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Is Mine Risk Education (Mre) Having A Significant Effect And Long-Lasting Impact On Attitudes Towards Uxos At The Community Level?

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IS MINE RISK EDUCATION (MRE) HAVING A SIGNIFICANT EFFECT AND LONG-LASTING IMPACT ON ATTITUDES TOWARDS UXOS AT THE COMMUNITY LEVEL?

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Abstract

For over 30 years, UXO (Unexploded Ordnance) contamination in Laos has affected the ability of the population to maintain suitable livelihoods in a number of provinces. This constraint is a significant challenge to community development as well affecting National Social Economic Development. UXOs are the cause of many accidents in Laos, the casualties are often children and farmers who are involve in agricultural activities and scrap metal collection.

UXO-LAOS is the key UXO clearance agency in Laos. Other UXO clearance agencies have also tried to address the problem by providing the clearance work as well as Mine Risk Education (MRE) activities in order to reduce the casualties and increase access to safe farmland.

The research found that the children have changed behavior towards the risk of UXOs to a greater extent than adults in terms of practicing the advice given during MRE when they encounter UXOs. MRE has had a very positive impact in communities. However, it needs considerable integration with the UXO clearance work as well as livelihood improvement activities in order to help MRE maintain a significant effect and long-lasting impact on attitudes towards UXOs at the community level.

List of abbreviations

NRA: National Requlatory Authority for UXO/Mine Action Sectore in LAO PDR

UXO: Unexploded Ordnance

UXO-LAOS: Unexploded Ordnance Program LAOS

MRE: Mine Risk Education (This term is used by CARE, MAG and others)

SEP-DEV: Sekong Ethnic Development Program

CA: Community Awarenes about UXO (this term is used by UXO-LAOS)

FSD: Swiss Foundation for Demining

NEX: Nationally Executed

SM: Scrap Metal

Glossary

- **Wooden/dibble sticks**: pointed stick used to make a hole in the soil for planting rice when growing rice in upland / slash and burn rice fields (metal dibble stick is more dangerous and high risk for UXO accidents).

- **Hoe**: handheld tool used for digging the ground especially to convert the rice filed as well as making lines for vegetable garden.

- **Shovel**: handheld tool used for soil shoveling, especially for the unconsolidated soil.

- **Metal Detector**: Normally is used by UXO agency for searching for UXOs. However, some villagers illegal used these to search for the scrap metal, which is supported by scrap metal traders. This is very dangerous for them because they do not have the technical expertise for dealing with the UXOs.

- **Axe**: tool used for cutting big trees, especially to convert the forest to become an upland rice field.

- **Upland rice /slash and burn**: Farming methodology where the land is cleared and burned before use, and farmed for a short period using intensive labour. The villagers then have to move to a new adjacent area either after one or two years.

- **Burning upland rice field**: After cutting the trees in the forest, the cut trees are burned. After that they dry, and then are cleared and converted to the upland rice field.

1 Statement

The researcher grew up in Sekong Province, which is located in the south of Laos. It is identified as one of the provinces with the highest contamination of Unexploded Ordnance (UXO) in the country. For over 30 years UXOs have caused significant problems and ongoing challenges for development, especially to agriculture and livelihood practices in Sekong province. A high number of UXO accidents have occurred since the conflicts of the 1960s/70s and continues to the present day. Several community development projects have been based in Sekong Province including Ethnic People Development Program and CARE International[1]. These agencies have faced the difficulty of conducting activities due to UXO clearance challenges. Sep-Dev has experienced challenges in implementing of activities, especially infrastructural activities as well as crop planting activities. CARE Sekong has implemented community development projects and has provided multiple activities in order to improve the livelihoods of ethnic communities within Sekong province[2]. The projects have faced many challenges regarding UXOs, and a number of activities are delayed because of the high UXO clearance demand for development work. Mine Risk Education (MRE) is carried out in communities to help the villagers address the risks from UXOs. Despite this, the presence of UXOs continues to present risks to communities and their daily lives. Therefore it is important to understand the degree to which MRE has been affective at the community level.

[1] The author has significant work experience with both of these organizations.

[2] Currently the author is working with this organization.

2 Introduction and research question

2.1 Introduction:

It is now 37 years since bombing missions over Laos were responsible for dropping the equivalent of half a tonne of ordnance for every adult and child living in the country, of which up to 30% did not explode. Unexploded ordnance remains a significant factor in the daily lives of people living in Laos. UXO clearance agencies have worked for many years to address the problem and, despite these efforts, it is believed that less than one percent of the UXOs have been removed. Mine Risk Education (MRE)/ UXO Risk Education (CA) is normally part of the UXO clearance process. However, it may be carried out as a stand-alone mine-action activity. MRE is an integral component of mine action or UXO clearance in Lao-PDR. MRE refers to activities which seek to reduce the risk of injuries from UXOs by raising awareness and promoting behavioral changes amongst at-risk groups. MRE in Laos is focused on reducing the risk from UXOs by preventing UXO-related accidents from happening, through proper awareness raising and communication. This is to help reinforce attitudes and practices of people living in contaminated areas to avoid risky behavior such as moving or tampering with UXOs. This paper will try to explore the quality or effectiveness of Mine Risk Education to see if the participants really practice what they have learnt, and how MRE can impact on longer-term behavioral change at the community level.

2.2 Research question:

Is Mine Risk Education having a significant effect and long-lasting impact on attitudes towards UXOs at the community level?

Sub-questions:

1. Does land clearance of UXO agencies have a direct correlation with the reduction of UXO victims?
2. Does the density of UXOs in an area (based on UXOs cleared/ha) have a direct correlation with the number of UXO victims?
3. How have the communities used the lessons from MRE activities in their daily life?

3 Literature review

3.1 History of UXOs in LAO

Laos is a land-locked country located in the centre of Southeast Asia and has borders with China, Thailand, Myanmar, Cambodia and Vietnam. The eastern part of Laos that borders with Vietnam was used after 1959 by the Vietnamese as a supply route for the Vietnam War (the Ho Chi Minh Trail). Consequently, the area was subject to high levels of aerial bombing.

Since 1964-1973 more than 580,000 bombing missions over Laos dropped in excess of two million tons of ordnance, making Lao PDR the most heavily bombed country, per capita , in history. It is estimated that up to 30% of ordnance that were dropped did not explode. These remain as unexploded ordnance, and continue killing and injuring Lao people more than 40 years on. More than 270 million bombies[3] were dropped onto Laos. They are the most common remaining UXO. It is estimated that approximately 80 million unexploded bombies remained after the war. (NRAfor UXO/Mine Action Sectore in LAO PDR). The Bombings were targeted heavily in two areas of Laos: in the northern part of Laos where the root of the communist movement was expanded to PATHAD LAOS[4], and the south of Laos over the Ho chi Minh Trail. (Siberman,2001)

[3] One of the smaller bombs that are released from a cluster bomb, approximately the size of a tennis ball, it is designed to explode sending out several hundred small rounded metal projectiles.

[4] PATHAD LAOS was the full name of Current LAO People Democratic Republic before revolution(before 1975).

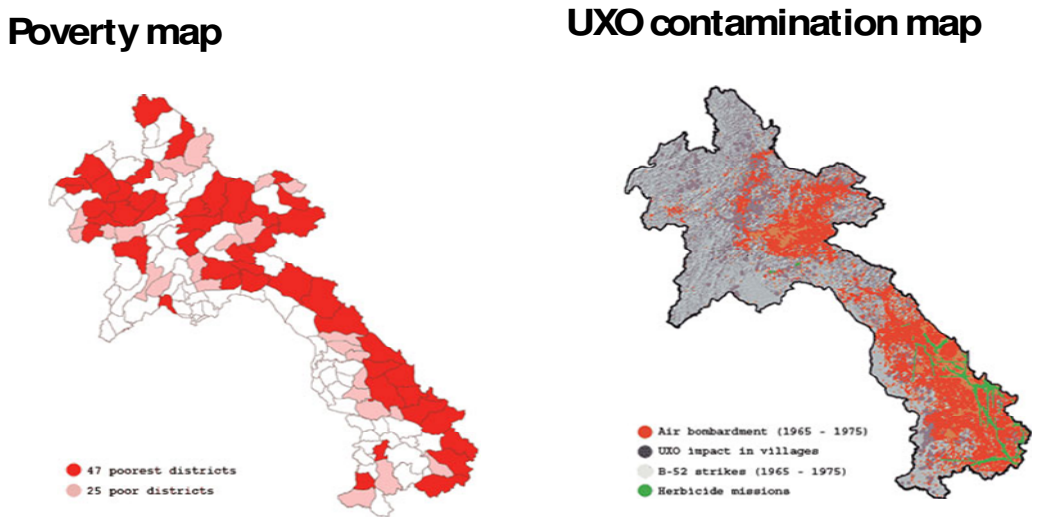
3.2 How the impact of UXO is linked to the poverty in LAOS.

After the war ended the presence of UXOs still remained significant, and has affected all 17 provinces of the country. Approximately 25 percent of villages suffer from various degrees of UXO contamination. There are 9 provinces that are considered to be the most heavily UXO contaminated areas: Xienkhouang; Savanhnakhet; Khammuoan; Huoaphanh; Luaongprabang; Champasack; Salavanh; Sekong; Attapeu. About 87,213 square Kilometers of land[5] are considered as being at risk from UXO contamination. 12,427 square kilometers are at high risk and 74,786 square kilometers are at moderate risk (Sisavath,2006). This creates a high risk for land use,and causes difficulty for livelihood activity implementation which clearly contributes to food insecurity and impacts on poverty. (Khoun Community Radio, 2010)

UXOs can prolong and exacerbate the conditions of poverty. UXOs restrict many aspects of community development and nation building, as the activities needed to drive forward progress and socio-economic development are either stopped or delayed. This causes challenges for communities to achieve a sustainable livelihood. The map below (Figure 1) (UNDP, 2010) demonstrates that there is a very strong link between UXO contamination and poverty in Laos. Most of the high poverty locations are the same areas with high UXO contamination; for example, the eastern border with Laos has high levels of both poverty and UXOs.

[5] A country- wide total of 236,800 square kilometers.

Figure 1: UXO contamination and Poverty maps



3.3 How the UXO contamination and Poverty are related to the number of the UXO casualties.

The majority of the rural population continues to have a subsistence-farming based lifestyle, which is greatly hindered in areas where there is UXO contamination. In simple terms, the impact of UXO contamination is to kill and injure people and stop food production. Communities cannot safely access the agricultural land they need, and this forces them to take terrible risks with their physical safety, just in order just to feed themselves. Accordingly, the national statistic shows that from the end of the war till 2010, the victims of UXOs number

around 22,000 people[6]. In the last decade, the rate was approximately 300 casualties per year. (NRA, 2011).

The poverty in UXO contaminated areas has forced people to conduct risky behavior including the collection of scrap metal, which is the cause of accidents**.** According to NRA (National Regulatory Authority) information, there are three high risk groups for accidents: farmers; children, and scrap metal collectors. In some cases some farmers do not know that the land is contaminated by UXOs because they are not always found on the ground surface. Some of the farmers know the risk but have no alternative to help them avoid farming in high-risk areas. Children engage in a variety of activities that expose them to risks, from playing or being involved with family work, including farming, food collection, and scrap metal collection. Scrap metal has become a significant industry in Laos as the demand for recycled metals for infrastructure projects is increasing both in Laos and neighboring countries. Many people take up this activity knowing there is money to be made, despite the risks involved. Sadly, the collectors are often children. (Sisavath, 2006). For the people who live in poverty, scrap metal can be the main source of income (though small) for the family. . This has been shown by an in-depth review of current community-awareness/MRE activities, of the messages delivered to impacted communities, and of the socio-economic linkages established between public well-being and the vast quantities of scrap metal and explosives that represent an additional source of disposable income to cash-strapped rural populations (Sisavath, 2006). The scrap-metal trade is considered a dangerous one contributing to the problem of UXO casualties in Laos. Shane (2006) suggests that it is quite difficult to confirm that the scrap-metal trade is a significant cause

[6] Both killed and injured

of casualties; however there is evidence from accident reports in some cases. Today the national statistics indicate that of the approximate 300 people that are injured every year, 40 percent are children. (NRA, 2011).

Since UXO-LAOSS was founded in 1996, the organization has cleared 7,200 hectares, benefiting more than five million people[7]. Unfortunately, accidents still happen. More than 82,000 square kilometers (more than one-third of the country's area) is considered at risk from UXO contamination, which will remain a challenge for future generations. (History 2010).

3.4 Background of Lao National Unexploded Ordnance Program (UXO-LAOS)

The Lao National Unexploded Ordnance Programme (UXO-LAOS) was established in 1996 with support from UNICEP, UNDP and other stakeholders. UXO-LAOS is a Nationally Executed (NEX) Project of the Ministry of Labor and Social Welfare, and the UNDP. The Ministry of Labour and Social Welfare is the implementing partner while UNDP provides program oversight. The headquarters is based in Vientiane, the capital of Laos, and provides support for field operations in nine provinces that have been identified as the highest UXO contaminated provinces. UXO-LAOS has focused on two mandates; "Reduce the number of casualties caused by unexploded ordnance, and increase the amount of land available for food production and other socio-economic development activities."(UXO LAOS, 2008). Provincial

[7] Some beneficiaries can be counted more than once. This happens when different areas of their land are cleared at different times.

operations are based on the principles of humanitarian mine action. In each of these provinces, UXO-LAOS established a provincial office and extensive field operations. These are supported by international technical advisors who are based at the provincial level. UXO-LAOS focused on training and capacity-building, both formal[8] and on-the-job training, Lao trainers and international technical advisors deliver the training. The UXO clearance is separated into two components. Firstly they operate mobile roving, which destroys the UXO found at ground level that are reported by villagers. Secondly they carry out clearing by using detectors to identify the land that is contaminated by UXO[9]. The survey activity provides a crucial operational element through the provision of detailed maps that help to prioritize work and monitor provincial progress against a baseline. UXO-LAOS also implements community awareness activities that seek to raise awareness among rural communities of the continued dangers of UXO, and to educate villagers on ways to minimize the risks caused by UXO through behavioral change. (Sisavath, 2006).

The Community Awareness or Mine Risk Education teams have conducted the awareness training to help communities avoid the danger of UXOs. However, the teams are not sufficient to meet the need, as the teams are only able to visit four to six villages each month and every village once every three or four years due to both resource constraints and the significant number of villages affected. (Sisawath, 2006). UXO operation standards have mentioned that UXO/MRE have complementary and mutually reinforcing components: Public information dissemination, Education and training, and Community liaison. Public information dissemination is primary

[8] The training conducted at the National Training Centre.

[9] Clear the UXOs below the ground level.

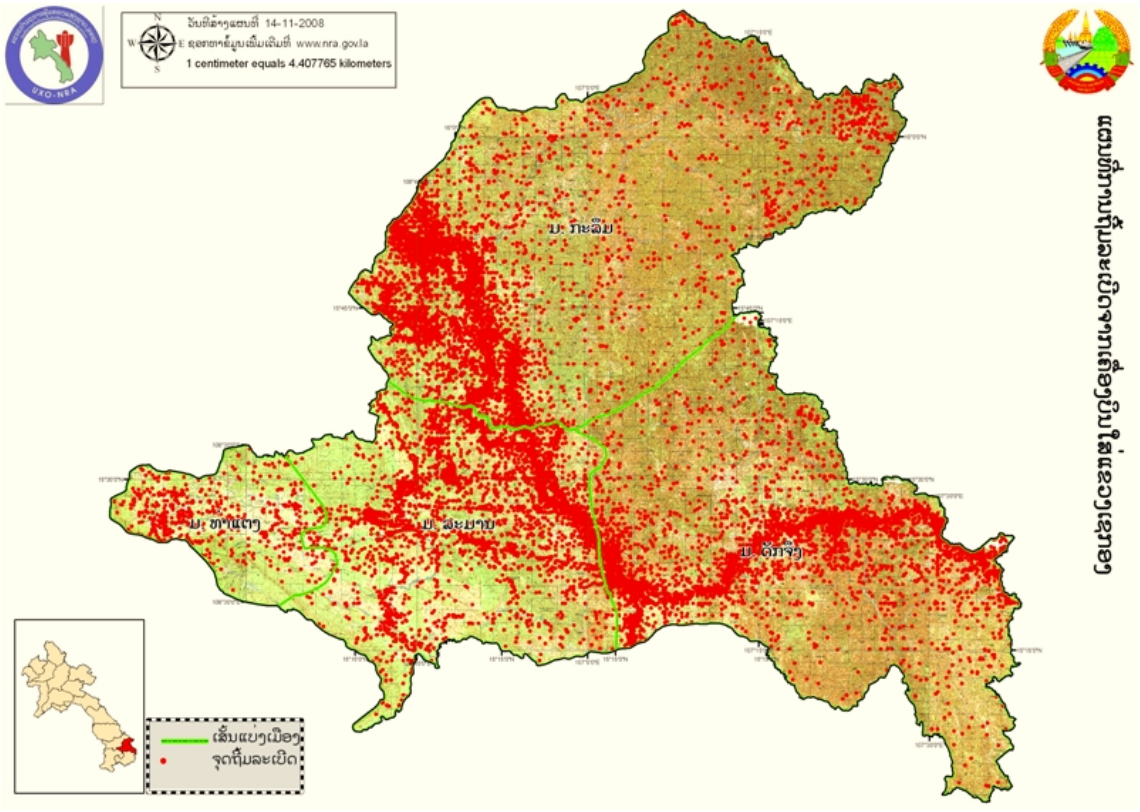
public information which seeks to reduce the risk and injury of individuals and communities by promoting behavioural change. Education and training activities seek to reduce the risk of injury from UXOs by raising awareness of the risk to individuals and communities and promoting behavioural change. Education and training is a two-way process, which involves the imparting and acquiring of knowledge, attitude and practices through teaching and learning. These activities may be conducted in formal and non-formal environments. The Community liaison is the system and processes used to exchange information between NRA and communities. It is also the opportunity for communities to be fully involved in clearance processes, and on completion of clearance to be confident that the land released for their use is safe (NRA, 2007). In the evaluation sector report it is stated that UXO-LAOS has conducted CA activities in **6,659** villages over the last ten years. Other operators also conduct risk education **in 2,861** villages. However, there has not been any verification process to ensure that the villages where community awareness activities are conducted are on the list of impacted villages. The statistic in this report also shows that the number of accidents in Laos from 2005 to 2007 has increased. (Griffin, 2008).

3.5 MRE/CA in Sekong Province.

Sekong province is located in the south of Laos, bordering with Champasak, Saravanh, and Attapeu provinces, as well as Vietnam. The total area is about 7,665 km², 95 percent of the total area of Sekong is rural, and many of the villages are not accessible due to a lack of roads (Sekong Province Information 2009). It is classified as one of the poorest provinces in Laos. Sekong has approximately 98,000 people which include 14 different ethnic groups. (Sekong

Province Information, 2009). Sekong is divided into four districts which includes 235 villages that are recognized formally and registered to have formal stamps (Summary of statistic, 2009). However the villages are divided by UXO-LAOS differently to the government system to make it easier to recognize locations in terms of UXO clearance operations. UXO-LAOS counts one group in a location as one village, because in many cases there can be up to four groups in one location. They are living in different clusters of houses but they are considered formally as one village. (I.e. several hamlets per 'official village' and UXO-LAOS chooses to deal with each hamlet individually), therefore the number of villages that identified by UXO LAO are **383** villages. Some of the villages were accessed by the Ho Chi Minh trail. The Ho Chi Minh trail was the key network of roads for North Vietnamese to transport the supplies, troops, food etc to southern Vietnam during Vietnam War. The Ho Chi Minh trail was one of the areas that was affected by heavy bombing from the American airplanes because they wanted to prevent transportation from northern to southern Vietnam.(Siberman,2001).

Figure 2. Sekong Province's UXO contamination



The UXO-LAOS programme was established in Sekong province in 1997 funded by international organizations. UXO-LAOS have been working in all four districts. Four main tasks are integrated together: roving, clearance, survey, and community awareness. UXO-LAOS Sekong has assisted about 60 percent of the 383 villages. In many of these villages MRE activities have been repeated several times as the need has been identified. However, MRE is not provided to some of villages in Sekong province as transportation for the CA team is not always available (Latsamy personal communication, March 31 2011).

CA is one of the key units of UXO-LAOS in Sekong province and works relatively with roving, clearance and survey teams. The approach is to use provincial community awareness teams to conduct intensive awareness campaigns on a village by village basis. According to Mr. Bounty Doaupanya, the deputy of CA team, the CA can contribute to two key areas: helping people understand how to avoid UXOs, as well as greater awareness in order to decrease the number of casualties . CA also facilitates the clearance and roving teams' work to go more smoothly as people see a greater need of clearing their land, and also getting a contribution from the villages to clear vegetation from the areas like farming land, infrastructure construction etc. The causes of accidents now and 10 years ago are quite different. Ten years ago the risks related to people having limited knowledge and understanding about the dangers of UXOs. This was because they lived with UXOs for many years which made them get used to the danger and not see them as a big problem; they were not aware how to stay away from UXOs. At the same time, the need of the people was to access land for farming to produce food, which also causes accidents. Now (ten years on) most accidents are related to collecting/trading scrap metal, as well as some of the people continuing to be affected during farming. The interpretation from the UXO-LAOS CA team leader was that there were two types of people who have accidents: the people who 'have intention' and the people who 'have no intention' to handle UXOs. 'No intention' means the people who do not purposefully touch UXOs, and are unaware that UXOs are around them. Injury occurs when they do something to disturb UXOs that they do not realize are there, especially if under the ground, which is difficult to predict. The people who 'have intention', means the people who try to do something with the UXO like collecting them for scrap metal. This includes trying to take the UXO apart to get the scrap metal, or explosive, to sell, or use as a simple tool for hunting. Currently some villagers also use metal detectors to search for scrap

metal. CA has used many different methodologies to raise awareness to communities about the dangers of UXOs. These include showing pictures or posters, playing games, singing songs that relate to UXO prevention, puppet shows, paper puppet shows and group discussions which include the village authority. All of these are contributing to giving awareness of UXO accident prevention. The CA have to approach differently comparing to now and 10 years ago because the underlying cause of the accidents are also quite different. Previously CA focused more on introducing the UXOs as a danger and how to prevent UXO accidents. Now CA focuses more on how to prevent accidents related to scrap metal collection, and other issues for accident prevention are less prioritized. Currently UXO-LAOS also has identified the three high-risk groups: children, scrap metal-collectors/traders and farmers. (B. Doaupanya personal communication, March 30 2011)

CARE International, working in Laos, has established a project called 'Reducing UXO Risk and Improving Livelihoods of Ethnic Communities in Sekong Province' which has been run by CARE International based in Sekong province since 2007. It is funded by The Australian Agency for International Development (AusAID), with the cooperation of The Laos Australia Non Government Organisation Cooperation Agreement (LANGOCA) Program. The organization addresses the multi-faceted vulnerability of poor, ethnic communities affected by UXO contamination, and incorporates best practice UXO clearance and community development focusing significantly on women and girls. There are two key components: community development, and UXO risk reduction. The project has worked in 20 target villages. In the first two years the project included funds for both community development and UXO operation (in partnership with FSD). This extended to UXO clearance, first aids kits/training, and the

establishment of MRE activities. After two years, the UXO clearance operation aspect was completed, and partnership for clearance was handed over to UXO-LAOS . However the MRE activities started in 2009 and are still being implemented along with community development activities. MRE has taken place in 18 CARE target villages, mainly the villages that have high levels of UXO contamination. . The MRE process is started by identifying the high risk groups. The result from that process is identification of three high risk groups; children, farmers and scrap metal trader/collectors. Then MRE takes place by using appropriate communication tools for each group. From 2009 up to March 2011 the MRE visits have taken place 67 times. Participants who were involved in the MRE undertaken by CARE include 1,239 adults and 1,637 children. (CARE Sekong 2011)

4. Methodology for the research

4.1. Research Genre

This research uses two methodologies, one quantitative and the other qualitative (Creswell,2009,p 12). Quantitative methods provide clear statistics regarding land clearance, and annual numbers of UXOs and UXO victims in Sekong. This enables us make good comparisons on how the status of casualties, the number of UXOs destroyed and land cleared might be linked. The qualitative data collection is obtained through field surveys and individual interviews at community level. It has been used to get a clear picture and provide an in-depth understanding about how the MRE have influenced behaviour change toward UXOs in the communities. They give a clear understanding of how MRE/CA is linked to the number of accidents and UXO casualties, as well as an understanding of how MRE activities have had influence on individual behaviour within the communities.

4.2 Data collection

- Statistics collection from UXO-LAOS
- Unstructured, open-ended interviews from community level
- Observation

4.2.1 Statistic collection from UXOLAO

Statistical data was obtained from UXO-LAOS in Sekong province as part of a process of discussion and enquiry. These statistics provide information about the number of hectares' that have been cleared, the number of UXOs that have been destroyed, and the number of casualties from the ten years from 2000 to 2010. All statistics are analyzed over an 11-year period, from 2000 to 2010. This analysis is able to give some information about the degree to which the land cleared and the number of UXOs destroyed correlates with the reduction of UXO victims, based on UXOs cleared/ha/ and the number of UXOs.

4.2.2 Unstructured, open-ended interviews from community level

Three CARE Sekong staff have been involved in the data collection process, as well as translation from two ethnic languages (Alak and Talieng), as assistants to the researcher. The team carried out interviews with children's groups and farmer's groups in all five villages. The researcher spent four days in the rural ethnic communities to conduct unstructured, open-ended interviews. The interview process was conducted in the appropriate ethnic language to ensure that interviewees understood the questions clearly, and felt more comfortable to express their opinions in their own languages. This is because people in these areas have limited understanding and confidence in speaking Lao[10]

The questions were developed based on the lessons and curricula relating to UXOs that are used by MRE teams when educating at a community level, as well as to assess the related risk-related

[10] Lao language is the National language.

behaviour in communities. This enabled analysis of the degree to which recipients of MRE remembered the lesson from MRE sessions, and how they use this knowledge in their daily lives

The researcher ensured that most of the interviews were face-to-face, one-on-one interviews as this would be more tools in data collection. The data is gleaned from controlling the questioning, which helps to obtain the desired information (Creswell 1994, p. 150). Unstructured, open-ended interviews were considered the most beneficial because if new issues were brought up, the researcher would be able to inquire further. Open-ended, unstructured interviews also allowed the villagers the opportunity to express their own views. The ability to ask follow-up questions in an unstructured interview gave the opportunity to request the interviewees' insights and thoughts, which helped to clarify any discrepancies or out-lying information. (Creswell, 2009, p.13). This method helped the researcher to have in-depth understanding about the knowledge and understanding of participants with regard to UXOs or MRE. The researcher and the team conducted the interviews with MRE and non MRE villages done by CARE international.

The interview was largely qualitative data to enable an understanding of attitudes and practices resulting from MRE and how it links to UXO casualty numbers. The study considered in more depth the understandings of participants at the community level who have received Mine Risk Education and still remember what they have learned, how they use it in their daily lives , and how differently this compares with the people who have never received any Mine Risk Education. The collected data was recorded via written notes as well as audio recordings. of the interviewees. This helped the researcher to cross check information, and make sure that information is not forgotten.

Figure 3. Photographs from interview activity

Interviewees in Ta Oun

Interviewing a villager in Tacheo

4.2.3 Observation

The researcher used observation in the communities during data collection as the final research method. The observations considered physical aspects within the communities regarding current behaviours in order to link information from the interview about Mine Risk Education with existing practices. The observations provide additional data to confirm the information from the interview (Creswell 1994, p. 150). The interviews provide information that could not be perceived in the natural environment of the behaviour or practice by the communities; observation helped the researcher to observe and experience quality indicators (Creswell 1994, p. 150). In addition, observations were able to confirm the accuracy of the information obtained from the interviewees, and real attitudes toward the UXO in practice. For example, in these observations the researcher was able to identify : if the villagers are in the field collecting scrap metal; where the children normally play; what tools they use for gardening; and so on. The

researcher also went to the forest to see how UXOs are marked by the villagers, to observe if the information given in the interviews is correct or not. All of these can help the researcher analyze if the MRE has been followed by villagers, as well as whether MRE has had a significant and long-lasting impact on attitudes towards UXOs and, thereby, to the reduction of UXO incidents.

4.3 The Sample Selection

This research selected a purposive sample based on "the research questions at hand as well as consideration of resources" (Hesse-Biber, 2006, p.78). The groups of children and farmers who participated in five villages were selected from Naver village, TaOun, Tacheo village, Tork Oungkeo and Dakseng village. All of these villages are CARE target areas that are located in rural areas of Lamam and Dakcheung districts in Sekong province. They are identified as high UXO contamination areas in the project proposal of CARE as well as by UXO Laos. .

- Four villages: Naver village, TaOun, Tork Oungkeo and Dakseng have received MRE activities 2010.
- One village: Tacheo village has never received MRE activities.

The total interviewees from these villages are **227** people, details of which are shown in the table below.

Figure 4: Number of interviewees

Names of villages	MRE activities	Adults Age 16-23	Adults Age 24-80	Total No. Adults	Children Age 4-8	Children Age 9-15	Total No. of children
Dakseng	Yes	0	8	**8**	3	12	**15**
Tork Ungkeo	Yes	8	23	**31**	7	22	**29**
Naver	Yes	6	10	**16**	3	25	**28**
Ta Oun	Yes	5	13	**18**	2	21	**23**
Tacheo	No	5	24	**29**	6	24	**30**
Total		**24**	**78**	**102**	**21**	**104**	**125**

5 Data Collected

5.1 Data presented from UXO-LAOS.

The statistics or quantitative data are analyzed by using the Positivism world view or scientific method (Creswell 1998, p. 6). The data is analyzed by showing graphs to compare the land cleared areas, numbers of UXO destroyed and UXO victims over time, and looking for trends or changes over time through comparison with UXO-LAOS Sekong operation records from 2000-2011. (UXO LAO, 2011). *(The detailed data is available in attached files as annex 3).*

5.2 Data presented from interview.

After data collection, the data was summarized and reviewed; the data is presented in graphs displaying percentage of the answers from interviewees. Data is categorized by separation into four key groups:

- children who attended MRE
- children who did not attend MRE
- adults who attended MRE
- adults who did not attend MRE

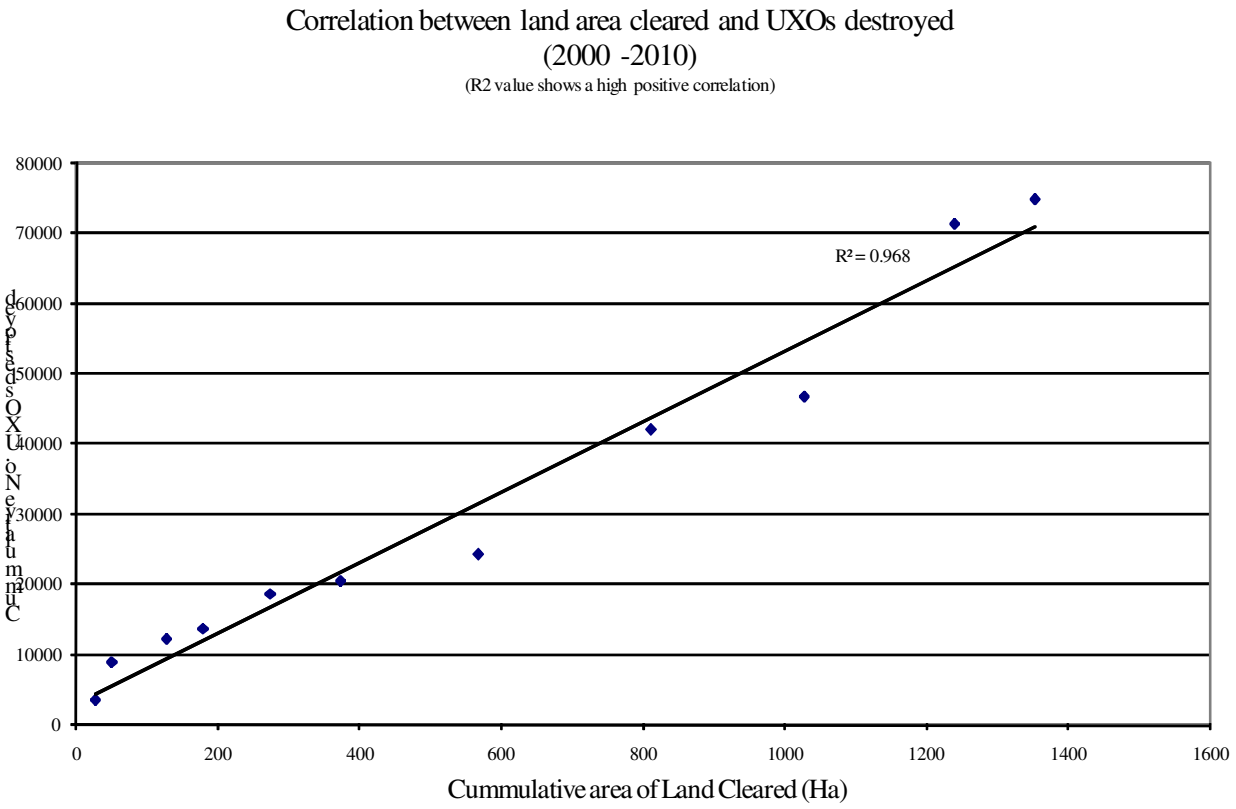
This is to help the researcher analyse data differences between adults and children, as well as between those who have and have not attended MRE.

6. Data Analysis

6.1 Data analysis from UXO LAO

The following graphs are analyzed and discussed to make comparisons and identify relationships between the area of land cleared, number of UXOs destroyed, MRE participants, and the number of UXO related victims.

6.1.1 Graph 1: Correlation between land cleared and UXOs destroyed over 10 years.



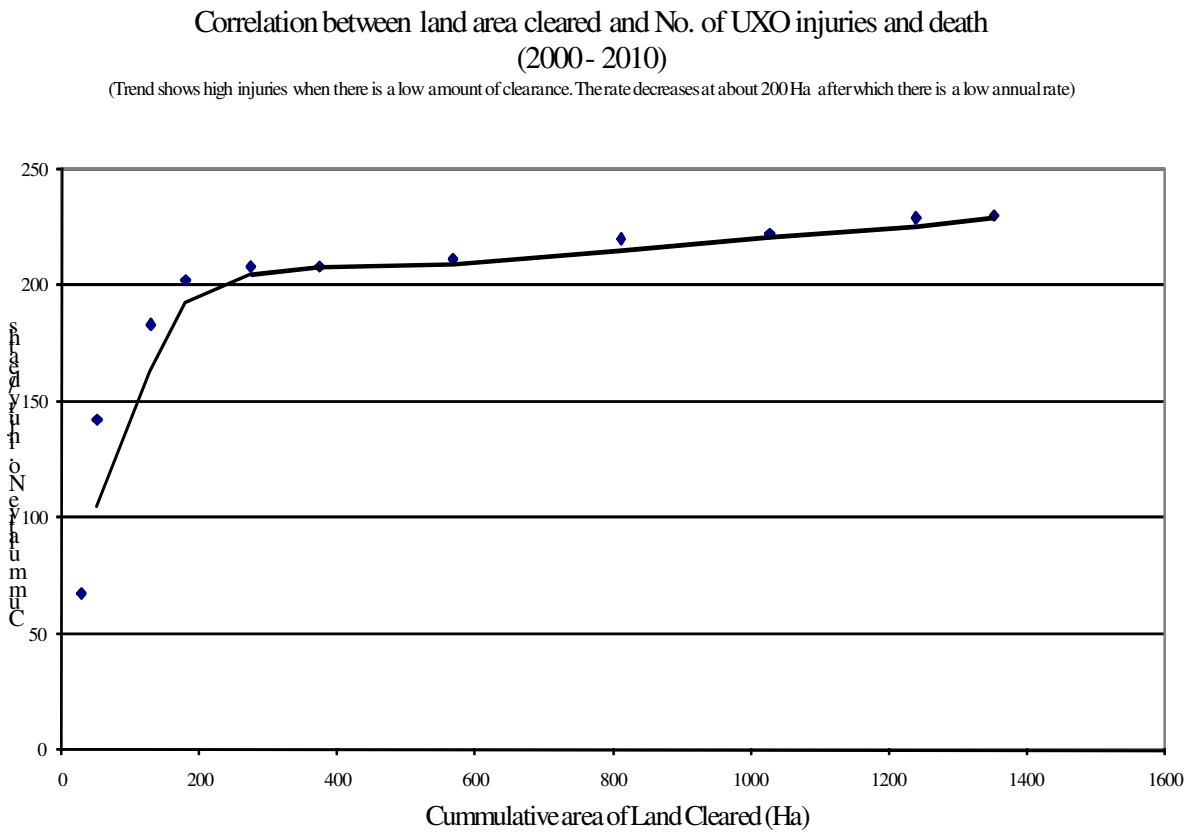
Graph 1 shows that the area of land cleared in the first two years is quite low. However, the number of UXO destroyed is high (above the line of best fit). It is understandable that from the beginning the number of UXO destroyed should be high as it can be assumed high priority areas will have a higher level of UXO contamination of UXO and therefore take a longer time to clear. However, the graph shows that the number of UXO destroyed over time per area of clearance remains quite constant. Surprisingly the last two points on the graphs representing the 8^{th} and 10^{th} year of clearance data has a considerable increase in the ratio of UXOs destroyed per area cleared. It might have been expected that over time the rate at which UXOs were found per unit of land would decrease. This is because it can be expected that high priority areas and areas of high contamination would be targeted first. Areas of lower risk or less evidence of bombing would be cleared in later years. However, the correlation suggests that the extent of UXO presence is so great that even after this time the rate of UXOs per area remains high and the lower risk/density areas are not yet being cleared.

Discussion

The results are surprising. One expectation could have been a drop in the number of UXOs found and destroyed over time as the higher contaminated areas are cleared and work begins in areas that are a lower priority. Also land clearance rates would increase if it took place on land with a lower amount of UXO.

If in year 8 and year 10 the number of UXOs found and destroyed is still increasing; this can be taken as an indication that the level of UXO risk remains very high.

6.1.2 Graph 2: Correlation between land area cleared and No. of UXO injuries and death

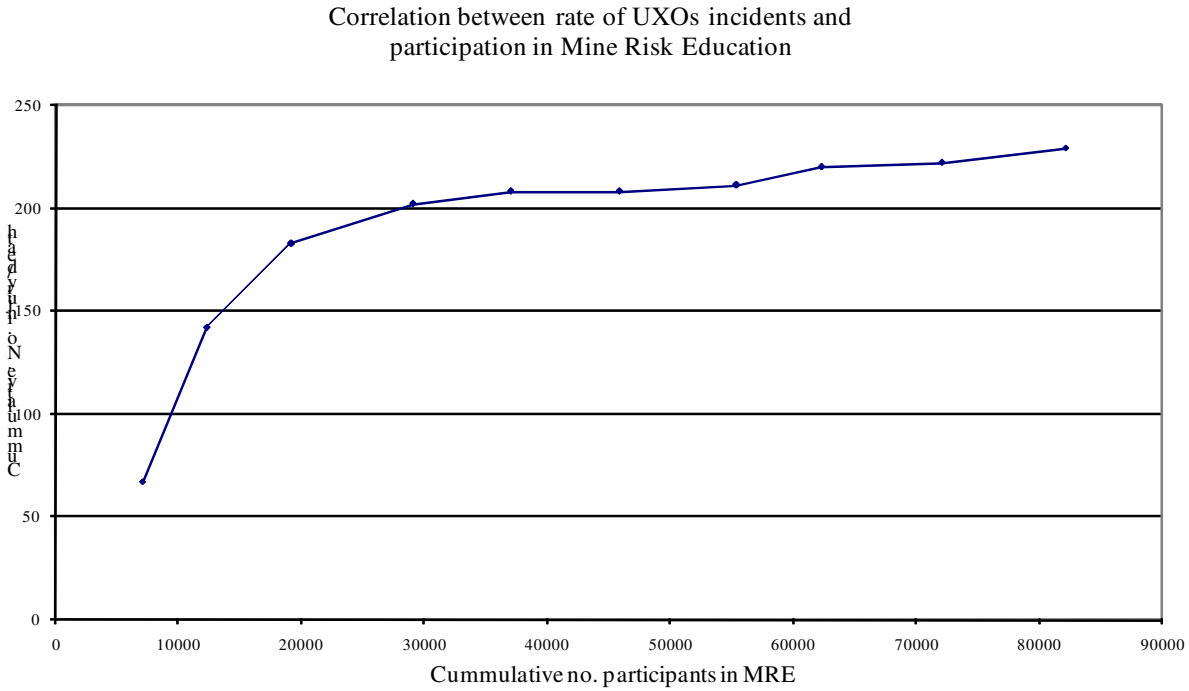


The graph shows that in the first 4 years the number of deaths and injuries from UXO incidents is high, after the fourth year the number of incident per year is greatly reduced. Meanwhile, after every years the land clearance has increased considerably.

Discussion

This trend is reasonable if it is considered that in the first four years, land clearance took place in very high risk areas near to where people were living. As more of the land is cleared, the more people have safe land to live on, which could decrease the number of injuries and deaths.

6.1.3 Graph3: Correlation between rate of UXOs incidents and participation in Mine Risk Education.



Graph 3 is similar to graph 2 in that the first four year there is a higher average annual rate of UXO incident, meanwhile the number of MRE's participants remains small. After year four the numbers of participants continued to increase regularly each year, but the rate of the injuries/death decreases.

Discussion

The graph for MRE compared to injuries has two trends. For the first four years of the data, despite continued MRE the annual rate of injury/deaths remains high. After year four there is a new trend, and the rate of injuries per year is much less, and MRE continues at a steady rate. Therefore, to analyse these two trends it is important to consider what might have happened at this 'critical point' at year four for the change in trend. Questions that should be asked include:

Is there a causality between MRE and this change in trend? Therefore, did MRE reach enough people at this time that very risky behavior (e.g. playing with bombies) decreased on a significant scale.

If there is no causality – what else might have caused this? A possibility is that UXO clearance had taken place in many of the very high risk areas by this stage – e.g. in the villages, close to the road.

It is assumed that this change is not due to the remaining uncleared land having less UXOs, as this is not evident from graph 1.

This change in trend is a possible area for further research.

6.2 Data analysis from the interviews

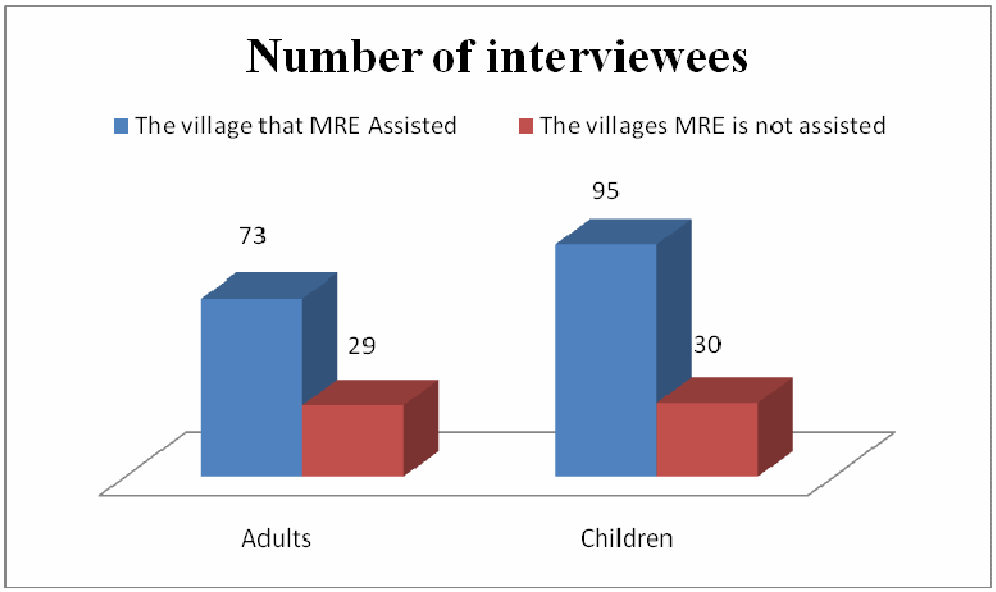
The data from the interviews is analyzed by looking at the percentages of respondents' answers regarding understanding and attitudes toward to UXOs. The context in which the case being studied exists must be thoroughly explored. This type of data requires significant textual

descriptions of the background and setting of the case (Creswell 1998, p. 153). According to Creswell, open coding requires the researcher to create in-depth analysis of the research (Creswell 1998, p. 57).

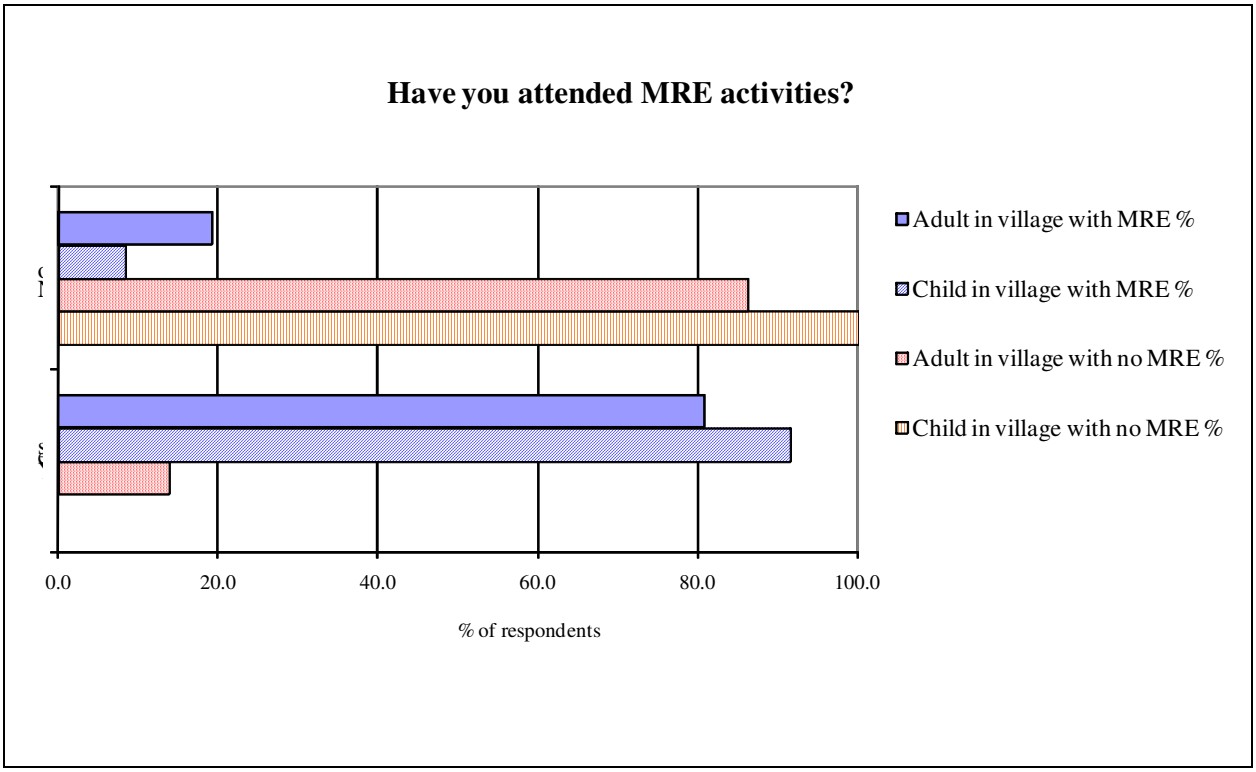
The data collected from interviews with any documents ?) is displayed with a graph or chart along with in-depth discussion for some key information in open coding methods (Hesse-Biber & Leavy, 2006, p. 348). It is used in this process to make this research gain the insight on the meaning of the data. The multiple data from different sources can help this researcher to cross-reference, and ensure that the data is sound .

Observation

Personal observation provided the additional data to confirm the information from the interviews (Creswell 1994, p. 150. The researcher used the information from her observations in the data analysis to ensure the accuracy of information from the interview . And this can be used to make a good comparison of the information from the interviewees and people's real attitudes toward the UXO. This provides the comparison information as to whether they have different or similar understandings and behavior toward UXOs. It confirms whether the MRE is effective within the communities.


Number of interviewees
The village that MRE Assisted
The villages MRE is not assisted
73
29
95
30
Adults
Children

6.2.1 Graph 5: Have you attended MRE activities?



Graph 5 shows that more than 80% of adults and more than 90 % of children in villages with MRE attended MRE activities.100% of children and more than 80% of adults in villages without MRE have not attended any MRE.

Discussion

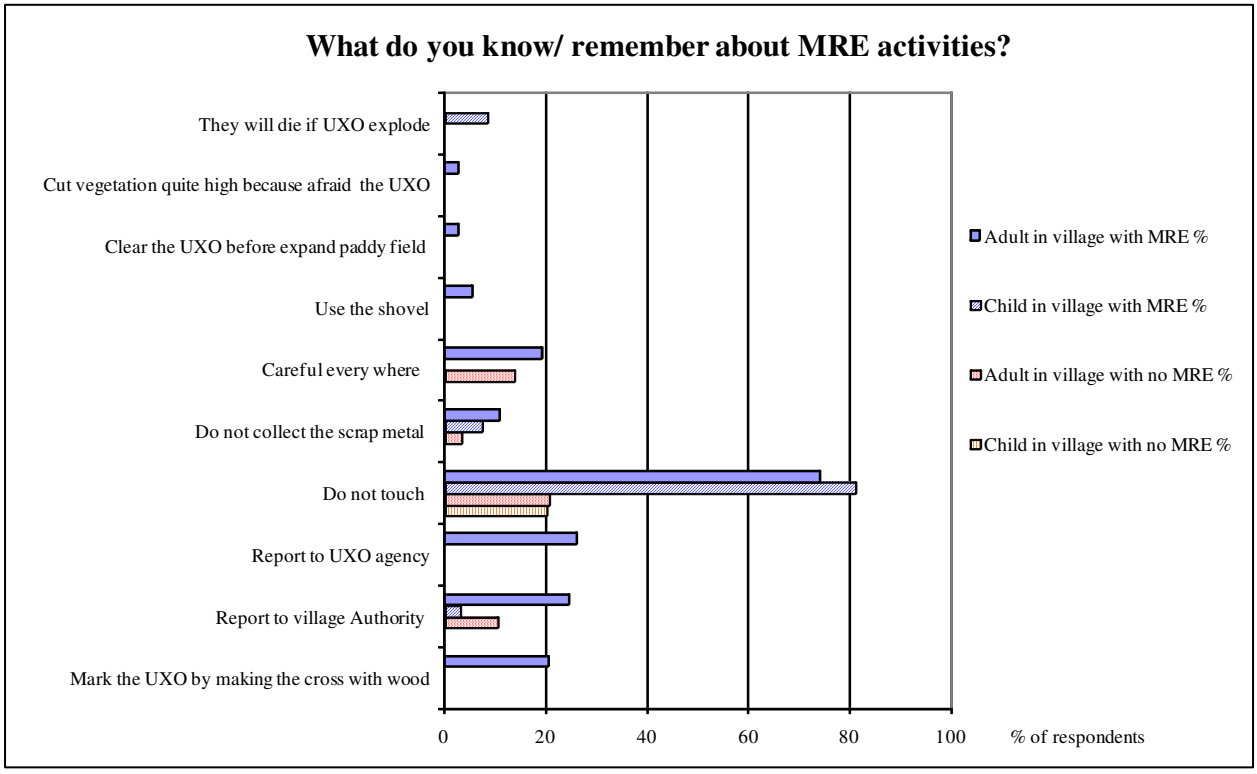
This research shows that for the villages with MRE there has not been 100% attendance in MRE. The reasons given during discussions are because they have daily tasks that are a higher priority. Box 1 shows examples from two participants.

Box 1: Coding from interviewees (1)

Interviewee 1 from TaOun village	" I cannot go to MRE because I had to go to the rice field because MRE took place in the day time"
Interviewee 2 from Naver (female)	"I am very old so I have to stay home, the people who should participate in MRE are my children"

Conversely, the interviewees in non MRE villages mentioned that few of them had a chance to participate with others in the MRE villages. 100% of the children in the non-MRE village had not been involved in MRE activities. However, some of them mentioned that a few years previously they received some information from their class teacher about UXOs. Therefore, it is difficult to conclude, as the graph suggests, that 100% of the interviewees are not educated about UXOs.

6.2.2 Graph 6: What do you know/ remember about MRE activities?[11]



Do not touch the UXOs

More than 80% of children in MRE villages, and about 20% of children in none MRE village remember 'do not touch the UXOs'[12].More than 70% of adults in MRE villages and about 20% of adults in non MRE village remember 'do not touch the UXOs'.

[11] The interviewees can mention many things that they can remember from MRE, therefore 1person can have many answers.

[12] In non MRE village use to have information about UXOs from their teacher a few years ago.

Reporting about UXOs

More than 25% of adults in MRE villages and 0% of adults in non MRE village know/remember that if they see a UXO they should 'report this to the UXO agency. Only 10% of adults in non-MRE village know that they should report a finding of a UXO to the village authorities. Only 5% of children in MRE villages (and 0% of children in non-MRE village) remember 'report to village authorities'.

Marking the UXOs

About 20 % of adults in MRE villages and 0% of adults in non-MRE villages mentioned that they should 'mark the locations of UXOs' if they see them. 0% of children in MRE and non MRE villages were able to talk about 'marking UXOs'

Cutting vegetation and tools used for farming.

About 5% of adults in MRE villages and 0% of adults in none MRE villages mention they should 'cut the vegetation quite high from the ground'. 5% of adults in MRE villages and 0% of adults in non MRE village mentioned that they 'should clear the UXOs before expanding the paddy field' About 8% of adults in MRE villages and 0% of non MRE village mentioned that they should 'use the shovel for working in the garden or rice field' (rather than using a hoe which has more of a hitting action and therefore presents a greater risk).

Being careful with UXOs

Almost 20% of adults in MRE villages and more than 10% of those in non MRE village mentioned that they should 'be careful everywhere'. 10% of children in MRE villages and 0% of children in non-MRE village mention that 'they will die if the UXOs explode'.

Discussion

The interviewees remember the basic MRE message (e.g. do not touch), which shows that the key aspects of MRE are remembered by participants.

Do not touch the UXOs

The interviewees both from MRE and non MRE villages mentioned 'do not touch the UXOs'. However, the percentage of adults and children in MRE villages are higher than children and adults in non MRE village. This is very basic and a very important thing that needs to be understood by villagers.

Reporting about UXOs

None of children in non MRE village and only a small percentage of children in MRE mentioned that they should report about UXOs. A higher percentage of adults in MRE villages' then non MRE village mentioned about reporting the UXOs. Even though it is small percentage, it clearly show that that participants remember further suggestions (not just do not touch UXOs) in order to reduce the risk in their communities.

Some attendees of MRE were able to remember about UXO reporting suggesting that this was both covered and at times understood during MRE. However, it is possible despite the MRE that UXO reporting has not become a priority for villagers and over time has been forgotten. (see discussion for graph 7).

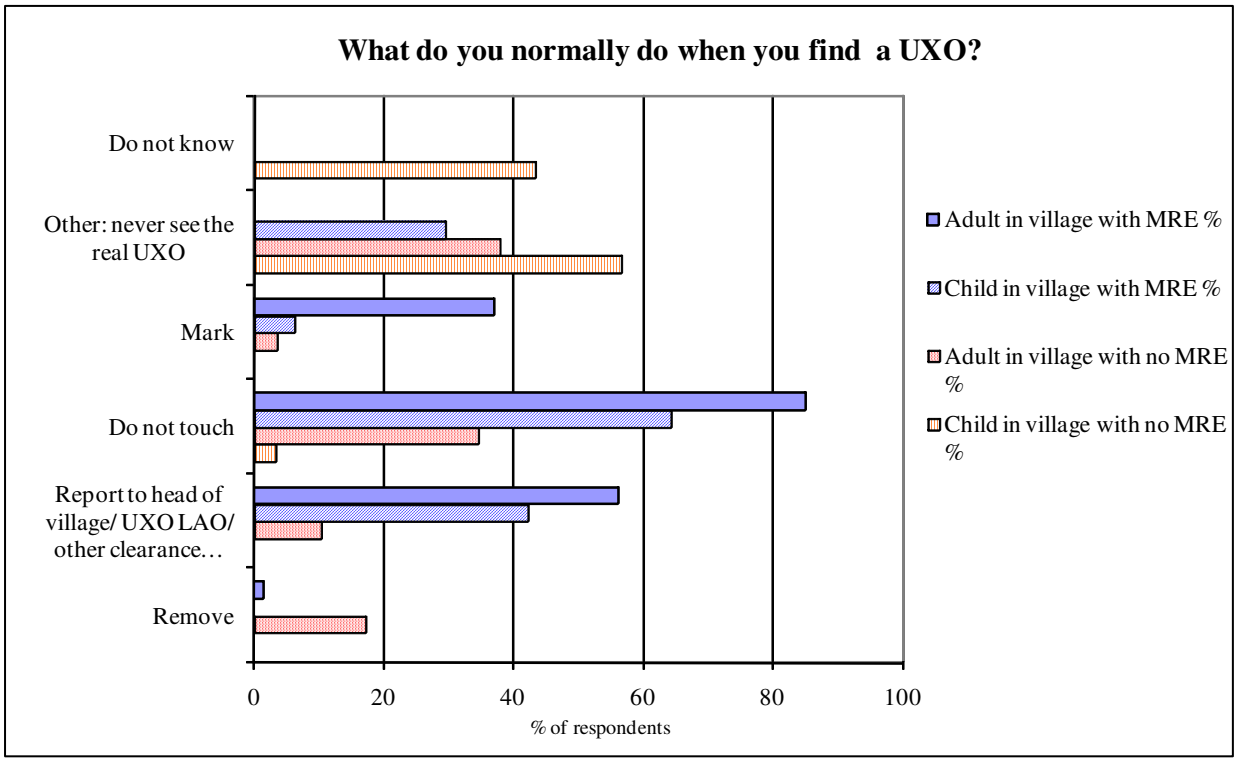
Marking the UXOs

It is only adults in MRE villages who remembered information about marking the UXOs. It means they are more aware about taking on this responsible behaviour than adults who are not in MRE villages. However, they did not mention how to mark the UXOs. This demonstrates that MRE information about marking UXOs is remembered by some participants, but the detailed information is missing.

Cutting vegetation and tools used for farming.

Some adults in MRE villages remember that they should cut vegetation correctly, to clear the UXOs before paddy field expansion and some of them mentioned that they should use shovel to work in garden or rice field. Conversely, none of those interviewed from the non MRE villages mentioned these risk reduction techniques. This suggests that MRE is responsible for influencing this behaviour, albeit to a limited extent. This knowledge is key in rural farming communities to help people avoid UXO accidents.

6.2.3 Graph 7: What do you normally do when you find a UXO?[13]



Do not touch the UXOs:

More than 80% of adult's in MRE and Less than 40% of adult in non MRE villages mentioned that 'do not touch the UXO'. Similarly, more than 60% of children interviewees in MRE villages and less than 10% of children in non MRE village gave this response.

[13] Most of the people who have seen the UXOs has said that they most of the time see the round small UXOs (this is called bombies)

Reporting presence of the UXOs to authorities.

More than 50% of adults in MRE villages, only 10% of adults in non MRE village said they would report a UXO to the village or other authorities. More than 40 % of children interviewees in MRE villages and 0% of children in non MRE village said they would report a UXOs.

Remove the UXOs.

Almost 20% of adults in non MRE village said they would remove the UXO, however less than 5% of adult in MRE villages said they would remove the UXO. 0% of children in MRE and 0% of children in non MRE villages said they would remove the UXOs.

Marking the UXOs

40% of adult interviewees in MRE villages and 5% of adult in non MRE village said they would mark a UXO if they found one. Almost 10% of children in MRE villages and 0% of children in non MRE village would mark the location of a UXO.

See the UXOs[14]

Most of the interviewees have seen the actual UXOs, as well as pictures of UXOs in photos or posters. 0% of adults in MRE villages, and 40% of adults in non MRE village have never seen

[14] Most of the real UXO they have seen are the bombies (small round like tennis balls)

the real UXO. 30% of children in MRE villages and almost 60% of children in non MRE villages have never seen the real UXOs.

Discussion

There is quite a high percentage of people who do not/would not touch UXOs that they find, which is almost the same rate with the people who remembered this as a message from the MRE. It suggests that people are aware of the risk and have changed their behavior to avoid UXO accidents. However, it is quite difficult to confirm that they fully follow the MRE suggestions. It was raised during the interviews from many men who practice slash and burn, that they do not touch the UXOs in their fields, but they burn the UXOs at the same time that they are burning the upland rice field.

Box 2: Coding from interviewees (2)

Interviewee 3 (adult male) from Tork Oung keo said	"I found 3 bombies in my rice field when I was slashing the forest for my rice field. I did not touch because I was afraid. I slashed around and avoided the particularly points. Then I burned them at the same time of burning my rice field. I stayed away from my rice field when it was burning because I expected the UXO would explode in that time"
Interviewee 4 (adult male) from Tork Oung keo said	"When I was slashing the forest for my rice field, I saw one UXO in my rice field, I stayed away in that particularly point and slash around that place and then I

	burned it at the same time with the field. I did not report to UXO LAOS because I was worry that I could not wait until they came to my villages. I was afraid that the farming would be too late for farming season."
Interviewee 5 from Naver (female)	"I found one bombie in the rice field I did not touch it because I was afraid it would explode. I told my son to remove it from the rice field because we wanted to grow rice"

Many cases of 'do not touch the UXOs' came up in deep discussion, quite similar with the coding above. It means that people still remember MRE but cannot follow proper process of MRE because they have to deal with daily activities and agricultural practice. In addition the UXO clearance services are not regularly available at the village level. From the discussion it can be seen that the people who remove the UXOs are the men because they are considered braver than women.

Reporting about the UXOs.

Children and adults in MRE villages have a higher percentage of reporting the finding of UXOs to village authorities/adults or UXO clearance agencies whilst the children in non MRE villages have never reported about the UXOs. However, it is quite difficult to confirm that those in non-MRE villages did not understand about the importance of reporting UXOs to assist in reducing the risks/danger. Graph **7** shows that almost 60% of the children in non MRE villages have never

seen the real UXOs. It is possible that they do not report because they do not see the real UXOs (or perhaps don't always identify a UXO as a UXO when they come across one).

Graph 6 shows that almost 25% of adults remembered from the MRE that they should report any findings of UXOs. This can be interpreted as low, however, from the interviews (box 2) it can be seen that people have other preferred strategies when they find a UXO. For example, burning the fields in the hope the UXO goes off on its own, moving the UXO to the side of the field, working around the place where the UXO is. Notably, one person said that he did not report a UXO, as the time taken for the clearance team to deal with it would be too long and he needed to farm the land. This suggests that whilst MRE suggested strategies might be followed, the need to farm may take priority.

This is further demonstrated from the observations that took place around Naver village. Children showed the researcher one UXO they found very close to the village site. They said that they reported the UXO to an adult a few months previously, but the UXO is still there, because they are waiting for UXO agencies to come to their village. In this example, the UXO is not preventing the finder from economic activity and it is reported, and they are now waiting for clearance.

Figure 7: Example of UXO

A UXO (Mortar) in Naver village. This was shown to the researcher by the children of the village during the data gathering process.

Remove the UXOs.

None of the children from any villages remove the UXOs, although a percentage of adults in non-MRE villages remove UXOs. This means the MRE villagers have more awareness of the risks of moving UXOs. However, information from the interviews showed that some people in MRE villages try to gently move the UXO from their rice field as well.

Marking the UXOs

Comparing between MRE and non MRE villages, it is clear that the MRE villages exhibit a stronger attitude towards the marking of UXOs. This means they are more aware that UXOs should be marked in order to warn others of the danger. It was discussed with interviewees in depth about how they mark the UXOs. Many of them marked the UXOs according to MRE suggestions. This involves giving information of the danger to others by putting wood in the shape of a letter X, put small branches on the top, or spraying with paint the letter X. Some of interviewee mainly mark the UXO for their own reference by putting a stone to remind them that there is a UXO. Even though marking has taken place, some of the markings are not helpful for other people. Markings like the letter X is truly giving the signal of UXOs to others, especially where most of the people have received the same massage during MRE activities.

Figure 8. UXO Marking examples

Boy showing the marking of a UXO in Dakseng

Marking UXO in Ta Oun

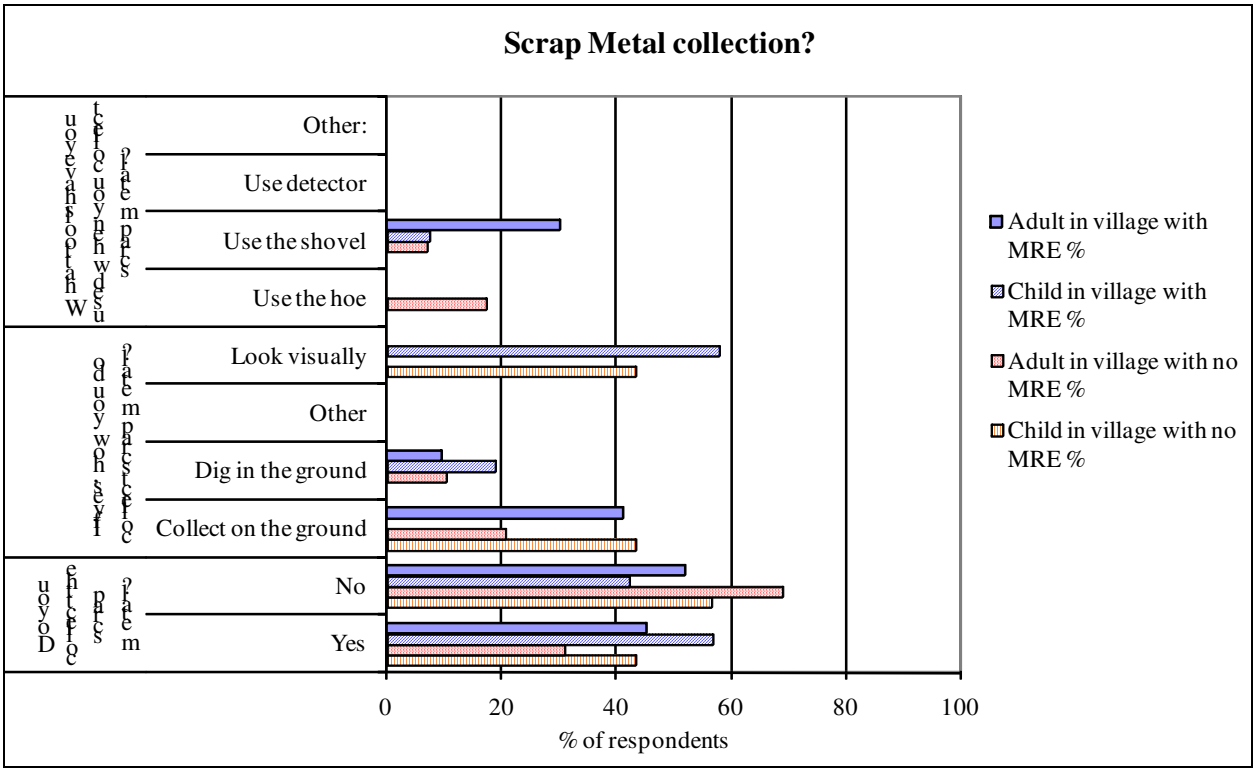
Marking UXO in Naver

The researcher went to see sites of marked UXOs to observe the different methods. The first photo in figure 8 show where a UXO has been marked by a 12-year-old boy in Dakseng. He put two big branches as letter X, and then put the small branches on the top to protect the UXO from a falling object of stone that could it the UXO and cause it to explode. The second photo is a UXO marking made by adults in Ta Oun village using a letter X made by spray paint. These two examples can help to warn people that there is danger. The researcher found that these two people who mark the UXOs attended MRE for several times. The third photo shows a method for marking a UXO which can bring a lot of confusion. It was marked by a woman in Naver using a stone. It is not possible to tell the difference between where there is a UXO, or where there is simply just stone. Similar stones without UXOs were present in the same rice field suggesting that other people would not be warned of the presence of UXOs. The woman who marked the UXO in this way mentioned that she has never attended MRE activities (although

MRE had been carried out in her village).[15] Clearly some interviewees in MRE villages that do not attend MRE have been influenced by others who have attended MRE, but do not understand the detail and techniques.

[15] She is the interviewee 2 in table two

6.2.4 Graph 8: Scrap Metal collection?



Collecting the scrap metal (SM)

More than 40% of adults in MRE village and 30% of adults in non-MRE villages collect scrap metal (SM). More than 60% of children in MRE village and more than 40% of children in non-MRE villages collect scrap metal.

Using the tools for collecting SM

Most of the people who collect SM in MRE villages look for SM visually. Almost 20% of adults in non-MRE villages use a shovel. Less than 20 % of adults in non-MRE village use a hoe to dig for SM. 10% of children in MRE and 0% of children in non-MRE villages use a shovel.

Discussion

Collecting the scrap metal (SM)

The percentage of adults and children in MRE villages are higher than percentage of people in non MRE village on collecting the SM. It clearly shows that MRE is not effective at discouraging SM collection as people who have received MRE are in fact more active in collecting SM than those who did not receive MRE. However, during discussions it became apparent that, although they aware the risk, SM collection is one of the ways for making money for the families or individuals. (see the quotes from interviewees below).

Box 3: Coding from interviewees (3)

Interviewee 6: Children in Dakseng:	"I collect scrap metal because I need some money to buy some books and pens. This year I collected about 6 Kgs and sell at 1,500kip per Kg" (8,000kip is approximately $1 USD).
Interviewee 7: Children in Ta Oun:	"I collected scrap because I want to buy some cloths"
Interviewee 8: Children in Ta Oun:	" I want to buy candy, therefore I collected scrap metal"
The interviewee 9: Adults from Naver:	"We need money to buy some basic items like cooking ingredients and detergent for washing. The scrap metal can help me to make some income, last year I received money more than 100,000 kip from selling SM" (Approx. $12 USD)

The reason for not collecting SM in the non-MRE village was investigated through extensive discussion. It seems that the primary reason for not collecting scrap metal in the non-MRE village is because there is less SM available. Some interviewees sited their experience of spending a whole day looking for SM only to find about 1 kg (which can be sold for 1,500 kip (0.2 USD)). Secondly, there is not a regular scrap metal buyer visiting the village. This is because the amount of SM is less, the road access is poor, reducing the motivation of buyers to go there. These reasons can lead to reducing the motivation of the villagers to collect SM.

Box 4: Coding from interviewees (3)

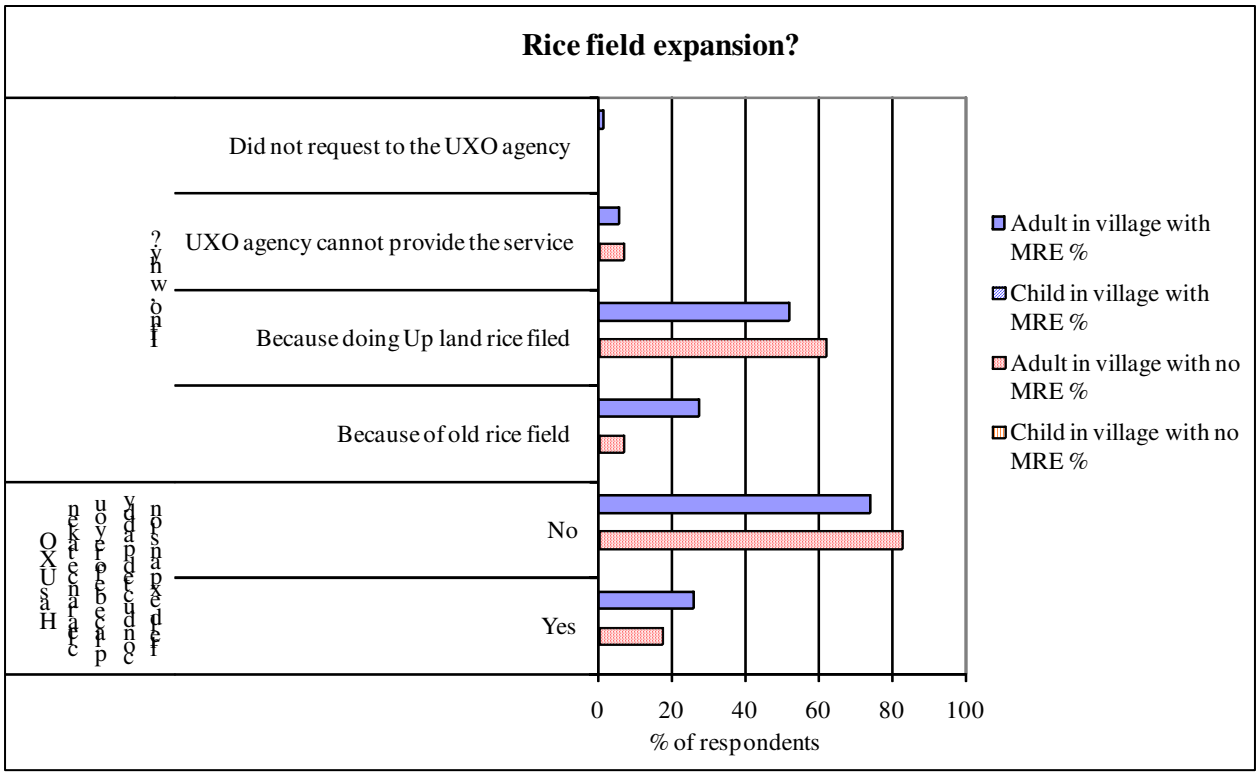
Interviewee 10: adults from Tacheo said	"the scrap metal here in the new village is very little, not the same with where we lived before"
Interview 11: adults from Tacheo " female) said	"We do not have time to collect SM because if we spend whole day we got only little and then nobody come and buy. If we want to sell we have to carry to other villages like TorkOungkeo and Naver"

From the above discussion if can be seen that there is no difference in the behaviour for collecting scrap metal between MRE and non-MRE villages. In these cases, MRE has not discouraged people from collecting scrap metal because the income it provides for the families outweighs the risks involved.

Using the tools for collecting SM

It is understandable that collecting scrap metal for some families is necessary, especially those who do not have any other source of income. But people in MRE villages have tried to use the lower risk tools for digging, like a shovel; using a hoe can result in a greater impact if the UXO is accidentally struck as it is more likely to explode. . This suggests that MRE cannot stop people from collecting SM, but be able to educate people to use the lower risk behaviours when collecting SM.

6.2.5 Graph 9: Rice field expansion?



Clearance of UXOs

More than 80% of adults in MRE villages and less that 80% in non-MRE villages do not clear UXOs before expanding their rice field. However, less than 10% of adults interviewed in MRE villages and less than 10% of Adults in non-MRE villages identified the ability of the UXO clearance agencies to provide support as a factor. About 2% of adults in MRE villages mentioned that they did not request the UXO agencies to clear their land.

Rice field status

More than 60% of adults in non-MRE villages and more than 50% of adults in MRE villages practice slash and burn or upland rice field[16]. More than 30% of adults in non MRE village and less than 10 % of MRE villages do practice paddy rice farming.

Discussion

Clearance of the UXOs

The percentage of people who do not clear UXOs before paddy field expansion are similar for MRE and non MRE villages. It was apparent from the interviews and discussions that some of them do not request UXO clearance agencies to clear their land. What the researcher found from the discussion was that most of the land cleared within the communities are the areas of activities that are supported by international organizations. This suggests that the clearance that has taken

[16] Upland rice field is normally located far away from the village and it is not permanent.

place in the villages was always initiated by the villagers themselves. Some interviewees pointed out that the clearance agencies do not come to the village very often. It is apparent that most villagers lack an understanding of the time frame for the planning of UXO clearance agencies[17]. They mentioned that they do not know the process to request for clearance. In addition, UXO clearance agencies take quite a long time to come and clear the land in their villages, and some of their land is not accepted for clearance by UXO LAO because the area is too far from the road. People often feel that the UXOs clearance is not the most necessary service the village requires. They only see the need when they are reminded of it by accidents that happen in their own village.

Box 5: Coding from interviewees (4)

Interviewee 12: females in Dakseng	"I prepared my land for coffee plantation this year. I have found 7 UXOs they look like fine apples. I am scared to continue because last week 3 children have died from UXO accident when they were in the rice field with their parents, 1 from our village and 2 of them from Dakchark. Therefore, I think I will wait until UXO LAOS come to our village and I can start my coffee garden next year"

[17] Normally UXO LAO has a yearly plan. Therefore the tasks need to be requested at least not latter September-December and can be considered for included in the next year planning.

Rice field status

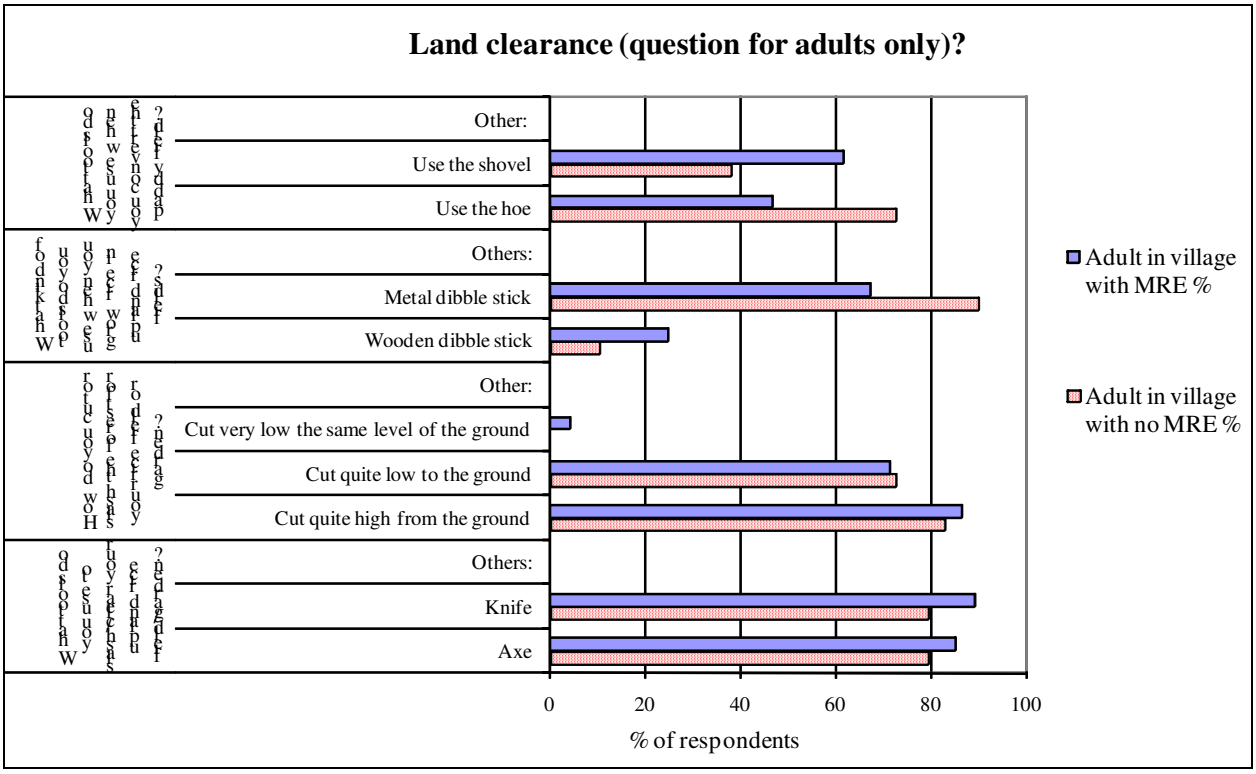
More than half of adults in MRE village practice slash and burn farming. Some of them are able to farm their established paddy fields. Slash and burn/ upland rice fields are not always possible for UXO LAO to clear[18]. It means that these factors can contribute to the low number of people who prioritize clearance of the UXOs before expanding the paddy field. Some interviewee discussions showed that people felt that working in former/established rice fields was safer. However, sometimes UXOs are found in these fields.

Box 6: Coding from interviewees (5)

Interviewee 13: male in Tohk Oungkeo	"Most of us practice slash and burn. Many times UXO LOAS could not except the clearance request because the areas are too far away from the village, which means spending many hour walking to reach there."
Interviewee 2: female in Naver	"My paddy field was cleared of UXOs last year and 20 bombies were found. Despite this, I found 1bombie this year in that rice field".

[18] Paddy field is not permanent farming land and most of the them very far away from the village.

6.2.6 Graph 10: Farming techniques to avoid the UXO accidents. *(Questions for adults only)?*



More than 60% of adult in MRE villages and less than 40% of adult in non MRE villages use shovels in converting the paddy field. Over 70% of adults in non-MRE villages and less than 50% of adults in MRE villages use a hoe to convert the paddy field. About 90% of adultsin the non MRE village and less than 70% of adults in MRE village use metal dibble stick to grow rice in upland rice fields.

Discussion

Using shovels and hoes

In terms of paddy rice/ upland rice planting, both MRE and non-MRE villages have used similar tools for farming. However, the graph shows that a higher percentage of people are using hoes in the non-MRE village, and more people are saying that they use shovels in MRE villages. The discussions showed that both shovels and hoes are used as tools in the fields. These tools have quite different purposes: a shovel is helpful for moving loose soil; a hoe is helpful for digging the ground, especially hard ground. It is not convenient to dig hard ground using the shovel. Most of those interviewed understood that using a hoe is more dangerous than using a shovel, but they feel that hoes are needed as well. As the shovels are less appropriate for some of the farming work, it can be argued that encouraging people not to use hoes is adding to the time and effort for farming. However, with the risk of striking a UXO with the hoe (or any other tool/machine designed to break hard soil with similar force) and causing an accident, the alternatives are limited. Ultimately the step that will enable the safe use of such tools again is UXO clearance.

Box 7: Coding from the interviewees (6)

Interview 12: adults from Tork Oungkeo (male) said	" I know that hoe is high risk but it is easier than using the shovel for converting the new paddy field because the soil is hard and there are many stumps"

Interview 13: adults from Naver (male) said	"It is okay to use a shovel with the looser soil for jobs like repairing the paddy field dyke, an old rice field, or making a new paddy field dyke, but for digging I prefer to use a hoe."

Related practices observed in Naver village included two people who were working in a garden planting banana trees. They used a hoe and small spade to dig the ground, both of which are high risk tools for causing UXOs accident. This evidence confirms that the villagers will not stop the use high risk tools in their routine farming practices.

Using wooden and metal dibble sticks[19]

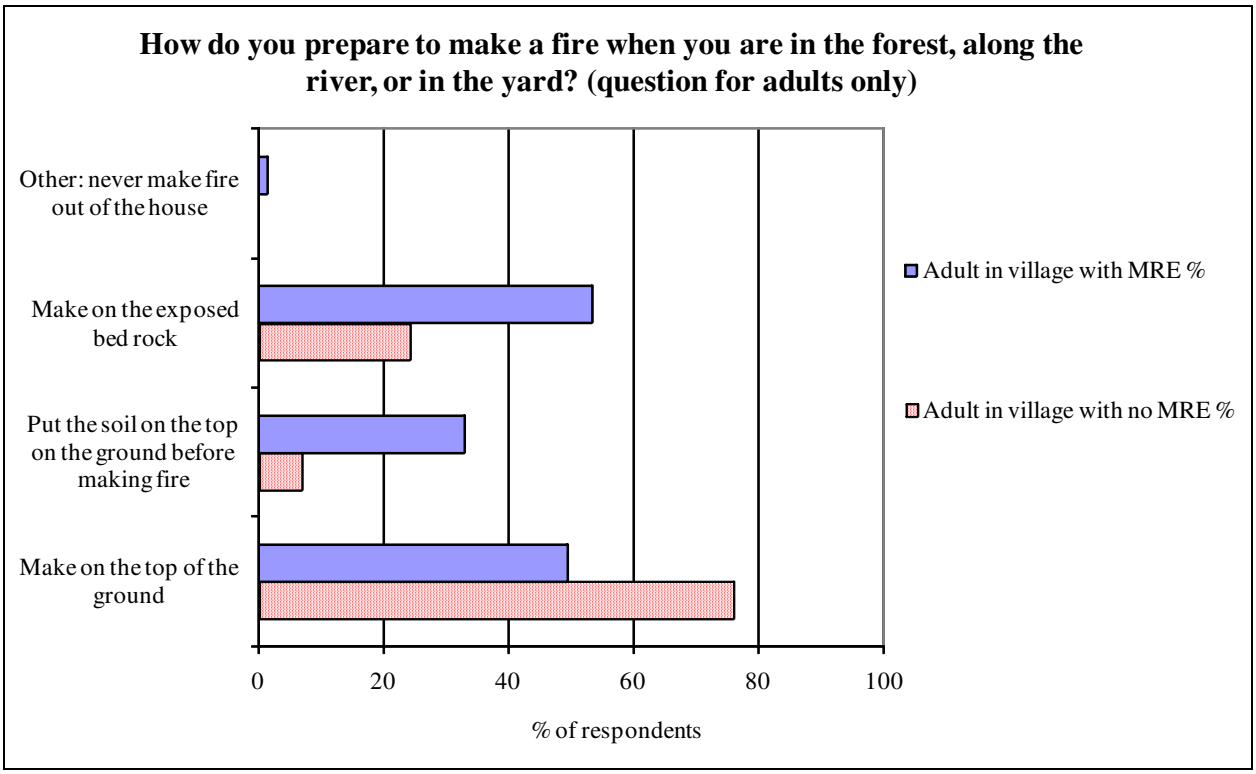
There is a higher percentage of people using the metal dibble sticks in non-MRE villages than villages that received MRE. This suggests that people in MRE villages have a greater awareness and understanding of which tools present a higher risk for UXO accidents. The metal dibble stick was developed/promoted approximately ten years ago as a new type of tool to make the small hole in which to plant rice in upland fields. Before this, most villagers used a wooden dibble stick. The metal dibble stick is found to be much more convenient and effective when used in the field. Of course, it is difficult to prove a direct causal link showing that using the wooden dibble stick is the result of MRE, but it can be concluded that some people are not interested to change from using a wooden dibble stick to a metal dibble stick, because they understand that the metal dibble stick is in more dangerous. (The implications in terms of effort and time are similar to the case above for not using a hoe).

[19] Metal dibble stick is much heavier than wooden stick with is can lead to accidents easily if they dib to UXO in the ground.

Box 8: Coding from the interviewees (7).

Interview 14: adults in Tork Oungkeo (male) said	"We normally use the metal dibble stick for growing rice in upland rice field because it is sharp, and that can help us to work quickly."
Interview 15: adults in Tork Oungkeo (female) said	"The metal dibble stick is an easy and effective tool for us, we are afraid of the UXOs, but we have to take risk from the UXOs in the ground, but we try not to use the dibble stick on the surface UXOs."
Interview 16: adults in Dakseng (male) said	"Many years ago we used wooden dibble stick but now we change to use metal dibble stick because it is permanently sharp. We do not have to sharpen by knife very often, the metal dibble stick can help us to work faster"
Interview 17: adults in Tacheo/non MRE village (male) said	"We normally use the metal dibble stick because much it is easier than wooden dibble stick. At the same time we have less concern about the UXOs accident. Since we move to live in this site we rarely see the UXO and there is no accident yet"

6.2.7 Graph 11: How do you prepare to make a fire when you are in the forest, along the river, or in the yard? (Question for adults only)



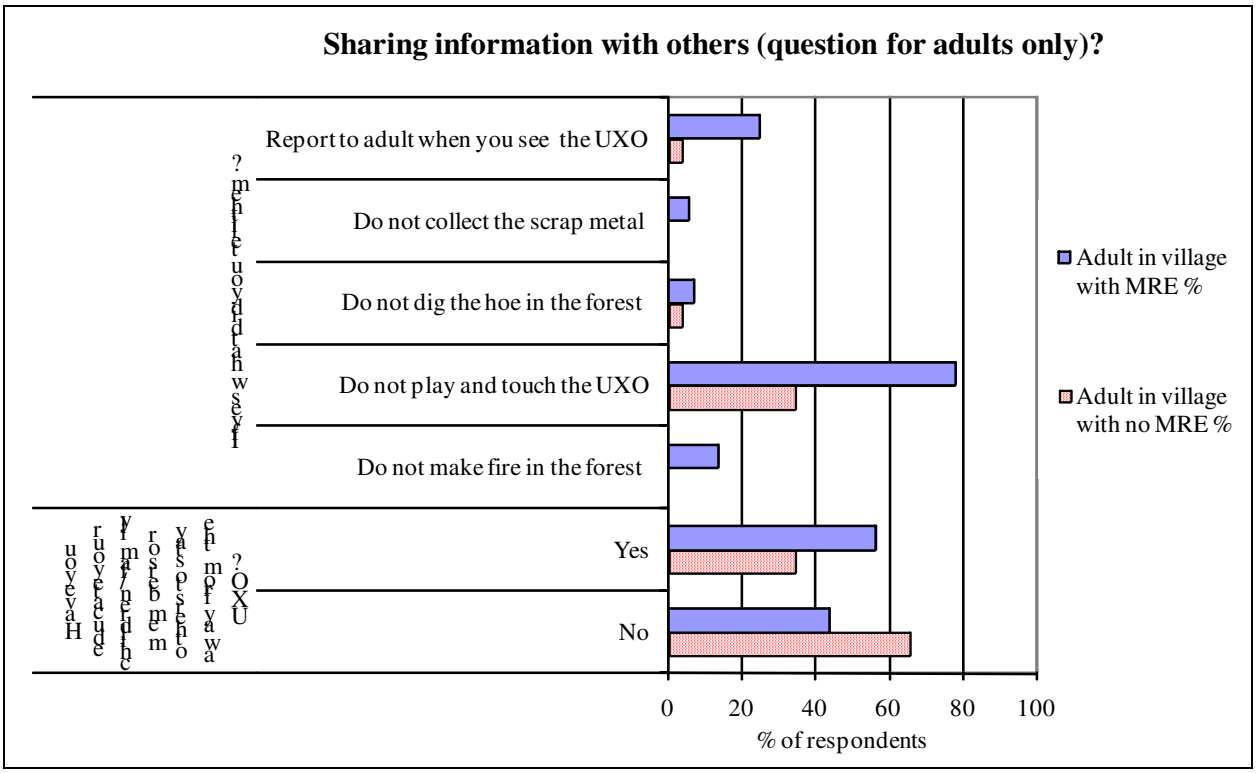
Almost 80% of non-MRE and almost 50% of MRE villages make fires on the top of the ground[20]. More than 50% in MRE villages and more than 20% of adults in the non MRE village make the fire on the exposed bedrock. More than 50% of MRE villages and less than 10% of adults in the non MRE village make the fire by putting the soil on the top of the ground first. . (MRE villages have a high percentage of people who make fire on exposed bedrock, and building up a layer of soil before making a fire, because this can decrease the level of risk of UXO explosion (the heat is further from a possible buried UXO).

[20] High risk of UXO accidents.

Discussion

It shows that the people in MRE villages are less likely to make a fire directly on the ground. This shows that in the MRE villages there has started to be an awareness that this is a high risk activity in terms of UXO accidents. It means that the people in the MRE villages are more aware of the causes of accidents, and have adopted practices which will help them avoid UXO risks.

6.2.8 Graph 12: Sharing information with others (question for adults only)?



Almost 70% of adults in non-MRE and almost 40% of adults in MRE villages are not passing on their knowledge and educating children or others in MRE.

Do not play and touch the UXOs:

Almost 80% of adults in MRE village and more than 30% of adults in non-MRE villages educated their children or others with the message: 'Do not touch the UXOs'

Report to adults if they see the UXOs:

More than 20% of adults in MRE village, and 5% of adults in non-MRE villages told their children or others about the method for 'reporting about UXOs'

Do not make fire in the forest:

More than 25% of adults in MRE villages and 0% of adults in non MRE village told their children or others: 'Do not make fire in the forest'

Do not dig the hole in the forest:

Approximately 10% of adults in MRE villages and 5% of adults in non-MRE village told their children or others 'Do not dig the hole in the forest.'

Do not use collect scrap metal:

More than 5% of adults in MRE villages and 0% of adults in non MRE village told their children or others: 'Do not collect scrap metal.'

Discussion

Do not play and touch the UXOs:

The percentage of people who attended MRE (graph 5) and the percentage of people who shared information with others are quite similar. It implies that most of the people who receive MRE pass the MRE information to the others within community, as well as educating their own children. For most of those who educate others about UXOs, the first message they shared was '*Do not play with, or touch, the UXOs'*. This is a very basic and important first step to avoiding UXO accidents. In the non MRE village, people who shared and educated others about MRE is far less (of course, there are far fewer in this village who have received the MRE). The percentage of people educating others with the *"Do not touch the UXOs'* message in the non-MRE village is the same as those that attended MRE. This also shows that MRE information is shared by MRE participants with others. In fact, in the non-MRE village, more people shared the key message than had actually attended MRE. This sharing maybe also from life experience, or may be linked to the teachers who passed this information to the primary students a few years previously. The most common message shared is '*Do not play and touch the UXOs'*

Box 9: Coding from the interviewees (8)

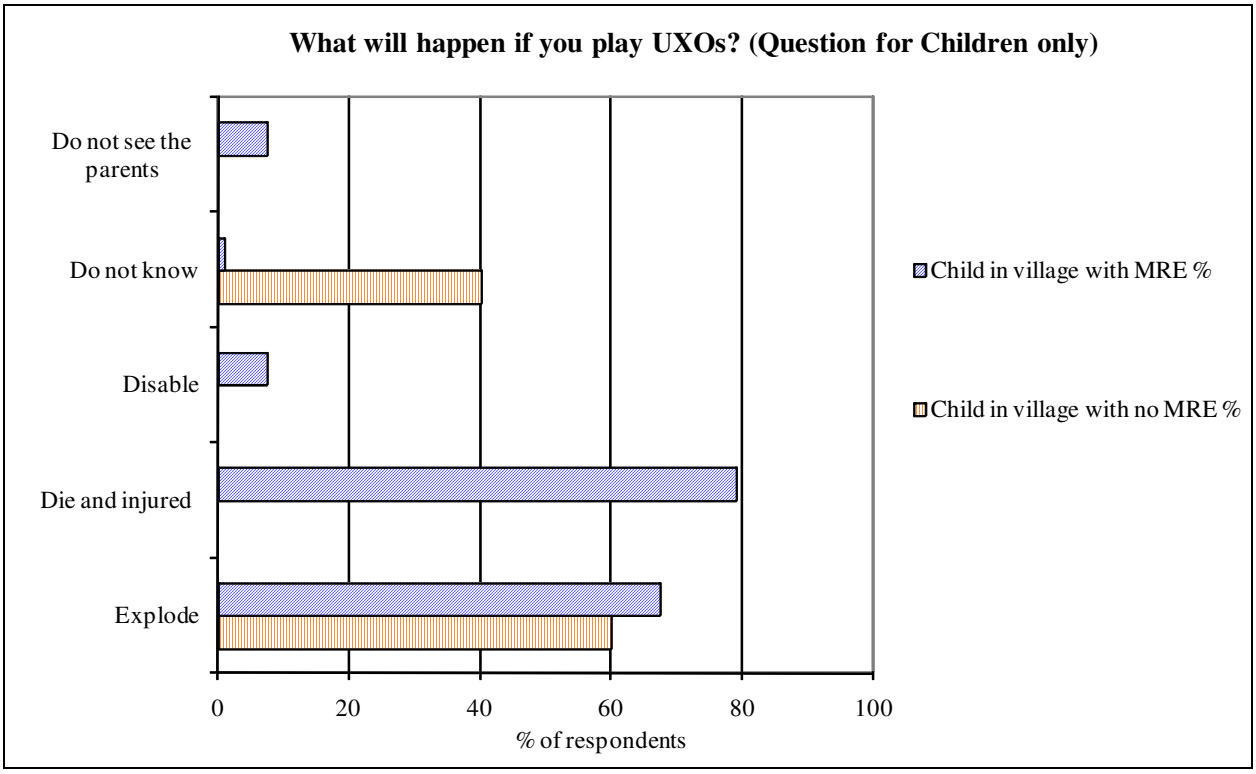
Interview 18: adults from Tacheo (male) said	" I have never told my children about UXO because we have never seen UXO accidents in this village"
Interview 19: adults in Tacheo village (female) said	" I have never educated my children about UXOs because I am not aware it will happen in my village"

Further messaging in MRE includes: reporting about UXOs; do not make fires in the forest; do not collect scrap metal; and do not dig the hole in the forest.

The percentage of people who share these additional messages about UXOs in MRE is much smaller than for 'Do not play and touch the UXOs'. However, the percentage for adults is higher in MRE villages than in the non MRE village. It can be seen that 0% of adults in the non MRE village mention any further sharing of the messages 'do not collect scrap metal', or 'Do not make fire in the forest'.

The conclusion here is that the MRE information shared within the communities mainly focuses on key important suggestions (do not touch UXOs), but generally does not extend beyond this.

6.2.9 Graph13: What will happen if you play UXOs? (Question for Children only)

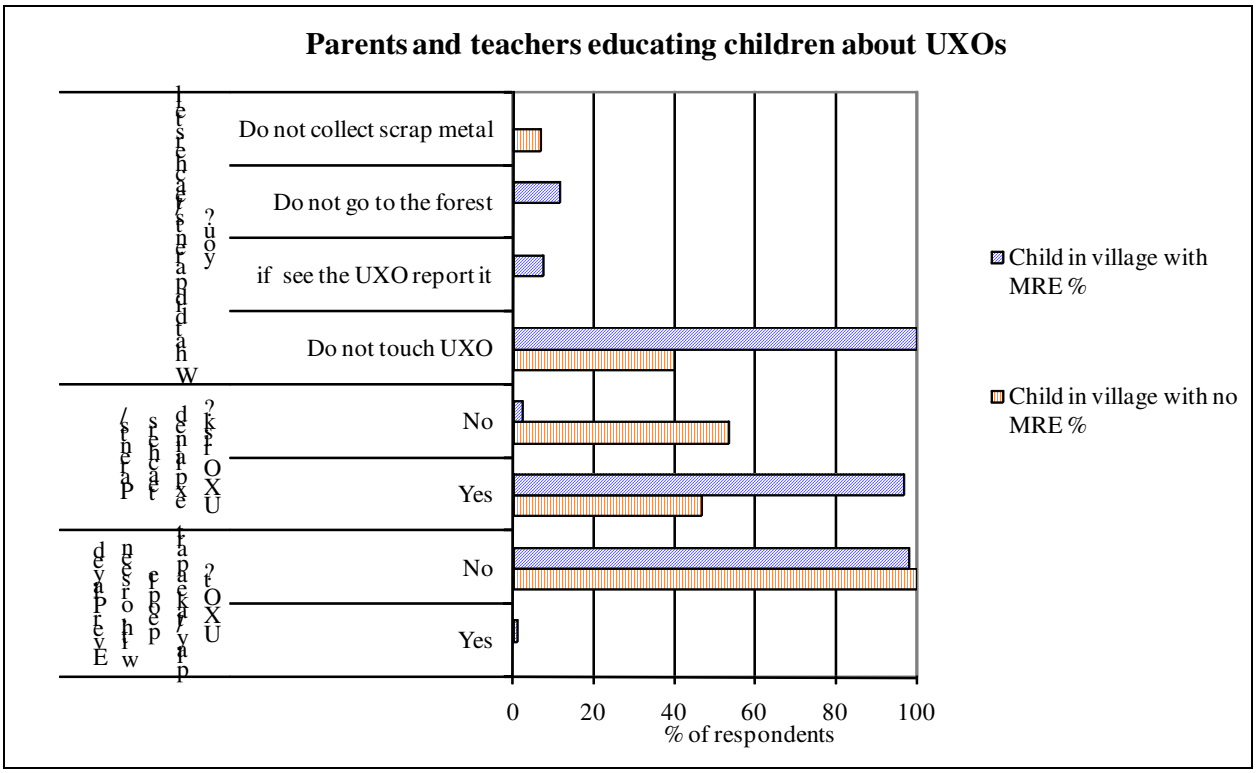


About 80% of children in MRE villages know that if they play with UXOs they could be injured or even die ('do not see the parent' has a similar connotation). In contrast, 0% of the children in the non-MRE village have raised this during the discussions. Almost 70% of the children in MRE villages, and 60% of the children in non-MRE villages say that UXOs will explode if they play with them. 40% of children in the non MRE village do not know what will happen if they play with UXOs.

Discussion

Quite a high percentage of the children in MRE village understand the potential consedquences of playing with UXOs. This means that the children are aware of the danger of UXOs. Conversely, the percentage of non-MRE village children who know about the risk of UXOs is lower. This suggests that the possiblity of UXO accidents for children is higher in non-MRE villages. Further discussion showed that MRE village children know what UXOs look like as many of them have seen the UXOs in posters as well as in real life, especially bombies.

6.2.10 Graph 14: Education from Adults to children about MRE? (Question for Children only)



The graph shows that almost all children in MRE villages have been educated by parents or teachers. Less than 50% of children in the non-MRE village have been educated about UXOs. 100% of parents/ teachers who educated children in MRE villages about UXOs educated them to not touch UXOs, but only 40% of parents/ teachers in the non-MRE village educated children to not touch UXOs.. More than 10% of children in MRE villages also received the messages of 'Do not go to the forest', while less than 10% of children received the message: 'If you see the UXO y should report it'. In the non-MRE village, less than 10% of children were warned against collecting scrap metal. .

Discussion

Most of the children in MRE villages were educated about UXOs, as opposed to less than half the children in the non-MRE village. The dominant message given to childen in both MRE and non-MRE villages, was 'Do not touch the UXOs'. Some of the children in MRE villages have received the message they should 'report about UXOs' and 'do not go to the forest', which suggests that their parents/teachers are more aware of the causes of the accidents. Children in the non-MRE village did not get these messages. However, a small number know that they should not collect scrap metal. This may be because the parents have previous experience of scrap metal collection causing accidents, or that the activity is not so relevant in their village due to a lower density of larger (more valued) UXOs. (See information in ***Graph 8***: Scrap Metal collection? or look at the coding from box 4 page 53).

7. Conclusion

So "is Mine Risk Education having a significant effect and long-lasting impact on attitudes towards UXOs at the community level?

The statistics show clearly that increasing the land cleared is correlating with decreasing the number of injuries and death by UXOs. The graph of Sekong shows there was a critical point at which this happens. The statistics show that an increase in land cleared can decrease the rate of injuries and death by UXOs. However, the increase in land cleared I does not directly correspond with a decrease in the density/number of UXOs present. The statistics also show that there is also a very strong correlation between increasing the number of MRE participants and decreasing of the rate of injuries and deaths.

Based on the research, it can be seen that Mine Risk Education is having a positive impact at the community level. This is revealed in the understanding of MRE and behaviour toward the UXOs exhibited by villagers. MRE has a positive effect within communities, through helping people to understand more about the risk of UXOs as well as how to avoid the risk from UXOs. However, MRE needs a lot of support from all stakeholders to assist the programme in retaining a significant and long lasting impact on the communities.

The research shows that MRE trainings are generally shared and used within the communities. However, sometimes it is not fully practiced by some villagers, especially by adults due to the necessity of continuing with farming practices as well as carrying out many tasks to support their families. When comparing adults in MRE and non-MRE villages, there is a different

understanding of the risks of UXOs, as well as difference in behavior toward the UXOs. For example, MRE villages see the importance of 'reporting about UXOs,' but in non-MRE villages they do not realize that this is important. Generally, adults in MRE villages have a much better understanding about UXO accidents. However, both non-MRE and MRE villages have similar behaviours in some situations, mainly in farming practices. For example: the adults in MRE villagers understand that they should clear the land before considering paddy field expansion, but there is no UXO service to support the land clearing requirement on a regular basis . In many discussions it was shown that instead of waiting for UXO agencies to come and clear their upland rice field, they have to take a risk and try to burn the UXOs when they found them in the rice field. The villagers from MRE villages understand clearly that collecting scrap metal is a high risk, but they are still collecting scrap metal because it can provide a significant income for their families.

The children in MRE villages understand clearly what UXOs look like, they are aware of the dangers of UXOs, and they know how to avoid UXO accidents. Understanding this is key to reducing the risk of UXO accidents for the children. Such understanding was far less apparent in non-MRE village. The children who attended MRE have exhibited greater behavior change toward the UXOs than the adults who attended MRE because they have less responsibility with regard to farming. However, some children still collect scrap metal which is a high risk behavior for UXO accidents.

Overall, MRE appears to have had a very positive impact I on the community. However, to ensure MRE will continue to have a significant effect and long-lasting impact on attitudes towards UXOs at the community level, some support is needed. For example, improving the livelihood conditions as well as getting more income from non-agriculture and scrap metal

sources, because the research clearly shows that poverty is one of the obstacles to following MRE and adopting risky behavior instead. In addition, the clearance agencies need to maintain a regular presence at the community level to make sure that all the needs for UXO clearance have been addressed.

In conclusion, Mine Risk Education is having a significant effect and long-lasting impact on attitudes towards UXOs at the community level. Behaviors are modified to reduce risks, basic knowledge about UXOs is widely understood in MRE villages, and statistics show that the rate of injuries has reduced. However, risks remain, particularly when access to land is a priority for income generation.

8. Limitation of the research

Participants: It was initially planned that one group of interviewees would be a community who had participated in MRE at least two years ago. This would have allowed the research to also consider how the passage of time affect the knowledge of MRE and related behavior. However, it was not possible to reach a group in this category.

Time: The team only spent 4 days in the field for data collection. It enabled a very good insight in to the opinions of the interviewees. However, the researcher fell that the time for the research was quite short which impacted on the observation process, which could not achieve a level of detail that was preferred. The team were able to get some information from observation to confirm/verify the answer from community, but observation for every single question of the interviews were not possible as the time was insufficient.

Subjectivity: This research was related to the researcher's experiences: living and working in a province with a high level of UXO contamination. This could bring a bias to the research process in comparison to a researcher visiting the province for the first time.

9. Recommendations for further research

Generally this research has covered broader aspects of MRE. However, it has not covered detailed study of the technical aspects of MRE. Therefore future research should look in detail at the technique of MRE in relation to real behaviors in within communities based on all of the messages of MRE.

In order to be able observe the full impact of MRE, the researcher needs to work in the communities for a longer time. **For example**, it would be useful to observe how communities make firer; what their reaction when they find a UXO.

Another point of research should look at how the UXO agencies prioritized the MRE activities and consider what the actual schedule of MRE activities have been implemented in each village.

Finally, UXO LAOS data shows that in 2003 the rate at which UXO related accidents/injuries occurred decreased significantly. It would be interesting to research more deeply to try to understand the full reason for this change.

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Annex1: Interview question for adult to evaluate MRE activities

Name of village……………………………………………

1. General

Sex: male……………; female …………………….

- Age from 16- 25 years old-------, to 26-85 years old------------

The villages

- Never received MRE activities ………………………………..
- Have received MRE long time ago…………………………….
- Have received MRE recently ………………………………….

2. The question to evaluate the MRE knowledge and behavior change toward the UXO as result from MRE activities.

1. **Have you attended MRE activities**? Yes…….; No …….

   If yes what do you remember about MRE activities?

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2. **What do you normally do when you have fund the UXOs?**
   - Remove ……………..
   - Report to head of village/ UXO LAO/ other clearance agencies---------
   - Do not touch ………………………….
   - other-----------------------

3. **Do you collect the scrap metal?** Yes …….; No …….

- If yes, how you do collect scrap metal?

- Collect on the ground…….
- Dig in the ground……....
- Other …….

4. What tools have you used when you collect scrap metal?

- Look visually…….
- Use the hoe…….
- Use the shovel……
- Use detector……..
- Other…….

5. Have UXO clearance taken place before you conduct the paddy field expansion?

- -Yes …….
- -No…….. ;
  why?.....
- Other ……

6. **What tools do you use to slash your upland rice filed/garden?**

- Axe……
- Knife…….
- other……

7. How do you cut or slash the forest for your rice filed or garden?

- Cut quite high from the ground …….
- Cut quite low to the ground ……...
- Cut very low the same level of the ground…….
- Other…….----------

8. What do you when you burn your upland rice field?

- Stay in the rice field until finish. ----------
- Stay away and come back when it is finished----------
- Other…….

9. **What kind of tools do you use when you grow rice in upland rice filed?**

- -Wooden paging strict ……………………
- -Metal paging strict ………………………
- Other……………………………………..

10. What tools do you use when you convert the paddy field?

- Use the hoe……………………….
- Use the shovel……………………
- Other---------------------

11**. How do you make fire when you make in the forest, along the river and the yard?**

- Make on the top of the ground-
- Put the soil on the top of the ground before making fire
- ©ñ¤-Ã¦È-²½-ì¾--
  ¹ó-ŒŒŒŒŒŒŒŒŒŒŒŒŒŒŒŒŒŒŒŒŒŒŒŒŒŒŒŒŒŒŒŒŒ
  Œ

-Other………………………………….
12**. Have you ever educate your children/ family members or others to stay away from the UXO?**
No
Yes………….. if yes what did you tell them?
……………………………………………………………………………………
……………………………………………………………………………………
Other observation
…………………………………………………

Annex 2 Interview question for children to evaluate MRE activities

Name of village

1. General information

……

- Sex: male…….; female …….
- Age from 4-8 years old-------, to 9-15 years old----------

The villages

- Never received MRE activities ……..
- Have received MRE long time ago…….
- Have received MRE recently …….

2. The question to evaluate the MRE knowledge and behavior change toward the UXO as result from MRE activities.

6. **Have you attended MRE activities? Yes…….; No …….**

   If yes what do you remember about MRE activities?

   Have you ever seen the UXO ?

   Yes …… No …….

   If yes, what it is look like?

   …….....

7. **Where did you see them?**

   - In the forest……..
   - Along the river…….
   - In the garden/ rice field ……
   - Inside/ or near by the village
   - Other……..

8. **What do you do when you see the UXOs?**

  - Remove…………………
  - Report to head of village/ parents/ others…………………..
  - Do not touch………………………..
  - Mark………………………………...
  - Other---

9. **What will happen if you play the UXOs?**

   ŒŒŒ

10. - Do you collect the scrap metal? Yes …….; No …….

If yes, how you do collect scrap metal?

- Collect on the ground………………………….
- Dig in the ground…………………………....
- Other ………………………………………….

11. What tools have you used when you collect scrap metal?

- Look visually…………………….
- Use the hoe……………………….
- Use the shovel……………………
- Use detector……………………..
- Other…………………………….

12. **-------------------Have you ever watch/ look at the people who play or taking UXO in the small part?**

   Yes …………, No…………….

13. Out of MRE activities, have your parents/teachers told you about the risk of UXOs?

- No………… Yes…………………
- If yes, what did they tell you?

  …………………………………………………………………………………………

Observation

Annex 3: UXO Laos Data

Operational record from year 2000-2010 UXO LAO, Sekong Province.

ì©	Description	Year										
		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1	The area cleared in HTs	28	23	78	51	95	99	194	244	216	212	114
	Cumulative area cleared (Ha)	28.3893	51	129	180	275	374	568	811	1,028	1,240	1,353
2	Number of UXO destroyed	3,414	5,360	3,388	1,468	4,916	1,833	3,873	17,774	4,686	24,589	3,483
	Cumulative No. of UXO destroyed	3414	8,774	12,162	13,630	18,546	20,379	24,252	42,026	46,712	71,301	74,784
3	Number of CA visit	57	48	68	56	54	54	63	45	64	71	
	Number of CA visit	57	105	173	229	283	337	400	445	509	580	
4	Number of participants	7111	5224	6825	9923	7954	8823	9447	6949	9825	10050	
	Cumulative No. of MRE participants	7111	12,335	19,160	29,083	37,037	45,860	55,307	62,256	72,081	82,131	
5	Number of injured and dice	67	75	41	19	6	0	3	9	2	7	1
	Cumulative No. of injured/ death	67	142	183	202	208	208	211	220	222	229	230

Correlation between land cleared areas and UXO destroyed (Year 2000-2010)

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
	Cumulative area cleared (Ha)	28.3893	51	129	180	275	374	568	811	1,028	1,240	1,353
	Cumulative No. of UXO destroyed	3414	8,774	12,162	13,630	18,546	20,379	24,252	42,026	46,712	71,301	74,784

es and deathof UXO injuri .Correlation between land area cleared and No

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
	Cumulative area cleared (Ha)	28.3893	51	129	180	275	374	568	811	1,028	1,240	1,353
	Cumulative No. of injured/ death	67	142	183	202	208	208	211	220	222	229	230

Correlation between land area cleared, UXO destroy and No. of injuries and death

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
	The area cleared in HTs	28	23	78	51	95	99	194	244	216	212	114
	Cumulative No. of UXO destroyed	3414	8,774	12,162	13,630	18,546	20,379	24,252	42,026	46,712	71,301	74,784
	Cumulative No. of injured/ death	67	142	183	202	208	208	211	220	222	229	230

Correlation between rate of UXOs incidents and participation in Mine Risk Education

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
	Cumulative No. of MRE participants	7111	12,335	19,160	29,083	37,037	45,860	55,307	62,256	72,081	82,131	
	Cumulative No. of injured/ death	67	142	183	202	208	208	211	220	222	229	

Annex 4: The result from interview

The result of interview the adults

NO	The questions	The answers	MRE assisted					None MRE	Remark
			Dakseng	Tork Ungkeo	Naver	TaOun	Total number	Tacheo	
1.	**Have you attended MRE activities**?	**Yes**	5	26	12	16	**59**	4	
		No	3	5	4	2	**14**	25	
	If yes what do you remember about MRE activities?	Mark the UXO by making the cross with wood	5	7	0	3	**15**	0	
		Report to village Authority	6	10	0	2	**18**	3	
		Report to UXO agency	2	5	2		**19**	0	
		Do not touch	8	18	13	15	**54**	6	
		Do not collect the scrap metal	2	3	1	2	**8**	1	
		Careful every where	0	8	2	4	**14**	4	
		Use the shovel	0	4	0	0	**4**	0	
		Clear the UXO before expand paddy field	0	2	0	0	**2**	0	
		Cut vegetation quite high because afraid the UXO	0	2	0	0	**2**	0	
2.	**What do you normally do when you find a UXOs?**	Remove	0	1	0	0	**1**	5	
		Report to head of village/ UXO LAO/ other clearance agencies	5	20	7	9	**41**	3	
		Do not touch	6	29	12	15	**62**	10	
		Mark	5	17	2	3	**27**	1	
		Other: never see the real UXO	0	0	0	0	**0**	11	
3.	**Do you collect the scrap metal?**	Yes	6	8	9	10	**33**	9	
		No	2	23	7	6	**38**	20	
	If yes, how you do collect	Collect on the ground	6	8	6	10	**30**	6	

	scrap metal?	Dig in the ground	2	0	3	2	**7**	3	
		Other	0	0	0	0	**0**	0	
4.	**What tools have you used when you collect scrap metal?**	Use the hoe	0	0	0	0	**0**	5	
		Use the shovel	6	0	9	7	**22**	2	
		Use detector	0	0	0	0	**0**	0	
		(other): Look visually	4	8	3	7	**22**	5	
5.	**Has UXO clearance taken place before you conducted paddy field expansion**	Yes	4	1	4	10	**19**	5	
		No	4	30	12	8	**54**	24	
	If no, why?	Because of old rice filed	2	4	10	4	**20**	2	
		Because doing Up land rice filed	4	27	1	6	**38**	18	
		UXO agency cannot provide the service	2	0	1	1	**4**	2	
		Did not request to the UXO agency	5	26	12	16	**59**	4	
6.	**What tools do you use to slash/clear your upland rice field/garden?**	Axe	8	31	9	14	**62**	23	
		Knife	8	31	11	15	**65**	23	
		Others:						0	
7.	**How do you cut or slash the forest for your rice field or garden?**	Cut quite high from the ground	8	25	12	18	**63**	24	
		Cut quite low to the ground	1	23	10	18	**52**	21	
		Cut very low the same level of the ground	0	0	0	3	**3**	0	
		Other:						0	
8.	**What do you when you burn your upland rice field?**	Stay in the rice field until finish	0	0	0	0	**0**	0	
		Stay away and come back when it is finished	8	31	10	18	**67**	29	
		Others:							
9.	**What kind of tools do you use when you grow rice in upland rice fields?**	Wooden dibble stick	3	4	10	1	**18**	3	
		Metal dibble stick	5	27	0	14	**49**	26	
		Others:							
10	**What tools do you use when you convert the paddy field?**	Use the hoe	2	16	10	6	**34**	21	
		Use the shovel	6	15	12	12	**45**	11	
		Other:							

11	**How do you prepare to make a fire when you are in the forest, along the river, or in the yard?**	Make on the top of the ground	7	12	7	0	**36**	22	
		Put the soil on the top on the ground before making fire	0	11	9	14	**24**	2	
		Make on the explode bed rock	0	24	6	9	**39**	7	
		Other: never make fire out of the house	1	0	0	0	**1**		
12.	Have you educate your children/ family members or others to stay away from the UXO?	No	0	30	0	2	**32**	19	
		Yes	8	1	16	16	**41**	10	
	If yes what did you tell them?	Do not make fire in the forest	1	3	0	6	**10**	0	
		Do not play and touch the UXO	6	23	12	16	**57**	10	
		Do not dig the hoe in the forest	1	0	3	1	**5**	1	
		Do not collect the scrap metal	2	2	0	0	**4**		
		Report to adult when you see the UXO	0	12	3	3	**18**	1	
		Do not the UXO detector	0	1	0	1	**2**		

The result of interview the children

NO	The questions	The answers	MRE villages					Non MRE	Remark
			Dakseng	TorkUngkeo	Naver	TaOun	Total	Tacheo	
1	Have you attended MRE activities?	**Yes**	13	28	26	20	**80**	**0**	
		No	2	1	2	3	**8**	**30**	
	If yes what do you remember about MRE activities?	**Do not touch and play the UXO**	13	28	28	8	**77**	**6**	
		If see the UXO report to adults	3	0	0	0	**3**		
		Do not collect scrap metal	0	1	0	6	**7**		
		They will die if UXO explode	0	0	8	0	**8**		
2.	**Have you ever seen a UXO ?**	**Yes**	13	28	20	15	**76**	**14**	
		No	0	1	8	1	**10**	**16**	
	If yes, what did it look like?	**Round like the stone**	12	28	20	10	**70**	**14**	
		Big/Long	4	10	1	0	**15**	**0**	
		black	0	9	3	5	**17**	**0**	
3.	**Where have you seen UXOs**	**In the forest**	11	16	14	11	**52**		
		Along the river	0	0	0	0	**0**		
		In the garden/ rice field	0	0	0	6	**6**		
		Inside/ or near by the village	0	0	0	0	**0**		
		Other: Posters	12	19	5	11	**47**	**13**	
4.	**What do you do when you see a UXOs?**	Remove it / pick it up	0	0	0	0	**0**		

		Report to head of village/ parents/ others	4	24	5	7	**40**		
		Do not touch	12	28	4	21	**61**	**1**	
		Mark	2	4	0	0	**6**		
		Other: stay away	0	7	13	8	**28**	**17**	
		Do not know	0	0	0	0	**0**	**13**	
5.	**What will happen if you play UXOs?**	**Explode**	6	26	23	9	**64**	**18**	
		Die and injured	13	29	24	12	**75**		
		Disable	3	4	0	0	**7**		
		Do not know	0	1	0	0	**1**	**12**	
		Do not see the parents	0	5	0	2	**7**		
6.	**Do you collect scrap metal?**	Yes	6	18	9	21	**54**	13	
7	**What tools have you used when you collect scrap metal?**	**Look visually**	**6**	**18**	**2**	**29**	**55**	**13**	
		Use the hoe	**0**	**2**	**2**	**0**	**4**	**0**	
		Use the shovel	**0**	**0**	**5**	**2**	**7**	**0**	
		Use detector	**0**	**0**	**0**	**0**	**0**	**0**	
		Other:	**0**	**0**	**0**	**0**	**0**		
8	**Have you ever Play /watched/ seen people who play with or take UXOs apart?**	Yes	**0**	**1**	**0**	**0**	**1**	**0**	
		No	**13**	**28**	**24**	**28**	**93**	**30**	
9	**Have your parents/teachers told you about the risk of UXOs?**	**Yes**	**13**	**27**	**24**	**28**	**92**	**14**	
		No	**0**	**2**	**0**	**0**	**2**	**16**	
	If yes, what did they tell you?	-Do not touch/play the UXO	20	28	27	28	**103**	**12**	
		- if see the UXO report to the UXO	0	7	0	0	**7**	**0**	
		- Do not go to the forest	0	11	0		**11**	**0**	
		Do not collect the scrap metal	0	0	0	0	**0**	**2**	