stand-alone EORE fails for the more intractable risk-takers (particularly the 'reckless' and 'forced' or 'intentional'). Trained facilitators/teachers work closely and enable the risk takers to define the problem and think critically from multiple perspectives to discover possible solutions for themselves.

Strategy Mapping

In the real world of complex human behaviour, motivations and interactions, there are often shortfalls, hitches and impediments in implementation which are overlooked or oversimplified in Theories of Change and linear Logistical Frameworks. Strategy Mapping[63] is a project management planning tool to realistically 'join all the dots', that is the causal connections, using diagrams. The advantage of Strategy Maps is that they emphasise a clear continuum of cause and effect of each action and estimates realistic probabilities / uncertainties between steps.

Strategy Mapping reminds planners that the definition of a strategy must contain four elements:

1. specifies an action (or actions), and
2. states an achievable objective, and
3. justifies the claim that the action will achieve the objective (often omitted), and
4. is recognised as a choice (among other alternatives).

Strategy Mapping also reminds planners that a strategy is in fact a theory, and it should be clearly articulated and justified. For example, the Strategy Map in Figure 17 tests the probabilities of success in each step in the casual chain of an EORE programme.

A purely hypothetical example of Strategy Mapping of a school EORE programme:

Inputs: Perhaps 95% of the allocated budget and resources actually reach the classroom because some teachers may not have the necessary training or imperfect financial management (score 0.95)

[62] Mindful Assessment: The 6 Essential Fluencies of Innovative Learning, by Lee Watanabe-Crockett, Andrew Churches, 2016, Solution Tree, www.solutiontree.com/products/mindful-assessment.html

[63] Strategy Simplified: a primer, by Tony M. Robinson, to be published in 2020

Actions: EORE teaching may only reach 80% of children because some children miss school (score 0.8)

Outputs: EORE teachers may only succeed in changing awareness of 90% of the students because some children are not interested or paying attention (score 0.9)

Outcomes: and of those students only 80% change their behaviour because some adolescent boys are reckless (score 0.8)

Impact: Therefore the success rate of this school EORE program is product of these probabilities: 0.95 x 0.8 x 0.9 x 0.8 = 0.55, which means there is only a 55% success rate of the particular strategy.

Conclusion: Integrated Action: This example demonstrates the need to integrate, reinforce or link classroom teaching with other interventions, such as sport, child-to-child, social media, positive role models, etc.

Figure 18: Strategy Map of School EORE

Monitoring & Evaluation of EORE

Until recently, evaluation of EORE has rarely been undertaken in the Mekong countries due to lack of resources and other competing priorities.

The Cambodian Mine Action and Victim Assistance Authority is currently conducting a comprehensive evaluation of EORE.

The HALO Trust and Mines Advisory Group is currently implementing a rigorous EORE evaluation methodology in three countries—two surveys are undertaken to measure both the level of understanding people have of risks associated with explosive ordnance, and whether having that understanding actually makes them change their behaviour.

International Mine Action Standard 12.10[64] sets the 'gold standard' for monitoring and evaluation of EORE. According to IMAS 12.10, in general monitoring should quality-assure EORE and the outputs of the project or programme in accordance with the plan. Evaluations should focus on the achievement of objectives, the impact of EORE, accountability, and lessons learned.

At a minimum, monitoring should examine:

1. effectiveness and efficiency of EORE delivery;
2. perception of EORE projects and programmes by at-risk communities;
3. resultant behavioural change;
4. geographical coverage;
5. reasons for risk-taking, new behaviours, adaptation to the hazard;
6. casualties;
7. changes in the make-up of the target risk group; and
8. meets relevant national and international standards, including any accreditation requirements.

Monitoring should track and adapt to any changes in the explosive ordnance hazard and environment. Monitoring should be carried out at project and programme level and both internally (i.e. by the implementing organisation itself) and externally (by a national or UN mine action agency on their behalf). The monitoring system should be able to:

[64] International Mine Action Standard 12.10 Second Edition (Amendment 2, June 2013)

1. identify measurement indicators that focus on relevance, efficiency, effectiveness, impact, and sustainability;
2. establish systems to collect and record information concerning these indicators;
3. ensure that the data collected is analysed and interpreted; and
4. ensure that the information is used to inform project/programme management to ensure that the activities support the achievement of objectives.

Evaluation of EORE should assess the impact of the project or programme, in particular in reducing the human, social or economic impact of explosive ordnance.

An evaluation may consider a single project, organisational approach, policy or strategy on EORE.

Evaluation of outputs requires a more rigorous means of measuring that can demonstrate the effectiveness of EORE, and encourages strategies that optimise resources, funding and effort.

The Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) recently adopted six core criteria for evaluating development programs.[65]

1. Relevance: Is the intervention doing the right things?
2. Coherence: How well does the intervention fit?
3. Effectiveness: Is the intervention achieving its objectives?
4. Efficiency: How well are resources being used?
5. Impact: What difference does the intervention make?
6. Sustainability: Will the benefits last?

IMAS 14.10[66] provides more detailed guidance for evaluation of mine action interventions and suggests the following criteria may be employed:

1. Relevance. The extent to which the objectives of an intervention are consistent with beneficiary requirements, country needs, global priorities, and donor policies;
2. Efficiency. A measure of how economically resources/inputs (funds, expertise, time, etc.) are converted to results (outputs and outcomes);
3. Effectiveness. The extent to which the intervention's objectives were achieved, or are expected to be achieved, taking into account their relative importance;
4. Impact. The positive and negative, primary and secondary long-term effects produced by an intervention, directly or indirectly, intended or unintended. The term 'final outcome' may be substituted;
5. Sustainability. The continuation of benefits from a mine action intervention after major assistance has been completed; and
6. Safety and quality. This relates principally to demining activities and covers whether the work was carried out safely and achieved the required standards of quality for the activity (i.e. technical survey, clearance, marking, etc.).
7. Value-for-money (economy, efficiency, and effectiveness);
8. Cost-effectiveness (used for comparing alternative means for achieving comparable objectives);
9. Cost-benefit (used for comparing alternative means for achieving alternative objectives, whether comparable or not);
10. Client satisfaction for both men and women;
11. Beneficiary satisfaction;
12. Replicability (whether a project or programme can be replicated in a different environment); and
13. Scalability (whether a project or programme can be increased in size or 'scaled-up').

[65] OECD DAC Evaluation Criteria, December 2019, www.oecd.org/dac/evaluation/daccriteriaforevaluatingdevelopmentassistance.htm
[66] International Mine Action Standard, Guide for the Evaluation of mine action interventions, 14.10 First Edition (Amendment 3, June 2013)

It is good practice for organisations involved in EORE to develop a Project Design and Monitoring Guide[67] with the following suggested elements:

Item	Details	Remarks
Objectives	Change in behaviour Reduction in casualties	
Guidelines	Standards, guidelines, SOPs	e.g. class size, duration of session
Activities	EORE delivery methods	e.g. schools-based, community-based, mass media, technology
Input Indicators	Number of people provided with RE.	disaggregated by age, gender, location and type of EORE
Output Indicators	Change in awareness and knowledge	tests
Outcome Indicator(s)	Change in Behaviour	KAP survey to measure change in attitude measured by increased explosive ordnance reporting and change in behaviour measured by reduction in casualty numbers
Theory of Change (ToC)	Brief narrative summary statement of ToC for each of the categories of typical explosive ordnance casualties.	
Results Framework	Explanation (graphic display, matrix, or summary) of the chains, of results expected from a particular project	The expected cause-effect relationships among inputs, outputs, intermediate results or outcomes, and impact in the project cycle to achieve the project objectives
Integration links	Integrated activities and relationships particularly for the 'forced' or 'intentional' category	more integrated, collaborative, multi-sectoral and multi-level response
Direct beneficiaries	People receiving risk education	
Indirect beneficiaries	The local community	
Baseline	Baseline knowledge Baseline attitudes Baseline behaviour	Established through KAP or through pre-EORE session questionnaires d focus groups Number of explosive ordnance reports per month in project area
Typical Milestones	Material prepared and piloted Teams established in area KAP surveys undertaken Team operational months Mass media released	
End-line	Change compared to baseline in: 1. knowledge 2. attitudes 3. behaviour	Established through KAP surveys and focus groups Number of explosive ordnance reports per month in project area Casualty numbers in project area
Expected impact	Reduced casualties Increased overall health of population in terms of reduced disability Reduced impact on earning potential	
Lessons learned		

Table 6

[67] Adapted from 'Mine Action Project Design and Monitoring Guides', Danish Demining Group, Version 1.0, June 2016

Annex E: Resources and References

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