



## **Lao People's Democratic Republic (Lao PDR)**

### **Extension Request under Article 4 Convention on Cluster Munitions (August 2025 – August 2030)**

## **B: Detailed Narrative**

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## **I. Introduction, Background**

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### **1.1 History of contamination and UXO/Mine Action Programme**

The Lao PDR has the distinction of being one of the most heavily bombed nations in the world. From 1964 to 1973, during the Indochina war, Lao PDR suffered the heaviest aerial bombardment in world history. During this period, more than 500,000 bombing missions dropped over two million tons of ordnance, or around 0.8 tonnes per man, woman and child. Among those, more than 270 million cluster sub-munitions (known locally as *bombies*) were dropped with the intention to explode on or shortly after impact, but the failure rate may have been as high as 30 percent.

After the country was liberated, the government continued its efforts to solve the problem of UXO. Until the 1990s, there was the cooperation and assistance of specialists from International Non-Governmental Organizations (INGOs), and later the assistance of the United Nations Development Program (UNDP) and UNICEF. In 1996, the government established the Lao National Unexploded Ordnance Programme (UXO-Lao) to clear UXO from agricultural land, productive and businesses areas of the Lao people. Subsequently, in 2004, the Government approved and promulgated the first National UXO Strategic Plan in the Lao PDR for the period 2003-2010 called "Safe Path Forward (SPF)". By 2006, the National Regulatory Authority for UXO/Mine Action Sector in the Lao PDR (NRA) was established to carry out the duties of managing, monitoring, and inspecting the work of resolving the problem of UXO in the Lao PDR. In 2012, the Government approved, promulgated, and implemented the second Unexploded Ordnance National Strategic Plan in the Lao PDR, called "Safe Path Forward II (2011-2020)". The duration of this Strategic Plan has come to an end but resolving the problem of UXO continues to be implemented and was essential to guide the UXO management agencies and UXO operators as a basis for implementation. Safe Path Forward III (2021- 2030) is the current national UXO strategic document and provides targets and methods of implementation required to steer the sector, consistent with the period of the global 2030 Agenda for Sustainable Development Goals (SDGs). The Lao PDR has adopted a National Sustainable Development Goal 18 called "Lives Safe from UXO" which contributes and supports the other 17 SDGs.

The 9<sup>th</sup> National Socio-Economic Development Plan, 2021-2025, is the government's 5-year plan which aims to address the economic development challenges facing the country. UXO clearance is a key consideration in the strategy being highlighted in Outcome 3 of the Plan, Enhanced Well Being of the People.

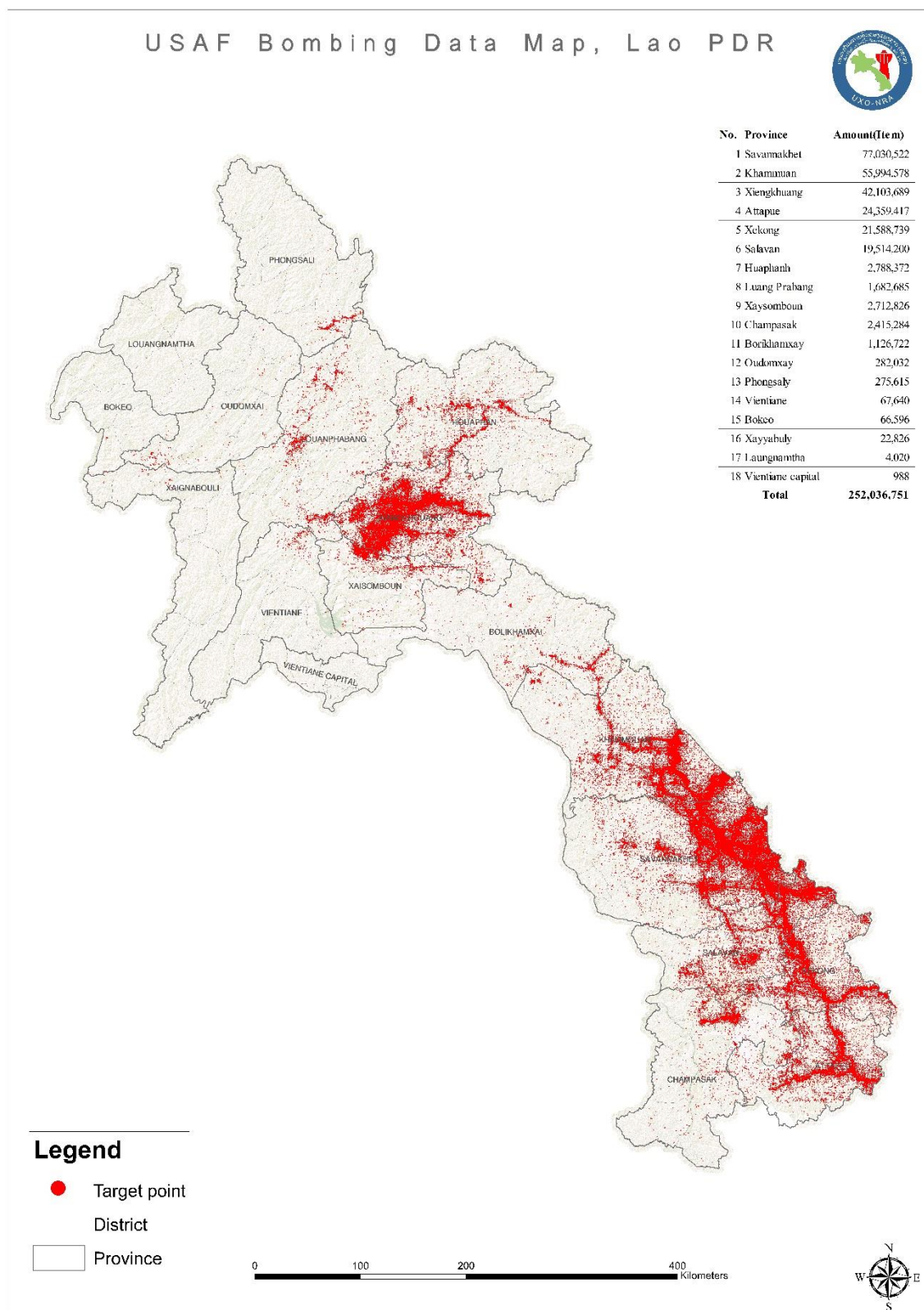
In 2013, the government established a humanitarian clearance capacity within the Lao People's Army (Unit 58) who are increasingly playing a more significant clearance role and over the long term, provide an option for the Lao government to address longer term residual contamination.

The National UXO Socio-Economic Impact Survey conducted in 1996-97 found that 86 of the 133 districts in 15 of the 18 provinces in the country were contaminated (all provinces except Luang Namtha, Bokeo and Xayabouli). It was also estimated that 25% of all villages in the country were contaminated with UXO with nine provinces particularly affected: Attapeu, Champasak, Houaphan, Khammouane, Luang Prabang, Saravan, Savannakhet, Sekong, and Xiengkhouang. Extensive contamination from other ERW includes both air-dropped and ground-fired unexploded ordnance (UXO) as well as landmine contamination, both anti-personnel and anti-vehicle from ground conflict dating back to the 1960s. The extent of landmine contamination is not known.

Clearance operators have reported the presence of at least 186 types of munitions in the Lao PDR. These range from BLU-26 cluster munitions, through 20lb fragmentation bombs to 3,000lb general purpose bombs, as well as artillery shells, grenades, mortars, rockets and landmines. Many of these explosive ordnances have sensitive fuses and therefore can be detonated accidentally even after 50 years of laying idle.

Year	# of accidents	Injured					Deaths					Total casualties
		Boy	Girl	Man	Woman	Total	Boy	Girl	Man	Woman	Total	
2011	65	36	4	30	9	79	16	0	6	0	22	101
2012	38	15	2	15	11	43	6	2	6	1	15	58
2013	19	12	5	10	2	29	7	1	5	0	13	42
2014	23	10	7	8	5	30	12	0	4	0	16	46
2015	27	16	1	15	1	33	2	0	6	1	9	42
2016	36	24	5	18	3	50	8	0	2	0	10	60
2017	20	8	6	13	11	38	0	1	3	0	4	42
2018	17	6	6	5	4	21	1	0	2	0	3	24
2019	21	5	5	5	2	17	1	0	8	1	10	27
2020	23	10	2	12	2	26	2	0	5	0	7	33
2021	35	15	7	16	9	47	6	0	8	2	16	63
2022	16	5	0	8	2	15	1	0	4	0	5	20
2023	22	13	4	12	7	36	4	1	4	2	11	47
<b>Total</b>	<b>362</b>	<b>175</b>	<b>54</b>	<b>167</b>	<b>68</b>	<b>464</b>	<b>66</b>	<b>5</b>	<b>63</b>	<b>7</b>	<b>141</b>	<b>605</b>

Fig. 1: UXO accidents in the Lao PDR 2011 – 2023



**Fig. 2: US bombing mission data, 1964 to 1973.**

## **1.2 Methods used to identify areas containing cluster munitions (in accordance with International Mine Action Standards - IMAS)**

Estimations of the levels of UXO and Cluster Munition contamination in the Lao PDR have varied over the years. Whilst it was estimated a total area of over 87,000 km<sup>2</sup>, this figure was estimated from US bombing data where bombing missions over the period covered approximately one third of the Lao PDR national territory of 236,800 km<sup>2</sup>. For Cluster Munitions contamination, the initial estimation is based on 70,000 individual cluster munitions target locations with each cluster munitions strikes producing a footprint of up to 12 hectares. Therefore, the initial estimation of cluster munition contamination area in the Lao PDR amounted to approximately 8,470 km<sup>2</sup>. These calculations gave a very broad understanding of the extent of contamination, but were, obviously, based on assumptions. Therefore, the extent of cluster munition contamination is an on-going process of CMRS.

In 2015, the Lao PDR adopted the Cluster Munitions Remnants Survey (CMRS) approach which has in turn, contributed to the drafting of a Technical Note for Mine Action (TNMA) to supplement International Mine Action Standards (IMAS) which has recently approved by an IMAS Board. The CMRS approach was a methodology to be able to define the extent of contamination based on evidence which significantly more accurate in determining contamination, and thus a baseline to frame the extent of the contamination problem in the Lao PDR.

In pursuance of this need to establish a baseline of contamination, CMRS was applied systematically in 6 of the most contaminated provinces in the Lao PDR (Attapeu, Champasak, Salavan, Savannakhet, Sekong and Xieng Khouang) where villages identified from US bombing data as contaminated, were identified to undertake CMRS Technical Survey (TS). Villages were then assigned to operators to systematically address contamination village by village, in order to identify Confirmed Hazardous Areas (CHAs). CMRS survey methodology was also adopted in a further 5 provinces (Bolikhamxai, Houaphan, Khammouane, Luang Prabang, Vientiane) although not systematically due to funding constraints. A remaining 4 provinces with contamination (Oudomxai, Phongsaly, Vientiane Capital and Xaisomboun) whilst known to have levels of contamination, do not have any ongoing CMRS to date.

Importantly, the CMRS process in the Lao PDR focuses at a village level where contamination is identified by villagers, identifying areas which impact directly on village life. As such, CHAs identified in this process focus in where ordnance is found in villages and with human interaction. Areas which are outside of human interaction and villages (forests, mountains, other areas with no human activity) are by definition, not included in the CMRS process and not registered immediately. At the start of the systematic CMRS process, the NRA assigned villages to operators to undertake proactive survey in all impacted villages. To date, 5 of the 6 provinces assigned for systematic (proactive) survey have completed the proactive survey phase (where the mapping of CHAs has been completed). In these 5 provinces, CMRS is ongoing but at a reduced rate as operators are responding to ad hoc requests when evidence (ordnance) is found by villagers, outside of previously surveyed areas (reactive CMRS).

	<b>Province</b>	<b>CHAs identified (ha)</b>	<b>Cleared CHAs (ha)</b>	<b>CHA completion (%)</b>
Full funded CMRS (high contamination provinces)	Attapeu	13,003	3,760	29
	Champasak	2,769	1,808	65
	Salavan	9,456	3,010	32
	Savannakhet	21,323	6,845	32
	Sekong	5,684	1,868	33
	Xieng Khouang	109,808	10,427	9
Ongoing CMRS but not fully funded (medium contaminated provinces)	Bolikhambxai	203	72	35
	Houaphan	4,498	1,233	27
	Khammouane	14,719	4,480	30
	Luang Prabang	2,798	629	23
	Vientiane	48	7	15
No current or ad hoc CMRS (lower contamination provinces)	Oudomxai	0	0	-
	Phongsaly	53	15	28
	Vientiane Capital	0	0	-
	Xaisomboun	0	0	-
	<b>TOTAL</b>	<b>184,362</b>	<b>34,154</b>	<b>19</b>

Fig. 3: Table of provinces and CMRS progress from 2015 to December 2023.



Notable in the table above is the example of Xiengkhouang where the high levels of contamination density mean that completion of survey has proved to be extremely difficult due to the significant and consistent overlapping of cluster munition drops where identified CHAs are massive, and where operators have to arbitrarily end a CHA and start another due to the massive nature of the CHAs identified.

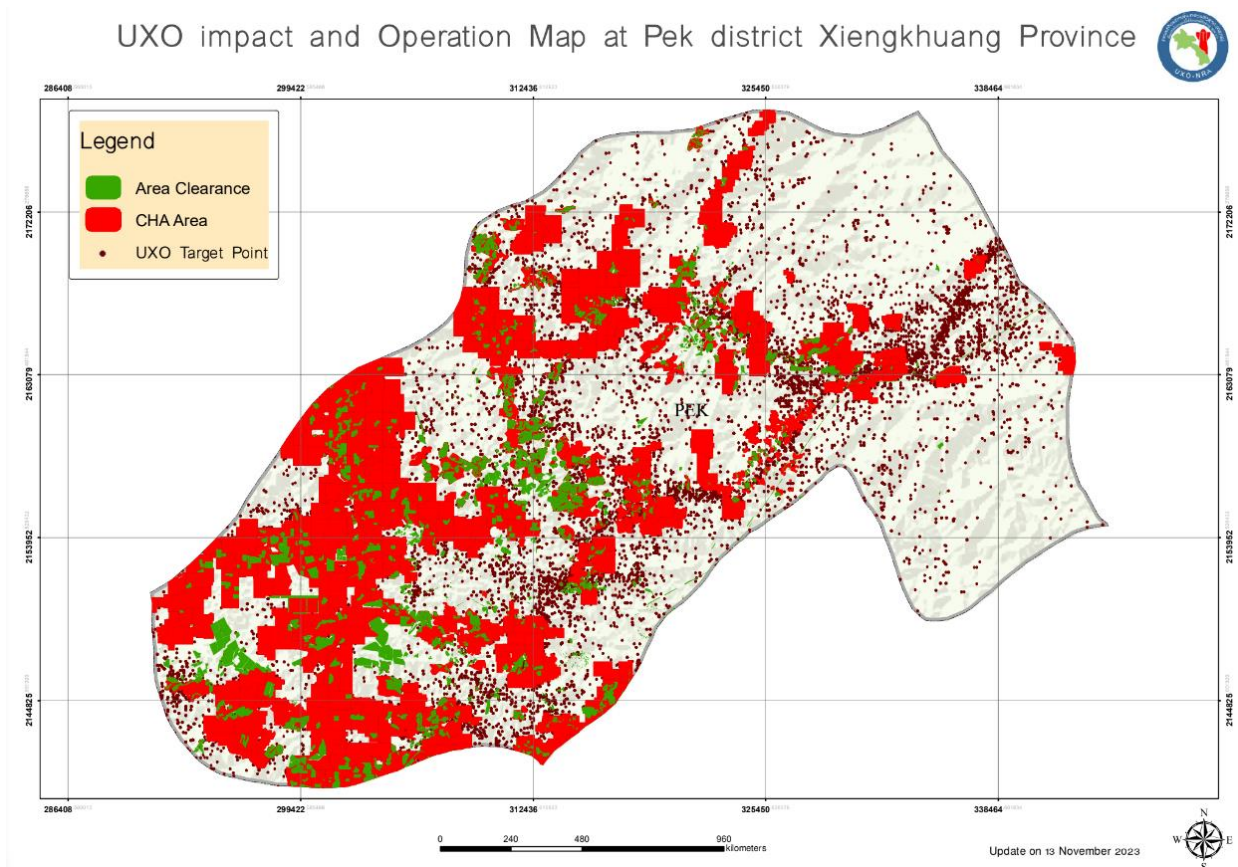
It should be noted that the CMRS process is reliant on using evidence points to initiate technical survey where the output is CHAs. As such, Suspect Hazardous Areas (SHAs) are *not* a product of the process – the only outputs of Technical Survey are land identified as CHAs and land which has no contamination. Similarly, the CMRS process defines land as contaminated or not contaminated and land release through NTS or TS also is *not* a product of the process, and as such not recorded.

Once CHAs are identified, clearance operators can start the systematic clearance of these CHA polygons. It should also be noted that the identification of CHAs is significantly faster than clearance, where the CMRS process establishes (and destroys) a single evidence point (per 50m x 50m box). Clearance takes significantly more time and resources to clear the same amount of land,

As of December 2023, the clearance of identified CHAs stands at 19% of the identified total, noting that:

- a. Technical Survey using CMRS methodology, is ongoing and the baseline will continue to increase as new CHAs for clearance are identified;
- b. Technical Survey has concentrated on the 5 most contaminated provinces in the south as well as Xieng Khuang. Khammouane province also has sizeable areas of contamination, although the province has not had dedicated TS funding for systematic village-to-village TS.
- c. Whilst there is significant progress in clearance of CHAs in a number of provinces (Champasak, Attapeu, Salavan etc.), the outlier is Xieng Khuang where mass contamination sees CHA identification continue to rise at a steady rate. It is, as yet, unknown when the rate of identifying new CHAs will decrease.

- d. Other areas of high percentage completion (e.g. Bolikhamxai, Houaphan etc.) have not had dedicated and systematic application of CMRS (due to funding constraints), so we expect these CHA numbers to continue to steadily rise as proactive technical survey continues.
- e. Xieng Khuang is a province which has an extraordinary high level of contamination (as highlighted by the identified CHAs to date). If Xieng Khuang is extracted from the national statistics, the CHA identified to CHA cleared ratio is 32% being close to a third cleared of identified CHAs.



**Fig. 4: Example map of Pek District, Xieng Khouang province detailing US bomb data and CHAs identified.**  
**Area clearance denotes land cleared of ordnance to the Lao PDR National Standards.**

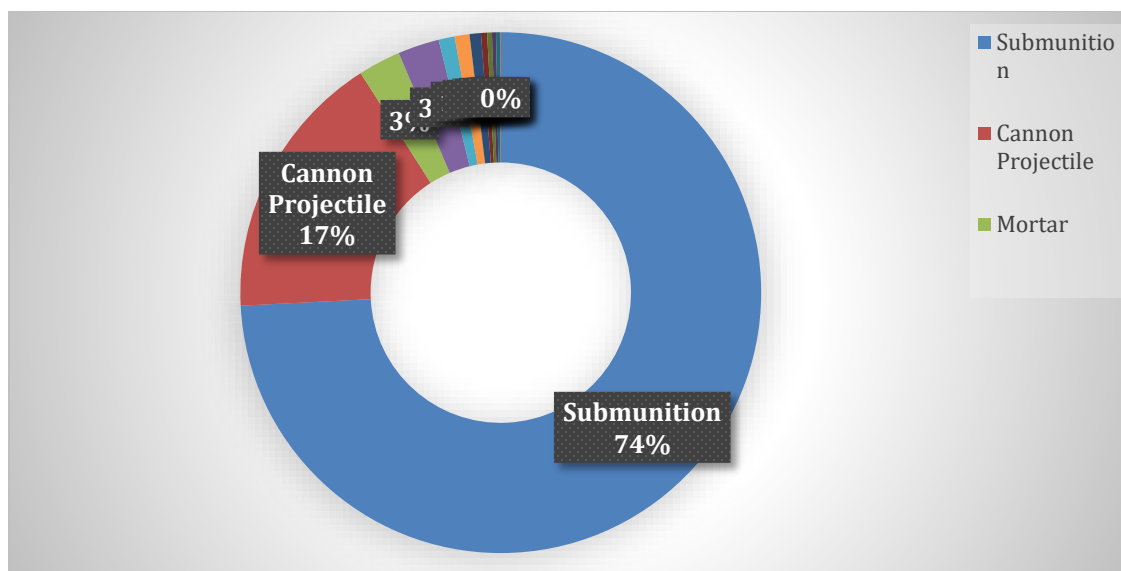
The Lao PDR is also exploring means to better utilize existing data to maximize clearance outputs. These include better examination and analysis of existing U.S. bomb data to be able to potentially identify contamination straight from existing data sources. This is pertinent in Xieng Khouang province where levels of contamination have meant that identifying stand-alone CHAs has been challenging (where massive contamination has led to the identification of ‘never-ending’

CHAs. Close examination of data may mean that resources dedicated to CMRS process could go straight to clearance, potentially hastening clearance outputs and reducing costs. This concept is currently being considered by the NRA.

### **1.3 Nature and extent of the progress made to date using terminology and providing information in a manner consistent with IMAS.**

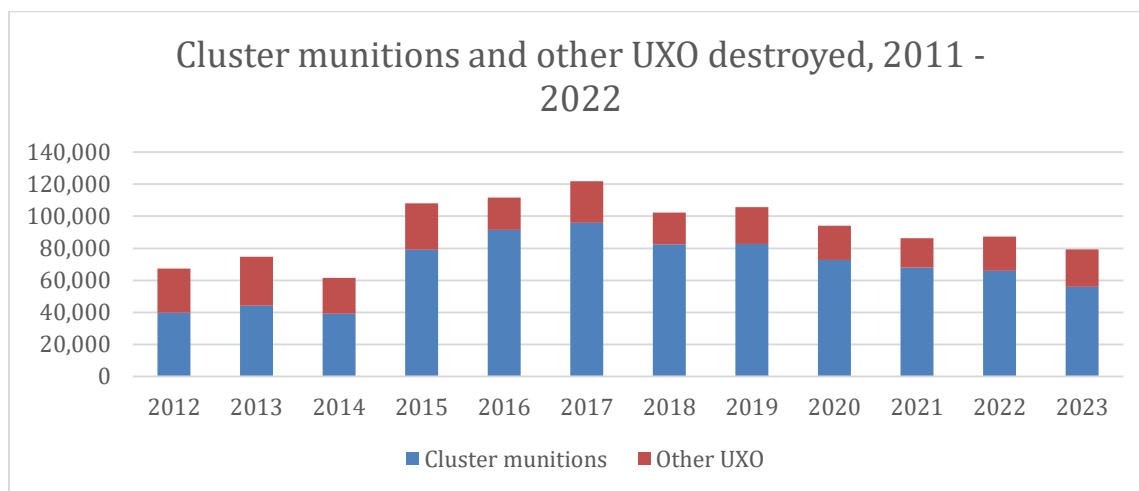
The CMRS process in the Lao PDR is undertaken by humanitarian clearance operators and is determined by evidence of ordnance. It is estimated that approximately 87,000 km<sup>2</sup> of the country (country territory of 236,800 km<sup>2</sup>) is contaminated with ordnance remnant. This figure was estimated from US bombing data where bombing missions over the period of 1964-1975, covered approximately one third of the Lao PDR national territory. For Cluster Munitions contamination, the initial estimation based on 70,000 individual cluster munitions target locations with each cluster munitions strikes producing a footprint of up to 12 hectares. Therefore, the initial estimation of cluster munition contamination area in the Lao PDR amounted to approximately 8,470 km<sup>2</sup>.

However, these are rough estimations where the country has used evidence based methodology since 2015, which has to date (December 2023) 195,704 hectares of Confirmed Hazardous Area (CHAs). This number continues to increase as the sector in the Lao PDR continue to identify contamination due to the fact that in addition to humanitarian clearance, commercial operators undertake clearance of contaminated land but with commercial objectives, for example in the preparation for hydro-electric dam construction, open cast mining projects etc.



**Fig 5: Types of munitions destroyed in the Lao PDR.** For a full breakdown of ordnance, please refer to annexes.

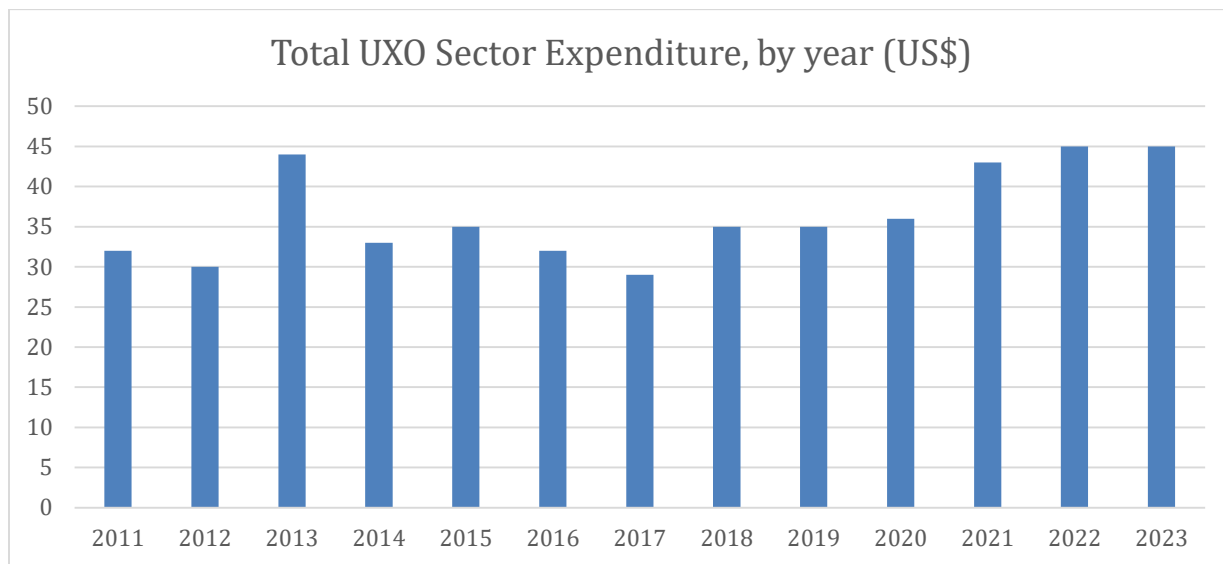
There have been at least 186 types of munitions in the Lao PDR. These range from BLU-26 cluster munitions, through 20lb fragmentation bombs to 3,000lb general purpose bombs, as well as artillery shells, grenades, mortars, rockets and landmines. Many of these explosive ordnances have sensitive fuses and therefore can be detonated accidentally even after 50 years of laying idle. The overwhelming majority of the UXO found consists of submunitions, accounting for 74.3% of the dataset. Cannon projectiles make up the second-largest share, comprising 16.8% of the findings. Mortars and projectiles each represent just under 3% of the dataset, with a small number of other objects accounting for the remaining finds (For breakdown of cluster munitions by type, please see Annex 3).



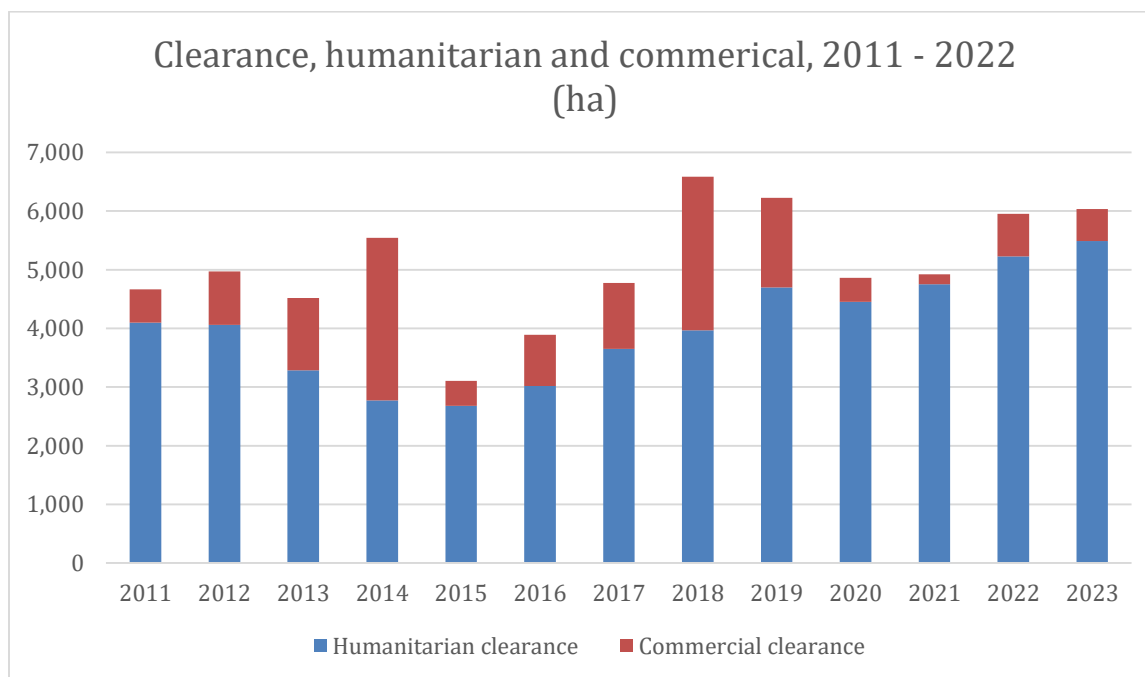
**Fig 6: Cluster munitions and other UXO destroyed 2011-2022**

## II. Resources made available to support progress made to date

The Lao PDR has been the recipient of between US\$ 30m US\$ (2012) and US\$ 45m (2022) over the extension period from a range of international donors, including governments of Ireland, Japan, Republic of Korea, Luxembourg, New Zealand, Norway, Turkey, United Kingdom, United States of America as well as smaller charitable organizations and donors.



**Fig. 7: Total UXO sector expenditure in the Lao PDR, 2011 – 2023** (2023 data entry provisional estimation).



**Fig. 8: Humanitarian and commercial clearance in the Lao PDR, 2011 – 2022.**

The government of the Lao PDR has contributed to the funding of the sector through the funding of a number of initiatives including support to Unit 58, being the humanitarian clearance capacity of the Lao People's Army where the Ministry of National Defence supports the deployment of Unit 58 soldiers, administrative support and infrastructure in collaboration with funding provided by KOICA and coordinated by UNDP. In addition, the Government have regularly provided in-kind contribution such properties for UXO-Lao offices, dormitories, training site, and equipment tax exemption for all humanitarian operators.

The existing funding mechanisms mainly derived from friendly countries through bilateral agreements, the UNDP and INGOs. The Government and the operators have increased efforts to maintain the confidence from donors which is related to increase transparency and promote efficiency in the UXO sector as the whole. In this connection, the UXO Sector Working Group (UXO SWG), which has similar concept as "Country coalition", has been utilized and improved since the first Extension Request. Therefore, the level of assistance has been provided steadily.

The UXO Sector is undertaking deeper studies on creating a funding mechanism that manage funding and activities in the UXO sector that the fund do not necessary generate from traditional donors (friendly countries or International Organizations) but plan to explore more diversified sources of funding. The first survey was conducted in December 2023. More concrete studies and results will guide the Government to design a more diversified funding mechanism in the coming years.

### **III. Strategy, Method and Standards**

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#### **3.1 Sector organization**

Since September 2023, the UXO and Mine Action sector in the Lao PDR is supervised by the Ministry of Foreign Affairs (MoFA) who chair the National Regulatory Authority Board and coordinate the sector and sector funding through the UXO Sector Working Group (SWG), currently chaired by MoFA and co-chaired by development partners. This platform serves as one of ten thematic SWGs that serve as key coordination platforms as part of the Lao PDR's Round Table process. The UXO SWG serves as a discussion forum to build sector consensus on sector priorities and effective cooperation amongst government, donors and operators in the sector. Prior

to the transition of UXO/Mine Action Sector to be supervised by MoFA, it was under Ministry of Labour and Social Welfare.

The National Regulatory Authority for UXO in the Lao PDR (NRA) is the government body responsible for the day-to-day coordination of the sector, undertaking sectorial accreditation of operators, information management, quality management and coordination of sub-areas of UXO work through quarterly technical Working Groups (TWGs) in Survey & Clearance, Risk Education, Victim Assistance and Information Management.

The NRA is headed by the National Director supported by two Deputy Directors for Operations and Support Services and has units responsible for Clearance, Quality Management, Risk Education, Victim Assistance, Information Management, International Treaties and Cooperation, Human Resources, Finance etc.

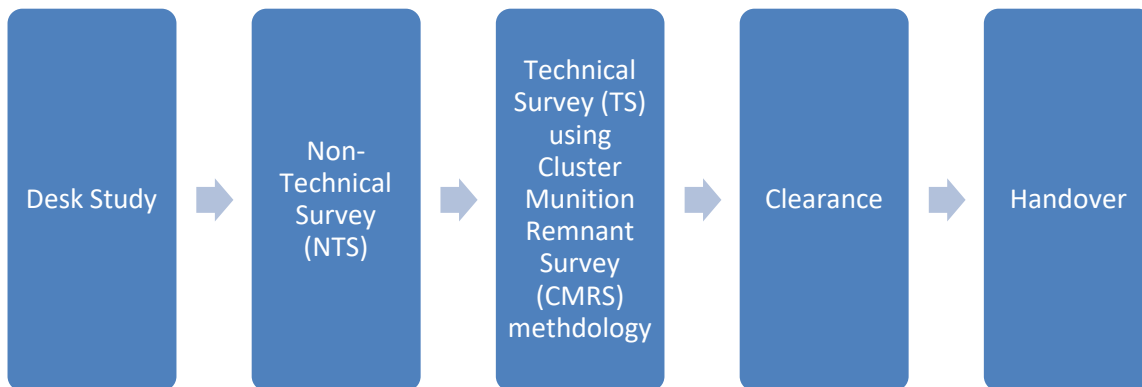
Clearance of UXO in the Lao PDR is undertaken by two national operators (UXO Lao and Unit 58 of the Lao People's Army), INGOs (Halo Trust, Humanity & Inclusion, MAG and Norwegian People's Aid). Accredited commercial clearance companies also currently number 24 and focus on supporting commercial activities, such as infrastructure development and supporting extractive industries. The sector receives technical support from UNDP, Tetra Tech, JICA and KOICA.

INGOs and national NGOs with Government Ministries leading work in Victim Assistance and Explosive Ordnance Risk Education and include organizations including World Education, Terra Renaissance and COPE.

### **3.2 Methods and standards used to release suspected areas, incl. quality assurance standards;**

The Lao PDR has adopted the Cluster Munition Remnant Survey (CMRS) process which is an evidence-based methodology (see CMRS footnote above) whose output is Confirmed

Hazardous Areas (CHAs), which in the Lao PDR's case, is measured in hectares<sup>1</sup>. The process for identification and subsequent clearance, as defined by the Lao PDR national Standards<sup>2</sup>, is as follows:



**Fig. 9: Graphic detailing UXO clearance process in the Lao PDR**

The output of the CMRS process is Confirmed Hazardous Areas, measured in hectares, which in turn form the basis of the Lao PDR's baseline of contamination. Humanitarian clearance is predominantly undertaken in the most contaminated provinces (see Fig. 1) where clearance focuses on contaminated villages where the presence of high concentrations of ordnance (identified by bombing records (Fig 2)). CHAs are identified in and around villages and other centres of population. Suspected Hazardous Areas (SHAs) are not an output of the CMRS approach used in the Lao PDR. Similarly, land is not released through technical survey at present, due to the high level of contamination, given that CHAs identify contamination of Cluster Munitions and other ERW.

Clearance operators (both humanitarian and commercial) are required to undertake internal quality control and quality assurance (QA/QC). QA/QC is also undertaken by the NRA where the national standard dictates that 2% of clearance is subject to NRA QA/QC.

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<sup>1</sup> A technical note on CMRS is shortly to be published by GICHD as a compliment to IMAS.

<sup>2</sup> Lao PDR National Standards can be found at: [www.nra.gov.la](http://www.nra.gov.la)



It is important to note that in the Lao PDR, land release is only undertaken through clearance of contaminated land as per the process above. Land release is not possible through any other means, due to the high level of widespread contamination.

### **3.3 Efforts undertaken in the effective exclusion of civilians from suspected areas**

The levels of threat posed by ordnance, including cluster munitions, combined with the massive extent of contamination means that in the Lao context, excluding populations from contaminated areas is both unmanageable and unrealistic. Cluster munitions are found in all types of land across the national territory; when cluster munitions are found in populated areas, for example in paddy fields used for rice cultivation, populations cannot be excluded from land that they have tilled for decades since the war. Further, there are very few incidents of casualties arising from tilling arable land, where the majority (of the relatively small) number of casualties is driven by either deliberate engagement of ordnance (play by boys, handling etc.) or through making fires (for clearing land for example).

Risk education in the Lao PDR focuses on two key messages for at-risk populations notably: 1) not to handle and 2) to report. All operators working in Lao PDR have a roving capacity to be able to respond to community requests for Explosive Ordnance Disposal (EOD).

## **IV. Progress of 1st Extension Request period**

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### **4.1 Survey and Clearance**

Since entry into force of the CCM in 2010, the Lao PDR has identified CHA of 195,704 hectares (2010-2023) through the conducting of Non-Technical Survey in 2,855 villages, completed Technical Survey of 237,395.08 hectares and cleared 69,841.92 hectares.

Over the period of the First Extension Request from 2021 to 2023, the Lao PDR undertook technical survey using the CMRS methodology to identify more than 65,133.93 hectares of contaminated land and in the same period, has cleared over 16,943.38 hectares of this amount, equating to 26% of the identified total for the period. Proactive Technical Survey<sup>3</sup> has been

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<sup>3</sup> Proactive Technical Survey is undertaken on a village-by-village basis using the CMRS technique where clearance operators survey villages one by one, as allocated to them by the Government of the Lao PDR (through the National Regulatory Authority, NRA). Each operator working in a province is given a list of villages to complete.

completed in five of the six most heavily contaminated provinces where villages assigned to operators to undertake TS CMRS by the NRA has been completed. Proactive survey refers to undertaking CMRS to identify CHAs in villages in Provinces as defined by the Government of the Lao PDR and assigned to operators for completion.

These complete provinces are then subject to ‘reactive’ survey; Reactive survey refers to CMRS being undertaken in areas where evidence is found but outside of the immediate village area or found after the proactive phase of the survey process.

Due to the massive extent of the contamination in the Lao PDR, survey (both NTS and TS) has focused on populated areas which has been subject to bombing and has evidence of contamination (community identification, previous requests from communities to undertake removal of ordnance for example). Large areas of forested and mountainous areas suspected to be contaminated have not been subject to systematic survey (and clearance) where prioritization has been focused on areas where contamination overlays with human activity (villages). The technical survey process is being applied systematically in areas of human population (proactive technical survey). Further survey can be undertaken by operators when evidence is found and resources are available in areas not in or adjacent to human habitation or activity (reactive survey).

Given the faster rate of identifying contaminated land through the CMRS process, against the slower rate of clearance, the ratio of cleared CHAs to total identified CHAs will decrease, whilst the CMRS methodology further identifies CHAs to be cleared. As Fig. 2 indicates, proactive survey is still ongoing in the majority of contaminated provinces in the Lao PDR, this the total amount of identified CHAs will increase as villages are surveyed and CHAs identified.

## **4.2 Explosive Ordnance Risk Education**

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Subsequently, operators work undertaking TS in each village until they are complete. It is recognised though, that given the massive extent of contamination in the Lao PDR, there will be areas of contamination that aren’t captured through this ‘proactive’ phase. As such, when the proactive phase is complete, clearance operators may undertake ‘reactive’ TS, being TS undertaken when the proactive phase is complete. Villagers may identify further contamination in outlying areas, through the location of evidence (UXOs) where further TS is required. Many areas in the Lao PDR are uninhabited and the proactive phase concentrates survey on populated areas. Reactive TS is undertaken when items are found, normally in areas further afield from the immediate village location when, for example, villagers are expanding agricultural areas.

Over the extension period, the Lao PDR has undertaken Explosive Ordnance Risk Education (EORE) reaching nearly 3 million beneficiaries (noting that some beneficiaries may have had more than one session over the period, noting that school EORE sessions can happen at different stages in a child's school attendance), see Fig. 8. The sector undertook a Knowledge, Attitude and Practice (KAP) survey during 2022 which looked at at-risk population's levels of knowledge of the UXO threat, how the knowledge was assimilated to impact their attitude towards the threat, and how both knowledge and attitude impacted on changed safer practices. During 2023, the KAP results were disseminated to stakeholders in the sector with a view to undertaking better analysis of why individuals engage with explosive ordnance and to tailor risk education and mitigation activities to better target specific at-risk groups and specific behaviours that lead to accidents.

Year	# of villages	Male	Female	Total audience
2011	433	78,713	80,855	159,598
2012	537	86,659	89,410	176,069
2013	514	96,013	97,420	193,433
2014	575	122,089	123,918	246,007
2015	726	167,011	163,655	330,666
2016	733	152,638	148,395	301,033
2017	567	146,112	143,892	290,044
2018	550	112,913	110,107	223,020
2019	610	147,239	145,981	293,220
2020	738	164,423	166,293	330,716
2021	684	101,637	100,544	202,181
2022	879	121,838	121,567	243,405
2023	1076	174,456	168,665	343,121

**Fig. 9: Explosive Risk Education participants, the Lao PDR 2011 - 2022**

Note: Data is not added as a total to ensure villages and beneficiaries are not double counted. Due to high levels of contamination, villages often have EORE repeated over a number of years, This is to both repeat and reinforce key mitigation messages to at-risk populations, but also to take into consideration primary age school children and the need for regular periodic EORE in schools. The rise in the last few years reflects a greater emphasis on the sector on focusing on at-risk children and the adoption of risk education into school curricula,

### 4.3 Victim Assistance

Over the period 2011 - 2022, the Lao PDR has implemented programming to support 360 UXO victims through the Victim Assistance Fund amounting to over USD 100,000. There were 533 UXO survivors received assistance which included medical treatment, physical rehabilitation, psychological support, vocational training and economic support. The sector undertook the process of reforming VA programme to be more comprehensive approach to victim assistance that will be integrated into the nationwide social welfare programming in the coming years.

#### **4.4 Funding**

The Lao PDR has been relatively successful in ensuring a steady finding pipeline to support activities in UXO clearance, technical and non-technical survey, risk education and victim assistance. However, funding has been heavily reliant on several key donors over the years and visibility of donors has been short term which has presented some challenges to the Government of Lao PDR in longer term planning. Where visibility for funding has been short term. This has presented some challenges to the Government in integration with Lao PDR development planning processes.

#### **4.5 Lessons learnt from 1<sup>st</sup> extension request**

One key lesson learnt from the last extension request is related to how TS using the CMRS methodology has meant that the country has been able to better define the extent of the Cluster Munition contamination. However, due to the massive extent of contaminated land, this process has been costly, both in terms of time and resources. The clear value of undertaking systematic TS in 6 provinces has meant that the government has a much clearer picture of the extent of humanitarian clearance required in each respective province surveyed (see Fig. 3). The survey process though, has not finished and the Lao PDR will continue to define further CHA's, during the next period which will consist of technical survey taking place:

- Reactively – in Provinces where systematic villages has been completed and where communities find evidence (munitions) that then require survey and the subsequent identification of CHAs
- In Xieng Khuang province – where the extent of contamination means that the systematic village-to-village approach has not been completed to date.

- In provinces where TS has not been systematic – notably in provinces of medium level priority which have TS undertaken according to operator budget availability.
- In provinces deemed as lower-level priority - where TS has been sporadic.

The Lao PDR is cognisant that in order to hasten clearance, innovative methods must be trialled to hasten results. Over the next period, the Lao PDR intends to research better ways of using data to identify ways of accelerating results through the utilisation of potentially satellite imagery and better utilization of bombing records.

## **V. Challenges and Opportunities**

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### **5.1 Challenges:**

- **Extent of contamination**

The CMRS process is increasingly drawing a picture of the level of contamination across the country, with 5 of the 6 most contaminated provinces completed proactive survey. CMRS is ongoing in a further 5 provinces. As such, the country is drawing a map of priority contamination to be cleared (notably where contamination is in or close to human habitation). However, as this extension request is highlighting, the massive extent of contamination in the Lao PDR represents the biggest challenge to meeting article 4 obligations.

- **Geography**

The Lao PDR is a country characterized by significant areas of mountains and forest and with a population of 7.6 million people spread over a national territory of 236,800 km<sup>2</sup> being a population density of 32 people per km<sup>2</sup> (compared to 96 per km<sup>2</sup> in Cambodia; 141 in Thailand; and 319 in Vietnam). The low density of population in the Lao PDR means not only that villages and settlements are isolated and hard to reach, but much of the country is relatively untouched with little human activity. It must be recognized that there are large areas of contamination in areas with no human activity. These areas are de-prioritized where contamination in populated areas takes precedence. The CMRS process is village focused and prioritizes village level contamination. The development of a forthcoming National Standard on prioritization will further

prioritize high impact clearance within each individual village. The Government of the Lao PDR will also strive to ensure that hard to reach communities are served by survey and clearance to ensure equal access to support, irrespective of location of village.

- **Funding and funding visibility**

The Lao PDR is a country working towards graduation from LDC status and is currently dependent on Overseas Development Assistance (ODA) to maintain momentum in the sector and to fund survey, clearance, risk education and victim assistance. The government of the Lao PDR contributes to the sector through the funding of some aspects of the sector, such as Unit 58 Army infrastructure and salaries of army deminers. The Government of the Lao PDR is committed to working with national capacities to develop long term solutions to residual contamination issues, most notably the deployment of the Lao people's National Army to humanitarian clearance (Unit 58), and the gradual expansion of the capacity which started in 2016 with a total of 7 clearance, survey and risk education teams. Unit 58 is in a process of expansion, supported by KOICA and UNDP, to have a total of 20 clearance, survey and risk education teams by the end of quarter 4 of 2023.

The Lao PDR though still relies on a small but dedicated group of donors who support survey, clearance, risk education and victim assistance. Funding to clearance programmes, however, can be erratic and little visibility is afforded to the sector which presents specific challenges to longer term planning. Breaks in funding to clearance capacities, for example, can result in trained staff being suspended without pay and moving to work in other sectors, making deployment when funding returns, more costly and slower given the need to train new staff.

- **Incomplete baseline**

The massive extent of contamination in the Lao PDR means that survey is complete in 5 high priority provinces but remains incomplete in the majority of provinces. As such, the rate of areas identified as Confirmed Hazardous Areas (CHAs) will continue to rise as survey continues in the remaining provinces. Hectares surveyed are identified at a significantly faster rate than hectares cleared, so the proportion of cleared land as a percentage of the baseline (survey output) will decline as more of the baseline is identified. Land identified in survey will slow as less resources and more hectares are identified as contaminated, meaning the baseline acceleration will

slow over time. Within the identified areas to clear, there are decades yet of clearance work to complete, given the current clearance capacity (approximately 6,000 hectares per year).

The government of the Lao PDR is striving hard to have a full picture of contamination, but the massive extent of contamination means that this process is huge and will still take years before a fuller picture of contamination is made.

Given that the baseline is incomplete, and continues to grow as further technical survey is undertaken, it is impossible at this juncture to predict how many more hectares of clearance till remains to be addressed. The massive levels of contamination mean that the Government of the Lao PDR prioritises areas where contamination aligns with human settlements. Once proactive survey has been completed in all the contaminated provinces, we may be able to make an estimation of the total area yet to be cleared where human settlement and contamination interact.

## **5.2 Opportunities:**

- **Lausanne Action Plan**

The Lausanne Action Plan identifies some key areas for the Lao PDR to be able to accelerate clearance outcomes. Notable is the adoption of the Lao government to better adopt innovation in the sector, and a willingness to experiment with new ideas and technologies which may accelerate both the rate and ease of clearance, but also developmental outcomes, where clearance ultimately relates to the living conditions of Lao people.

- **All Reasonable Effort**

The *All Reasonable Effort* (ARE) concept may assist the Government of the Lao PDR in further defining to what extent the country must undertake its commitments under article 4 of the Convention. The Lao PDR hopes to enter into discussions to be able to define what ARE translates to in the Lao context.

## VI. Work plan for 2nd Extension Request period

	Total land cleared – humanitarian and commercial (ha)	Total clearance – humanitarian (ha)	Total ordnance destroyed	Total CMs destroyed	Actual/Projected cost (USD m)
2020	4,864	4,452	94,154	72,718	36
2021	4,923	4,752	86,316	67,874	43
2022	5,952	5,229	87,332	66,020	45
2023	6034	5489	79,387	55,593	45
2024	6,500	7,000	100,000	75,000	45
2025	7,000	7,500	105,000	79,000	45
2026	7,500	8,000	110,000	83,000	45
2027	8,000	8,500	115,000	86,000	45
2028	8,500	9,000	120,000	90,000	45
2029	9,000	9,500	125,000	94,000	45
2030 (to 31/7/30)	5,250	5,542	72,917	54,833	26

	Actual
	Projected

**Fig. 10: Work plan targets for 2020 - 2030**

**Please find a detailed version of the work plan annexed 1.**

The Lao PDR expects to increase productivity in UXO clearance year to year, through the application of good practice, the adjustment of national standards to respond to evidence and best practice in country and better utilisation of data over the forthcoming years. It is anticipated that the Lao PDR will see a sub-sequential increase in efficiencies translating into more hectares cleared and more ordnance removed. As other SDGs, the Lao PDR's 18<sup>th</sup> SDG, Lives Safe from



UXO, has some ambitious targets. It is the intention of the government to drive efficiency and effectiveness in the UXO Sector to increase productivity year on year through impactful changes to, for example, use of US bombing data and changes national standards to drive efficiencies.

Further, the government of the Lao PDR will work hard to maintain levels of funding from existing donors and also look to diversify funding sources to maintain levels of investment. Given the wider funding climate however, the Government of the Lao PDR might expect a downward trend in overseas development assistance (ODA) given the prevailing global context. However, the Government of the Lao PDR is planning to maintain funding levels with ongoing support from existing donors as well as working to attract smaller donors. Amongst initiatives being considered is a small donor trust fund to facilitate the management of small grants. Over 2024, the NRA will be producing a resource mobilization strategy which will detail activities to maintain donor interest and also explore alternative funding avenues.

The Lao PDR expects to strengthen work in victim assistance, sourcing more funding to be able to work to provide equitable access to all UXO victims across the whole country, expanding the coverage of programmes to all areas of the country during the extension request period. The support will target both access to resources to support new casualties of UXO accidents, but also widen the coverage of livelihood support to existing victims from UXO accidents from prior years

### **6.1 Clearance prioritization for the 2<sup>nd</sup> Extension Request period**

The UXO clearance sector in the Lao PDR will continue to work towards prioritizing clearance in areas with high levels of ordnance and relative population density, targeting humanitarian clearance in the poorest districts of the Lao PDR. Further work will be undertaken on prioritization of within districts to concentrate clearance on projects which support rural development (such as the building of schools, clinics and infrastructure) in contaminated areas (CHAs).

It is acknowledged that fulfilling the requirements of the convention (notably clearance of all contaminated areas) will be impossible in the extension period. As such, the focus of the Lao PDR will be to accelerate results and to focus on areas with the highest poverty indicators.

The Lao PDR will continue to use the Desk study – NTS – TS (CMNRS) – Clearance methodology as detailed on page 15. Given the context of the Lao PDR's massive contamination, this approach, the government believes, currently best serves the clearance requirements of contaminated communities. Over the extension period, the Government of the Lao PODR will review possible alternative methodologies to improve efficiencies in clearance, as and when they present themselves.

## **6.2 EORE prioritization for the 2<sup>nd</sup> extension Request period**

EORE over the extension period will be focused particularly on the most at-risk groups, as defined by close analysis of casualty statistics. The engendered nature of statistics (see Fig. 1 above) indicate that boys and men are particularly vulnerable to accidents. EORE will be further integrated into primary education curricula to ensure that children (particularly boys) are warned of the threat of playing with ordnance when discovered. EOE activities will also focus on strengthening the sector's understanding of causality of accidents and adjusting EORE messaging towards the activities that casualties were undertaking at the time of the accident, to understand whether the accident caused was due to a lack of knowledge, or their approach to the ordnance where possibly they know that the ordnance is dangerous (for example boys playing with ordnance knowing very well the ordnance is dangerous, or men burning in forest areas, also cognisant of the risk). A strong understanding of levels of knowledge, attitude and practice can inform public health focused interventions aiming to prevent accidents, rather than assuming all accidents are caused by lack of knowledge.

## **6.3 Victim Assistance prioritization for the 2<sup>nd</sup> Extension Request period**

The Lao PDR will pay significant attention over the next extension period to broadening the extent of coverage of support to victims, both to access to health and financing immediately following a UXO accident, as well as supporting longer term access to livelihood programmes for victims and their families over the longer term. The victim assistance sub-sector will improve their linkage to wider social protection environment in country. It is utmost importance to explore more source of financing to establish minimum social protection floors, where UXO victims would be a category of social welfare assistance.

## **VII. Humanitarian, social, economic and environmental implications of the proposed extension;**

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### **Humanitarian**

Humanitarian clearance undertaken by national operators (UXO Lao and Unit 58 of the Lao People's Army) as well as international clearance operators (Halo Trust, Humanity and Inclusion, MAG and NPA) focuses on human needs identified through the CMRS process. The identification of CHAs through technical survey is undertaken in priority areas which coincide with district poverty mapping; the majority of UXO and cluster munition contamination occurs in districts which are considered as poor<sup>4</sup>.

The functioning of UXO/Mine Action Local Coordinators (in Province and District levels) in UXO impacted provinces allows the government of the Lao PDR to react to localised challenges to respond to humanitarian needs in the UXO sector, such as the movement of ordnance during, for example, flooding or landslides, notably on the increase following climatic change.

### **Social**

A key observation of research undertaken into impact by the Government of the Lao PDR in 2023's Post Clearance Impact Assessment<sup>5</sup>, is the presence of fear in a community when there is the known presence of ordnance, including cluster munitions. The presence of ordnance, as such, undermines the confidence of rural populations in the land which they cultivate and depend on for livelihoods. Land uncleared of cluster munitions and other ordnance equates to farming in fear.

### **Economic**

The presence of UXOs impedes the development of rural infrastructure projects, such as schools, health clinics or roads, where construction is hampered by the presence of ordnance. A focus of clearance to facilitate rural development projects, within confirmed CHAs, can foster poverty alleviation and will be a focus of prioritization work undertaken by the sector in the upcoming extension period. Moreover, the UXO clearance during the first extension request has

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<sup>4</sup> Lao PDR 2015 Census-based poverty map

<sup>5</sup>

<http://www.nra.gov.la/resources/WorkingGroup/UNDP%20Post%20Clearance%20Impact%20Assessment%202023%20Eng.pdf>

proved to be significant for economic development as the UXO clearance enabled the construction of the country's first high-speed railway, a landmark development project, which will significantly enhance the quality of life and boost socio-economic development.

## **Environment**

The Government of the Lao PDR is cognisant of the issues pertaining to mass contamination of UXO and the potential impact on the environment. To ensure that cluster munition clearance impact on the environment is minimised, the Lao PDR will be reviewing the National Standard on Environmental Management<sup>6</sup> in 2024 to ensure that clearance operations have the minimum possible impact on the environment, and are in line with IMAS, specifically *Environmental Management in Mine Action* (IMAS 7.13). This will incorporate best practice in the disposal of scrap metal, the use of appropriate quantities of explosives, the clearance of UXO in the Lao PDR does not systematically utilize machines for land release.

The majority of UXO clearance undertaken in the Lao PDR is undertaken on land with established ownership, where people cultivate and farm. As such, the Lao PDR, unlike other countries, is not subject to rapid settlement on land post clearance.

## **Gender and Diversity**

During 2023, the Government of the Lao PDR, led by the NRA, undertook a Gender Analysis of the sector and as a result, have integrated Gender and Diversity focal points in each of the 4 Technical Working Groups (Survey & Clearance, Risk Education, Victim Assistance and Information Management), to ensure that gender and diversity issues are redressed at a technical level, with operators and coordinated by the NRA. Further, and following proposed reforms to the coordination of the sector by the Ministry of Foreign Affairs (MoFA), Technical Working Groups are being assigned specific tasks by the Sector Working Group (SWG) currently chaired by the Vice-Minister of MOFA.

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<sup>6</sup> Chapter 21, found at <http://nra.gov.la/resources.php?data=National>

During 2023, the sector under the leadership of the NRA, has established a Gender and Inclusion Code of Conduct to strengthen gender and diversity issues within the sector. The Code of Conduct aims to establish a minimum standard and targets for all operators, both humanitarian, and commercial, in ensuring workforces are representative of the population and ensure redress mechanisms for any complaints are established, amongst other things. The Code of Conduct will be finalised during Q1 of 2024.

Further, the work on gender and diversity has produced a set of recommendations for government organizations (notably the NRA, UXO Lao and Unit 58 of the Lao People's Army) to establish more equitable approaches to gender and diversity. These recommendations will be addressed starting 2024.

**Annexes:**

Annex 1	Detailed work plan
Annex 2	Current capacity
Annex 3	List of items destroyed

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