



FINAL REPORT: POST-CLEARANCE IMPACT ASSESSMENT FOR UNDP'S UXO CLEARANCE SUPPORT

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United Nations Development Programme (UNDP) Lao PDR Country Office is implementing the project in close collaboration with National Regulatory Authority for the UXO/Mine Action Sector in Lao PDR (NRA) and the Lao National Unexploded Ordnance Programme (UXO Lao).

The impact assessment, undertaken and submitted by an international consultant, Ms Ruth Bottomley, and a national consultant, Dr Vivath Sauvaly, was conducted between October and November 2022. It gathered information through document review and discussions with key stakeholders using a mixed-methods approach in Vientiane capital, Xiengkhuang and Bolikhamxai provinces. Cover page photo credits go to UNDP/Pongpat Sensouphone (Lou).

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Acronyms

CCM	Convention on Cluster Munitions
CCW	Convention on Certain Conventional Weapons
CHA	Confirmed Hazardous Areas
CMR	Cluster Munition Remnants
CMRS	Cluster Munition Remnants Survey
CRDP	Convention on the Rights of Persons with Disabilities
CTA	Chief Technical Advisor
DRA	District Regulatory Authority
FCDO	Foreign, Commonwealth and Development Office
FGD	Focus Group Discussion
GDP	Gross Domestic Product
GoL	Government of Laos
HDI	Human Development Index
HI	Humanity and Inclusion
HMA	Humanitarian Mine Action
IMSMA	Information Management System for Mine Action
JICA	Japan International Cooperation Agency
KII	Key Informant Interview
KOICA	Korean International Cooperation Agency
LAP	Lausanne Action Plan
MAG	Mines Advisory Group
NMAS	National Mine Action Standards
NSEDP	National Socio-Economic Development Plan
NPA	Norwegian People's Aid
NRA	National Regulatory Authority for the UXO Sector in Lao PDR
PCA	Post-Clearance Assessment
PCIA	Post-Clearance Impact Assessment
PDR	People's Democratic Republic
PRA	Provincial Regulatory Authority
QSI	Quality Solutions International
SDG	Sustainable Development Goals
SLF	Sustainable Livelihoods Framework
SSI	Semi-Structured Interview
QLA	Quality of Life Association
ToR	Terms of Reference
UK	United Kingdom
UNDP	United Nations Development Programme

US	United States
USD	United States Dollar
UXO	Unexploded ordnance

Note: Spelling for province, district and village names have been aligned with the spelling on the NRA IMSMA database.

Executive Summary in English

The purpose of this Post-Clearance Impact Assessment was to assess the impact of the presence of UXO in contaminated areas, and then, based on an understanding of the socio-economic impacts of UXO on the communities living with contamination, to assess the impact post-survey and post-clearance with reference to Lao PDR development strategies,¹ the National Strategic Plan for the UXO Sector in Lao PDR, the Safe Path Forward III, and the Lao PDR Sustainable Development Goals (SDGs). The study was expected to:

- provide a baseline of the impact of UXO contamination on individuals and communities;
- provide evidence of the value, relevance, and effectiveness, in development terms, of UXO survey and clearance;
- provide recommendations for NRA and UNDP that can inform and drive improved survey and clearance to maximise the positive impact of programming.

This impact assessment explored the impact of the presence of UXO in the areas where UNDP supports UXO survey and clearance, namely in the provinces of Xiengkhuang and Bolikhamxai, focusing on the survey and clearance work of UXO Lao in Xiengkhuang, funded by New Zealand, and of Unit 58 in Bolikhamxai, funded by KOICA. Four villages in Khamkeuth district in Bolikhamxai province were selected for the study, and eight villages in Xiengkhuang province were selected - four in Kham district and four in Pek district. The villages were selected using purposive (judgement) sampling, identifying characteristics that would be interesting for the study and which would allow different situations to be compared. These characteristics included extent of contamination, extent of survey and clearance activities, number of tasks, type of tasks (agricultural and development), and, to some extent, village demographics and geography.

The Impact study applied a mixed-methods approach drawing on qualitative methods, specifically Key Informant Interviews (KII), Semi-Structured Interviews (SSI) and Focus Group Discussion (FGD). Where possible, quantitative data was collected to supplement the qualitative analysis. This included information about the extent of survey and clearance, beneficiary numbers, accidents and casualties, and data available on village and household poverty. The research methods were intended to collect “rich” data and to allow a deeper and more nuanced understanding of the impacts of UXO contamination and UXO clearance and survey on households and communities.

Key informant interviews were held with the national authorities, including the NRA, HMA operators and development stakeholders in Vientiane Capital. At provincial and district level, key informant interviews were held with government officials and departments, specifically Labour and Social Welfare, Planning and Investment, and Agriculture and Forestry.

Semi-structured interviews were held at village level with villagers who were living with contamination, villagers whose household agricultural land had been surveyed, and villagers whose household agricultural land had been cleared. Survey and clearance of land for community assets and development projects were explored through the Focus Group Discussions.² A participatory timeline activity was conducted as part of the Focus Group Discussions, which allowed changes in a village, both positive and negative, to be mapped over an identified timeframe agreed by the participants.

¹ Particularly the ninth five-year National Socio-Economic Development Plan, 2021-2025, which aims to implement the National Strategy on Socio-Economic Development 2025, and Vision 2030 of the Lao PDR.

² This included land cleared for schools, health centres, pagodas, and village meeting halls.

The data collected was triangulated to provide a strong evidence base for the study findings and conclusion. The Sustainable Livelihoods Framework (SLF) and the five livelihood capitals – human, social, financial, natural, and physical – were used as the main framework for analysis. The SLF recognizes that household livelihoods are complex and intertwined, and that the wider context may also impact on livelihood outcomes.³

The study found that UXO clearance has contributed to improvements in livelihoods and people's wellbeing in several areas. Clearance reduces the risk that people are exposed to daily when living in contaminated areas. Clearance of land for community infrastructure has improved access to schools and health centres, and has provided opportunities for greater community interaction, information sharing, and the marking of important cultural ceremonies. UXO clearance of tourism sites has helped to promote tourism and provide opportunities for villagers to earn income through selling handicrafts or food to tourists. UXO clearance for animal raising has also supported the ability of some households to increase their income. The contribution of clearance to improving agricultural productivity and income is less clear as other factors have more clearly contributed. Agricultural extension, providing new techniques and seed varieties, has improved productivity, and increased market demand and food processing facilities have contributed to the ability of farmers to sell their produce. However, farmers reported feeling more confident to work on land that had been cleared, and clearance also enables farmers to extend their land. The mechanisation of farming and the use of tractors has occurred regardless of the clearance of UXO, and some farmers felt using tractors was safer than digging agricultural land by hand. Some agricultural activities, such as digging and clearing rice field bunds and drainage channels, required farmers to dig the land more deeply, which raised questions and concerns about the safety of these activities even on land which had been cleared of UXO. The building and rehabilitation of infrastructure in terms of roads, water systems, irrigation and markets has contributed to the overall improvement of livelihoods and the connectivity of villages, and UXO clearance has clearly contributed to this where it has been undertaken.

A summary of the main study findings, categorised according to the five capitals of the SLF and the main comparisons identified pre- and post-clearance, is outlined in the table below. However, differences pre- and post-clearance are not always clear-cut because clearance has been a progressive process over many years and livelihood improvements have also occurred progressively, often with other factors also contributing to the changes. Pre-clearance data was collected from several sources, including villagers waiting for clearance of their land, villagers recalling their situation prior to clearance, and villagers whose land had been surveyed but not cleared. Post-clearance data was collected from villagers whose land had been cleared of UXO, both by roving tasks and full clearance. The timeline activity enabled discussion with small groups of villagers about the changes that had occurred in their village over time and the contribution UXO clearance, and other factors, had made.

Capital	Pre-clearance	Post-clearance
Human	<ul style="list-style-type: none"> - UXO were ubiquitous - People habitually removed UXO - Children were perceived to be at risk in fields - People felt afraid or anxious when farming contaminated land 	<ul style="list-style-type: none"> - UXO are less visible; surface UXO have been removed - People report UXO although may still move items if they find them - Children are safe from UXO - People feel safe, proud, and confident

³ GICHD, "Sourcebook on Socio-Economic Impact Survey," GICHD, December 2011.

	<ul style="list-style-type: none"> - Schools were small and built of wood and offered fewer grades - People had to travel to seek health care 	<ul style="list-style-type: none"> - Increased access to school facilities and schools able to cater for more children - Health centres offer primary health care and reduce reliance on traditional medicines
Social	<ul style="list-style-type: none"> - Small or no adequate facilities for holding village meetings - Small pagodas didn't allow large gatherings - People didn't report UXO; little understanding of clearance process and prioritisation 	<ul style="list-style-type: none"> - Villages have better facilities for holding meetings and activities - People are proud of their pagodas which are important for ceremonies and festivals - People are confused about prioritisation and often have little understanding or awareness about the survey process. This has created some frustration and anxiety - Clearance handover documentation was reported to be difficult to understand, even by some village chiefs
Finance	<ul style="list-style-type: none"> - People were poorer and livelihoods were often subsistence - People had less confidence in farming the land - Fewer livelihood opportunities - People were less aware of the value of their land in monetary terms 	<ul style="list-style-type: none"> - Livelihoods have improved and people have enough to eat and produce to sell, but it is difficult to attribute these changes to UXO clearance. Other factors have played a part - People feel more confident to farm - More livelihood opportunities with tourism development - Land value has increased following clearance in some areas, particularly in FDAs and along roads. Investment, economic growth, and population growth in these areas has increased demand for land, particularly land cleared of UXO.
Natural	<ul style="list-style-type: none"> - People don't farm all their land if it is overgrown and may have UXO contamination - People farm more carefully and slowly and work around contamination - People worry about digging the land and using digging tools 	<ul style="list-style-type: none"> - People can extend land and farm new land - People feel more confident to farm with machinery and to use a hoe - People can farm with confidence - Some concerns remain about depth of clearance for different agricultural activities
Physical	<ul style="list-style-type: none"> - Poor quality or dirt roads - Lack of access to markets and traders 	<ul style="list-style-type: none"> - Roads have been improved with asphalt and gravel

- Lack of access to water and irrigation	- Better access to market and traders - Villages have gravity water system and irrigation
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However, challenges still exist. In areas with UXO contamination, risk taking is still common and people habitually move UXO when they find them in fields so that they can continue farming. A lack of information or understanding about survey and clearance processes and how clearance is prioritised creates some degree of frustration at village level and potentially hampers better land use planning and more proactive participation in clearance processes by villagers. There remains a lot of potential to improve and maximise the outcomes of UXO clearance through improved communication and outreach, joined-up planning at provincial and district level for task prioritisation, and strengthening of linkages to development organisations and agricultural outreach.

The recommendations from this study aim to support the NRA and UNDP in their work to strengthen the UXO sector and to help to maximise the development outcomes of clearance. The recommendations are as follows:

- In line with ongoing work, a clear, national-level prioritisation system for UXO clearance should be developed and implemented by all operators. The system should support clearance in high priority areas (CHA) that can contribute to poverty reduction targets. Work should be undertaken to clearly communicate the prioritisation process to village, district, and provincial authorities to enable them to actively contribute and participate in planning for UXO clearance.
- Review how villagers are informed about clearance and survey processes to ensure that landowners and people who farm the land are fully aware of UXO operations on their land and know how this may affect their ability to work the land. Strengthen community engagement processes to improve communication on these issues, ensuring that both men and women are involved and informed.
- As part of the handover documents provided to landowners and village chiefs, consider providing a clear summary sheet in Lao language to attach to the handover document for each household to explain the key information related to each clearance task. Ensure that handover documents are provided to all households where clearance has taken place.
- Consider discussing the issue of clearance depth and whether in some cases clearance may need to be to a deeper depth for certain land use such as ponds and fence posts, and shallower for other land use to speed up productivity.
- Support and strengthen district and provincial planning processes to include UXO clearance requirements and budget at the planning stages, and to ensure that development tasks can be included within annual clearance workplans, rather than added in as emergency tasks at a later stage. Consider ways to increase the number of development tasks that operators can take on every year, ensuring that the tasks are for humanitarian development and in poorer villages and districts.
- In contaminated provinces and districts with identified CHA, the NRA should advocate and liaise with development organisations, or support operators to do so, to improve opportunities for integrated UXO clearance and development projects. Support UXO organisations to work with district agricultural services and other services that could support livelihood improvement in areas that will be cleared of UXO. Consider and discuss

other opportunities to encourage and enhance partnerships between UXO operators and development partners.

- Support risk education operators to respond to the habitual risk taking of people moving UXO when they find them so that they can continue farming,⁴ and to adapt messages to reflect changes in farming, including the use of tractors.

⁴ People interviewed often said that when they found UXO in their fields, they would remove the UXO to the side of the field so that they could continue farming, but that they would also report the UXO for the organisations to come and clear.

1. Introduction

1.1. Report outline

This report outlines the findings and recommendations of the Post-Clearance Impact Assessment study conducted for United Nations Development Programme (UNDP) and the National Regulatory Authority for the UXO Sector (NRA) in Lao PDR. This introductory section of the report outlines the study objectives and scope, as understood from the Terms of Reference (ToR), the timeframe for the research, the main stakeholders involved in the study, and the challenges encountered during the study implementation.

The second section outlines the background and context for the study, including the UXO contamination in Lao PDR, the policy framework which underscores the linkages between UXO action and development objectives, and approaches to survey and clearance.

The third section provides an overview of the methodology and tools that were utilised for the study. This includes the selection of the districts and villages for study, a description of the research tools used to understand and demonstrate impact; and the conceptual framework used to guide the analysis.

The fourth section outlines the main findings from the study. The findings are presented according to the five assets of the Sustainable Livelihoods Framework,⁵ and case studies are included to highlight specific issues and village profiles.

A fifth section provides some reflections in terms of how the development outcomes from UXO clearance can be maximised through enhanced prioritisation, communication, and better planning and linkages with development activities.

The final section of the report outlines the conclusions and main recommendations. The initial findings and recommendations of the study were presented to UNDP, the NRA and UXO Lao on 25th November 2022, and input and suggestions from the participants of that meeting are also included within this final report.

1.2. Impact assessment objectives

According to the Terms of Reference, the purpose of the impact assessment was to assess the impact of the presence of UXO in contaminated areas, and then, based on an understanding of the socio-economic impacts of UXO on the communities living with contamination, to assess the impact post-survey and post-clearance with reference to Lao PDRs development strategies,⁶ the National Strategic Plan for the UXO Sector in Lao PDR, the Safe Path Forward III, and the Lao PDR Sustainable Development Goals (SDGs). The study was expected to:

- provide a baseline of the impact of UXO contamination on individuals and communities;
- provide evidence of the value, relevance, and effectiveness, in development terms, of UXO survey and clearance;
- provide recommendations for NRA and UNDP that can inform and drive improved survey and clearance to maximise the positive impact of programming.

⁵ The assets are divided into five categories: Human, Social, Financial, Physical and Natural.

⁶ Particularly the ninth five-year National Socio-Economic Development Plan, 2021-2025, which aims to implement the National Strategy on Socio-Economic Development 2025, and Vision 2030 of the Lao PDR.

The need for an improved understanding of the impact of UXO contamination on communities in Lao PDR, and for a baseline drawn from evidence-based research, was identified by the final evaluation of the United Nations Development Programme (UNDP) and the Government of Lao People's Democratic Republic (GoL) UXO project, '*Moving Towards Achieving SDG 18 – Removing the UXO Obstacle to Development in Lao PDR*' implemented between July 2017 and March 2022.⁷ The evaluation noted, "It seems reasonable to assume that UXO Action has contributed towards human development and livelihoods but a lack of detailed analysis about the impact of the UXO contamination and UXO Action means that the quality and nature of the contribution is unknown. There is no satisfactory system in place to monitor and evaluate development outcomes."

This impact assessment assessed the impact of the presence of UXO in the areas where UNDP supports UXO survey and clearance, namely in the provinces of Xiengkhuang and Bolikhamxai, focusing on the survey and clearance work of UXO Lao in Xiengkhuang and Unit 58 in Bolikhamxai.

The scope of work as outlined in the ToR was to:

- Task 1: Assess the impact of UXO on development outcomes in contaminated areas
 - o Review measurable development indicators pertinent to strategic development targets and SDGs of the GoL
 - o Define a methodology for measuring indicators in selected programme areas
 - o Undertake data collection and analysis
- Task 2: Assess the impact after UXO survey and clearance
 - o Review the same development indicators post survey and clearance
 - o Undertake data collection and analysis
- Task 3: Evaluate the impact of survey and clearance (Task 1 measured against task 2)
 - o Quantify the impact of survey and clearance by comparing impact pre and post survey and clearance
 - o Make recommendations to drive improved survey and clearance to maximise positive impacts of programming

At a kick-off meeting on 7th October 2022, attended by the consultants, the NRA and UNDP, the NRA listed the additional following areas for investigation for the impact assessment:

- To look at the difference between land that has not yet been cleared, land that has been surveyed, and land that has been cleared, to understand the benefits/constraints to beneficiaries and overall impact in each scenario.
- To compare the benefits of clearance of household agricultural land with clearance of land for development (e.g. clearance for schools, infrastructure etc). Which has more impact, and for whom?
- To provide input into the discussions around clearance prioritisation based on the study findings. How should the National Prioritisation System function, and why? Inclusion in the study of some information on operator prioritisation methodology may support these discussions.
- To understand what the benefits of clearance are in terms of livelihoods and local development, but also their level of confidence and perceptions of safety. To understand if some people are not satisfied with survey and clearance activities and if so, why.
- To illustrate how coordination and good communication contribute to impact – what difference does it make?

⁷ Rebecca Roberts and Kiengkay Ounmany, "Moving towards achieving SDG 18: Removing the UXO obstacle to development in Lao PDR," UNDP, 13 September 2021.

- To ensure analysis of impact links to the goals of the Safe Path Forward III, the SDGs, and the 9th NSEDP.

1.3. Study timeframe

The planning and implementation of the impact assessment study was conducted in October and November 2022 in two phases:

- The first phase took place in October 2022 and comprised a literature review and the development of the research plan, methodology and tools. This resulted in an inception report which was written and provided to UNDP and the NRA. An initial kick-off meeting was held on 7th October with UNDP and the NRA, and a presentation of the inception report was given online on 25th October.
- The field work for the study took place in November. The first week of the field work was spent in Vientiane Capital to meet with relevant stakeholders and to collect the required data for the village selection. The team were in Bolikhamxai province from the 6th – 12th November, and in Xiengkhuang province from the 13th to 24th November. A debrief was provided in Vientiane Capital to UNDP, the NRA and UXO Lao on the 25th November.

The report writing took place in December 2022. The literature review and documents consulted can be found in Annex 1 and 2, and a timeframe/workplan for the study can be found in Annex 3. This final report was completed in January 2023, incorporating feedback from the NRA and UNDP.

1.4. Assessment stakeholders

1.4.1. United Nations Development Programme (UNDP)

UNDP support to the UXO sector in Lao PDR has focused primarily on two areas: 1) support to strengthening the capacity and technical competency of the National Regulatory Authority, including to be able to oversee and steer the sector in pursuance of national strategic goals and obtaining Lao PDR's UXO Action Sustainable Development Goal, SDG 18: Lives Safe from UXO; and 2) to provide capacity support for survey and clearance, through support to UXO Lao and the Humanitarian UXO Demining Teams of Lao People's Army (Unit 58), thus hastening progress towards clearance in impacted communities.⁸

The overall United Nations Country Programme Document has a focus on ensuring that by 2026, people living in Lao PDR benefit from sustainable and inclusive economic growth and are increasingly resilient to the risks of climate change, natural disasters and UXO, while state institutions are more transparent, inclusive, and accountable to the people."⁹

1.4.2. National Regulatory Authority for the UXO/Mine Action Sector (NRA)

The NRA is a public institution of the Lao government, established in 2005 and operational in 2006. The NRA is responsible for the regulation and coordination of the UXO/mine action sector in Lao PDR and serves as the national focal point for the sector. Its mandate includes strategic direction and policy formation; operator accreditation; coordination of operational activities; capacity building within the sector; information management and analysis; quality management; and international treaty support.¹⁰ The NRA is comprised of seven units: clearance, explosive ordnance risk education, victim assistance, information management, quality management, public relations,

⁸ UNDP, Terms of Reference: International Consultant to undertake an impact assessment for UNDP's UXO clearance support.

⁹ United Nations, "Country Programme Document for Lao PDR, 2022-2026," 2 July 2021, DP/DCP/LAO/4.

¹⁰ NRA, "[About us: About NRA](#)," accessed 13 October 2022.

and international cooperation and treaty support.¹¹ The NRA board is composed of representatives from government ministries and chaired by the Minister of Labour and Social Welfare.¹²

The NRA vision: *A Lao PDR free from the threat of UXO, where individuals and communities live in a safe environment contributing to development and where UXO victims are fully integrated into their societies and their needs are met.*

1.4.3. UXO Lao and Unit 58

The assessment focuses primarily on the survey and assessment work of UXO Lao, funded by New Zealand in Xiengkhuang province, and the humanitarian teams of the Lao People's Army, Unit 58, which is operational in Bolikhamxai province with funding from KOICA.

UXO Lao is the National UXO programme of the Government of Lao. It has been operational since 1996 and works in the nine most UXO contaminated provinces, including Xiengkhuang province. UXO Lao was established with support from UNDP, UNICEF, and other partners, and undertakes survey, clearance, roving tasks and risk education activities. It clears land of UXO for agricultural and community purposes as well as for other development activities.

Unit 58 is the humanitarian demining unit of the Lao People's Armed Forces. Unit 58 has seven teams in total: two EORE teams, one Non-Technical Survey Team, one Technical Survey Team, and three Clearance Teams. It has conducted survey and clearance in Bolikhamxai province since 2017 with the support of UNDP and funded by KOICA.

¹¹ NRA, "[Units](#)," accessed 13 October 2022.

¹² "[Decree on the Organisation and Operations of the NRA for UXO in Lao PDR](#)," Decree no67/PM, 12 February 2018.

2. Background and context

2.1. UXO contamination

Lao PDR has the world's highest level of contamination from unexploded cluster munition remnants, resulting from the Indochina War of the 1960s and 1970s, when the United States (US) conducted one of the heaviest aerial bombardments in history. The bombing data indicates that there were around 70,000 individual target locations across Lao PDR, and more than two million tons of bombs were dropped between 1964–1973, including more than 270 million submunitions (referred to locally as bombies).¹³ The failure rate is unknown. Some of the most common types found in Laos include the BLU 26, BLU 3B, BLU 61, and BLU 63.¹⁴

All eighteen provinces¹⁵ in Lao PDR are reported to have UXO contamination and fifteen to have contamination by cluster munition remnants contamination, with nine heavily contaminated: Attapeu, Champasak, Huaphanh, Khammouan, Luangprabang, Salavan, Savannakhet, Xekong, and Xiengkhuang.¹⁶ The heaviest contamination is found in Xiengkhuang province and along the former Ho-Chi Minh trail to the east of the country along the border with Vietnam.¹⁷

Cluster munition remnants and unexploded ordnance have killed and injured at least 50,899 people in Lao PDR between 1964 and 2021.¹⁸ The annual number of casualties in Lao PDR has decreased substantially from 304 casualties in 2008, to 99 in 2011.¹⁹ In 2022, the NRA recorded 13 accidents and 17 casualties (14 injured and 3 killed), and in 2020 and 2019 there were 33 and 26 casualties respectively.²⁰ In 2021, there was an unusual rise in accidents with 35 incidents recorded. Accidents with unexploded ordnance in Lao PDR are frequently caused by farming (cutting grasses and vegetation and digging land), by making fires to keep warm or for cooking, and by touching or playing with items. Most casualties are men and children, particularly boys. In 2022, casualties comprised 7 boys, 7 men and 3 women, and in 2021, of the 63 casualties, 23 were men, 22 boys, 11 women and 7 girls. In February 2021 an incident was reported in Vientiane province, in which a submunition killed two children and injured three others, all of whom were under the age of 10.²¹

2.2. Policy framework

The Lao PDR national level policy framework demonstrates the significance placed by the country on the clearance of UXO to enable the reduction of poverty, improvement in safety and wellbeing, and socio-economic development growth. Lao PDR is a State Party to the Convention on Cluster

¹³ US Congress, "US bombing records in Laos, 1964–1973, Congressional Record," 14 May 1975; [Lao PDR Convention on Cluster Munitions Article 7 Report](#) (for calendar year 2019), Form F, p. 4.

¹⁴ [Lao PDR Convention on Cluster Munitions Article 4 deadline Extension Request](#), Part B, detailed narrative, 26 February 2019, p. 5; and [Lao PDR Convention on Cluster Munitions Article 7 Report](#) (for calendar year 2019), Form F, p. 7.

¹⁵ Officially 17 provinces and one prefecture, Vientiane capital.

¹⁶ [Lao PDR Convention on Cluster Munitions Article 4 deadline Extension Request](#), Part B, detailed narrative, 26 February 2019, p. 1.

¹⁷ [Lao PDR Convention on Cluster Munitions Article 7 Report](#) (for calendar year 2019), Form F; Lao PDR [Convention on Cluster Munitions Article 4 deadline Extension Request](#), 26 February 2019.

¹⁸ Landmine and Cluster Munition Monitor, [Country Profile: Impact: Lao PDR](#), last updated 2 December 2020.

¹⁹ NRA, "[IMSMA Dashboard](#)," accessed 15 December 2022; and Landmine and Cluster Munition Monitor, [Country Profile: Impact: Lao PDR](#), last updated 2 December 2020.

²⁰ NRA, "[IMSMA Dashboard](#)," undated.

²¹ Legacies of War email update, "Children and Bombs: Horrific story from Laos," 24 February 2021; and NRA, "[IMSMA dashboard](#)," accessed 15 December 2022 and 11 January 2023.

Munitions with a current commitment to destroy all cluster munition remnants in areas under its jurisdiction and control no later than 31 July 2025.²²

2.2.1. SDG 18

In 2016, Lao PDR put in place an 18th Sustainable Development Goal, “Lives Safe from UXO,” with targets to reduce accidents and casualties, to clear land with high contamination and in poor villages, and to support the needs of UXO survivors.²³ The current indicators and targets for this SDG 18 are as follows:²⁴

Targets	Indicators	Links to other SDGs
18.1 By 2030, ensure that annual casualties from UXO accidents are eliminated to the extent possible	18.1.1 Number of reported UXO casualties disaggregated by age group 18.2.2 Percentage of population in contaminated villages (disaggregated by age group, sex and persons with disabilities)	SDG 3: Health and well-being SDG 10: Reduced inequalities SDG 11: Sustainable cities and communities
18.2 By 2030, ensure that residual UXO activities undertaken and all known UXO contamination in high priority areas and all villages defined as ‘poor’ cleared	18.2.1 Percentage of high priority hazardous areas remaining to be cleared (disaggregated by high priority villages) 18.2.2 Number of villages defined as ‘poor’ with confirmed hazardous areas remaining to be cleared	SDG 1: No poverty SDG 2: Zero hunger SDG 4: Education SDG 11: Sustainable cities and communities
18.3 ²⁵ By 2030, ensure that all identified UXO survivors and victims have their needs met in health, and support provided for livelihoods/employment to the most poverty-risk survivors	18.3.1 Proportion of active age UXO survivors unable to earn sufficient income with access to basic income security 18.3.2 Percentage of UXO survivors and victims’ mainstreamed into health, education, and employment services	SDG 3: Health and well-being SDG 5: Gender equality SDG 8: Decent work and economic growth SDG 10: Reduced inequalities

2.2.2. National Socio-Economic Development Plan, 2021-2025

The ninth National Socio-Economic Development Plan for 2021-2025, approved by the Minister for Planning and Investment in March 2021, includes five-year targets and indicators for clearance and survey under the overall outcome 3 of the plan, Enhanced Wellbeing of People.²⁶ The plan notes that UXO contamination is a priority issue with important implications for poverty alleviation, land use for agricultural production, habitation, tourism, or access to natural resources, posing a major challenge to socio-economic development and a threat to human lives. It notes that despite the

²² See, “[Convention on Cluster Munitions: Country Profiles Laos](#),” 18 August 2022.

²³ NRA, “UXO Sector Annual Report 2021,” 2022.

²⁴ Extracted from Rebecca Roberts and Kiengkay Oumany, “Moving towards achieving SDG 18: Removing the UXO obstacle to development in Lao PDR,” UNDP, 13 September 2021.

²⁵ Survivors refers to people who have been injured in an explosive ordnance accident. Victims refers to the relatives of those who were killed and, as a consequence, require support.

²⁶ Lao PDR, “[Ninth Five-Year National Socio-Economic Development Plan](#) (2021-2025),” Vientiane, March 2021.

progress in clearing UXO from agricultural land, construction land and other development project areas, the areas cleared of UXO so far are not sufficient to meet the needs.²⁷

The plan includes the following five-year targets and indicators for clearance and survey:

- To conduct non-technical surveys to identify confirmed hazardous areas (CHA) in 2,776 villages, and technical survey to identify CHA on 250,000 hectares, an average of 50,000 hectares per year.
- To clear UXO on 50,000 hectares of agricultural land, community areas and economic centres, an average of 10,000 hectares per year.

Targets for risk education and victim assistance are also included in the plan.

The clearance target, to clear an average of 10,000 hectares (100km²) per year of land for socio-economic development purposes will require more capacity and improved efficiencies directed to clearance. Over the last five years, from 2017 – 2021, Lao PDR has cleared a total of 280.41km², an average of around 56km² per year.²⁸ In 2021, Lao PDR reported clearing 45.57km².²⁹

2.2.3. The Safe Path Forward III, 2021-2030

The new national UXO Sector Strategy, The Safe Path Forward III, 2021-2030, was developed under the leadership of the NRA.³⁰ It is the third sector strategy, following on from the Safe Path Forward II, 2011-2020, and the Safe Path Forward I, 2003-2010. UNDP supported the development of the strategy and the process included consultation with the key stakeholders, including the international mine action operators. A draft of the Safe Path Forward III was completed in June 2022 and has been approved by the government. An English translation is being finalized.

The draft Safe Path Forward III details the objectives of the government and its development partners with the aim to reduce the humanitarian and socio-economic threats posed by UXO. It is designed to contribute to the implementation of the CCM, the SDGs 2030, and the 9th NSEDP. A key focus of the new plan is the need to ensure strong integration with development mechanisms, particularly at a provincial level, and to ensure actions are focused on community level priorities for the facilitation of development.³¹ The overall vision combines the desire for a safer environment for Lao people and the acceleration of the socio-economic development of the country. The four goals and accompanying targets relate to risk education, clearance, victim assistance and management of the UXO sector. The targets are to:

- Reduce the number of UXO casualties to less than 380 people over 10 years (averaging less than 38 casualties per year)
- To undertake survey to identify 250,000 hectares of CHAs
- To conduct clearance of UXO from 100,000 hectares of land for agricultural and development purposes
- To support 11,400 UXO victims including livelihood development for better integration into society; and

²⁷ Lao PDR, “[Ninth Five-Year National Socio-Economic Development Plan](#) (2021-2025),” Vientiane, March 2021, p.79.

²⁸ See Lao PDR Convention on Cluster Munitions Article 7 reports (for calendar year 2018-2022).

²⁹ [Lao PDR Convention on Cluster Munitions Article 7 Report](#) (for calendar year 2021), Form F, p. 13.

³⁰ UNDP, “Background paper for UXO donor and media field visit,” 31 March– 2 April 2021.

³¹ Terms of Reference, UNDP Impact Assessment for UNDP’s UXO Clearance Support, 2022.

- To integrate UXO activities into relevant sector plans.³²

2.3. Survey and clearance

The full extent of contamination in Lao PDR is unknown, although since 2015 UXO operators have been undertaking the Cluster Munitions Remnants Survey (CMRS) which is intended to produce an evidence-based assessment of the extent of contamination in provinces where the survey is being undertaken. It is currently being conducted in six provinces funded by the US and limited survey is ongoing in another five provinces. As of the end of December 2021, 152,300 hectares (1,523km²) of confirmed hazardous area (CHA) had been identified through survey.³³

The survey will form the basis for clearance operations going forward, with most clearance to be conducted in CHA where there is evidence of contamination.³⁴ Since 2021, operators have been increasing their clearance capacity and reducing their survey capacity. In 2021, there were 57 technical survey teams and 147 clearance teams funded by the US. By 2024, it is planned that there will be 36 technical survey teams and 205 clearance teams.³⁵ According to the UXO Sector Strategy, The Safe Path Forward III, 2021 – 2030, the NRA has set clearance targets of an average of 10,000 hectares (100km²) per year of land for socio-economic development.³⁶

However, there is currently no national policy or standard in place for determining national clearance priorities. Current prioritisation guidance is quite general and prioritisation decisions are decentralised, with operators implementing their own approach, often with some input from provincial and district authorities.³⁷ Clearance within identified CHA should result in more munitions being cleared per hectare, improving output efficiency, but prioritisation also needs to be based on an improved understanding of the impact of clearance so that the development outcomes of clearance can also be strengthened. The development of a prioritisation system as part of national planning is included as an action under Strategic Objective 2 in the new UXO Sector Strategy, the Safe Path Forward III. Tetra tech and UNDP are supporting the NRA to develop a nationwide prioritisation system.

According to the NRA IMSMA dashboard, from 1997 until the end of 2022, a total of 772.70km² (77,270 hectares) has been cleared across 15 provinces and Vientiane capital, of which 603.43km² (60,343 hectares, 78%) was for agricultural land and 169.27km² (16,927 hectares, 22%) was land for development. At least 874,058 UXO have been cleared and destroyed, of which 591,326 were cluster munition remnants, 1,196 were mines, 867 were bombs, and 280,669 were other ERW. A total of 5,123,174 people were reported to be the beneficiaries of the clearance.³⁸ The clearance of agricultural land is a top priority, as is the clearance of educational, community and government

³² NRA, “National Strategic Plan for the UXO Sector in the Lao PDR 2021-2030, ‘The Safe Path Forward III’,” Vientiane Capital, June 2022, unofficial translation.

³³ [Lao PDR Convention on Cluster Munitions Article 7 Report](#) (for calendar year 2021), Form F, p. 6; Lao PDR Convention on Conventional Weapons (CCW) Protocol V Article 10 Report (for calendar year 2021), Form A.

³⁴ The NRA can approve exceptions to this where the clearance is being paid for by a client or full clearance of land is required for development projects.

³⁵ Chart showing consolidated figures of US-funded Technical Survey and Area Clearance Teams of UXO Lao, HALO, MAG and NPA, 20 October 2022.

³⁶ Lao PDR, “Ninth Five-Year National Socio-Economic Development Plan (2021-2025),” Vientiane, March 2021, p.79.

³⁷ Katherine Sweet, “Prioritisation policy, procedures and practices relating to UXO clearance in Lao PDR,” NRA and GICHD, September 2017.

³⁸ NRA, “[IMSMA dashboard](#),” accessed 19 October 2022.

facilities, public infrastructure, and tourism sites.³⁹ However, the figures show that far more land is cleared for agriculture than for other development purposes.

³⁹ NRA, “National Strategic Plan for the UXO Sector in the Lao PDR 2021-2030: The Safe Path Forward III,” Vientiane, June 2022, draft English translation.

3. Approach and Methodology

3.1. Assessment methodology

The Impact study applied a mixed-methods approach drawing on qualitative methods, specifically Key Informant Interviews (KII), Semi-Structured Interviews (SSI) and Focus Group Discussion (FGD), supplemented by the collection of available quantitative data through secondary data from the desk review, the NRA IMSMA database, and provincial and district level data. The research tools are presented in Annex 5.

These research methods were intended to collect “rich” data, to allow a deeper and more nuanced understanding of the impacts of UXO contamination and UXO clearance and survey on households and communities in the provinces of Bolikhamxai and Xiengkhuang. The qualitative and participatory research tools encouraged discussion and dialogue with the participants about issues. Supplementary questions enabled the researchers to probe and deepen conversations about changes observed by the respondents and the reasons behind them.

The field research commenced with key informant interviews with national authorities, HMA operators and development stakeholders at a national level in Vientiane Capital to discuss impact assessment and prioritisation mechanisms for clearance and survey.

Time was spent with the Information Management unit at the NRA to select the districts and villages for the field research and to obtain documentation on survey, clearance, and roving task activities in each of the villages selected. The NRA Information Management unit compiled the available clearance and survey documentation for each village visited.

At provincial and district level, key informant interviews were held with the relevant government officials and departments to understand the process for planning for development (public investment projects), and how UXO survey and clearance were integrated into the planning processes.

At village level, interviews were held with villagers who were living with contamination, villagers whose household agricultural land had been surveyed, and villagers whose household agricultural land had been cleared. Survey and clearance of community assets and development projects were explored through Focus Group Discussions.

Where possible, quantitative data was collected to supplement the qualitative analysis. This included information about the extent of survey and clearance, beneficiary numbers, accidents and casualties, and data available on village and household poverty.

The data collected was triangulated to provide a strong evidence base for the study findings and conclusion. The Sustainable Livelihoods Framework was used as the main framework for analysis.

A meeting to present the initial findings and recommendations was held at the NRA on 25th November 2022 with representatives from UNDP, the NRA and UXO Lao present. This provided an opportunity to discuss the findings and emerging recommendations, and some of the points raised at this meeting have been taken on board and included within this final report.

3.2. District and village selection

The study was undertaken in two of the provinces where UNDP has supported survey and clearance – Bolikhamxai in areas where Unit 58 of the Lao Army has undertaken survey and clearance with KOICA funding, and in Xiengkhuang in areas where UXO Lao has been operating

with New Zealand funding. Districts were selected based on an analysis of clearance and survey tasks.

In Bolikhamxai, the Lao Army Humanitarian Demining Unit, Unit 58, has been operational since 2017 in two districts, Khamkeuth and Viengthong. In Khamkeuth district, Unit 58 has conducted both survey and clearance and worked on 21 tasks in 11 villages with KOICA funding.⁴⁰ Both agricultural and development tasks had been cleared. Unit 58 had conducted no clearance in Viengthong district at the time of the study.

District	# of villages	# of tasks	Agriculture (m ²)	Development (m ²)	Total (m ²)
Khamkeuth	11	21	477,341	61,884	539,225
Viengthong	0	0	0	0	0

Twenty-seven CHA tasks had also been identified by Army 58 in Khamkeuth as shown in the table below. In Viengthong district, three CHA tasks had been identified, but no clearance had been undertaken by Unit 58.⁴¹

District	# of villages	CHA tasks	CHA (m ²)	Clearance (m ²)
Khamkeuth	18	27	1,525,313	438,523
Viengthong	2	3	67,224	0

Khamkeuth district was selected for the study as it offered greater scope in terms of the selection of villages and potential respondents, the ability to look at survey and clearance tasks including those funded by KOICA, and at tasks cleared for both agriculture and development land.

In Xiengkhuang, survey and clearance are conducted by UXO Lao and by MAG. The NRA IMSMA database has data for UXO Lao clearance in Xiengkhuang from 1999 to 2022, covering seven districts.⁴² UXO Lao activities in Xiengkhuang have been funded by New Zealand since 2014 in four districts – Kham, Mokmai, Pek and Phoukout. The UXO Lao clearance activities recorded under New Zealand funding up to November 2022 were as follows:

District	# of villages	# of tasks	Agriculture (m ²)	Development (m ²)	Total (m ²)
Pek	50	361	14,210,691	301,395	14,512,086
Kham	31	133	4,718,746	57,449	4,776,195
Phoukout	15	219	9,437,080	62,564	9,499,644
Mokmai	9	12	8,672	23,946	32,618

⁴⁰ In total, since 2017 Unit 58 has worked on 31 tasks in 12 villages, funded by KOICA and the Ministry of Defence.

⁴¹ NRA, "IMSMA dashboard," accessed 19 October 2022 and 11 January 2023; NRA, "[CHA dashboard](#)," accessed 19 October 2022.

⁴² The districts of Kham, Khoun, Mokmai, Nonghed, Pek, Phaxai and Phoukout.

In addition, as of October 2022, the following CHA tasks had been identified by UXO Lao in the four districts as follows: ⁴³

District	# of villages	CHA tasks	CHA (m ²)	Clearance (m ²)
Pek	66	307	52,069,815	20,124,771
Kham	36	129	20,897,198	6,456,169
Phoukout	26	166	25,748,178	12,502,761
Mokmai	2	3	258,813	0

Pek district offered the most scope in terms of the number of villages where UXO Lao had worked, the number of clearance tasks completed for both agriculture and development, and the number of CHA identified. Kham was selected as the second district as it had the second largest number of villages with clearance and CHA tasks after Pek, and also had a good mix of clearance for both agriculture and development tasks. It was also noted that Pek and Kham district had the most recorded casualties of the four districts since 2008, with 129 UXO casualties reported in Pek and 61 in Kham.

Once the initial selection of districts was made based on the analysis of IMSMA data, the consultants were able to check the suitability of the district selection in a meeting with the NRA Director General and the Clearance Officer.

The villages for the study were selected with the support of the NRA Information Management Unit using purposive (judgement) sampling, in that they were selected based on certain characteristics the consultants felt would be interesting for the study of impact and that will allow different village situations to be compared.⁴⁴

Firstly, the villages were selected based on evidence that survey or clearance had been undertaken by Unit 58 (supported by KOICA) or UXO Lao (supported by New Zealand), or that they were in the plan for survey and clearance by these operators in coming years. Where clearance had been undertaken, villages with a high number of tasks (both agriculture and development) were selected to ensure that there would be enough people to interview, and to allow comparison of tasks cleared for agriculture use as compared to tasks cleared for development use.

Where possible the clearance tasks chosen were ones that had occurred up to three to four years previously, which would allow time for some longer-term impacts and changes to be observed. However, this was not always possible, and some tasks were cleared one to two years previously.

Evidence of high contamination also guided choice of villages (based on NRA maps with bombing data) as it was felt that these villages would potentially demonstrate more change post-clearance and survey, than in villages with medium to low contamination.

⁴³ NRA, "CHA dashboard," accessed 19 October 2022.

⁴⁴ The consultants identified the criteria for village selection, and the NRA Information Management Unit supported the team to identify villages meeting the criteria on the IMSMA database. The Information Management Unit also supplied information on clearance tasks in each of the selected villages.

Village demographics and geography were considered as much as possible with the data available prior to the field work – mainly location and village size. Data on ethnicity and main productive activities could only be collected from the village itself once the village selection had been made.

It was intended to select two or three villages in known Focal Development Areas (FDAs), which were stated as a priority for UXO clearance in the Lao PDR UXO multi-year workplan, approved 2016.⁴⁵ However, there were few FDAs identified in the districts selected for study. Only Ban Thongsaen in Khamkeuth district in Bolikhamxai province is a designated FDA. However, several of the other villages were “cluster” villages, where more than one village was combined as one village administrative unit. Ban Thongsaen will also be part of the five-year KOICA project which will link UXO action to rural development and which is being implemented in cooperation with the Ministry of Agriculture and Forestry and the NRA and UXO sector.

Initially, it had been hoped to target one village where no clearance or survey had taken place, but where UXO contamination was present and there were plans for survey and clearance;⁴⁶ one village with survey; and two villages where clearance had taken place (for agricultural land and/or for development land), with clearance having taken place up to three to four years previously. However, most UXO contaminated villages in both Bolikhamxai and Xiengkhuang have been the beneficiaries of some form of HMA activities over time (although sometimes by different operators). In villages with contamination awaiting survey, and in villages where survey had taken place, there were often reports of prior clearance having taken place on different tasks in the village. Roving tasks had also been conducted (often initiating the survey process), and so the immediate contamination of concern to villagers had frequently been removed. This did create some challenges in discussing the impact of contamination, but it also raised some interesting questions about villager understanding of the processes of survey and clearance, which will be explored more in the main findings of this report.

To gain an understanding of the impact of contamination prior to clearance, the team interviewed households who had not had their agricultural land cleared to establish how contamination impacted their lives. In addition, respondents from households whose land had been cleared were also asked to recall the situation prior to clearance, which enabled some comparison and discussion about the changes. The timeline exercise used in the focus group discussions also enabled a discussion on changes in a village over time, which helped to highlight the challenges caused by UXO and how clearance helped to facilitate development and livelihood improvement over time.

In selecting the villages, not all the data required was available and the time to select the villages was shortened by the requirement of the NRA to notify provincial and district authorities in advance of which villages would be visited. A more thorough cross-checking of information may have been beneficial, and the consultants had to do some of this cross-checking in the field. In Xiengkhuang, the team was unable to reach one village, Ban Houayphat, due to the road condition. Another village, Ban Hin, was visited as a substitute.

In Bolikhamxai, the study was undertaken in Khamkeuth district in the following four villages:

⁴⁵ Kathryn Sweet, “Prioritisation Policy, Procedures and Practices relating to UXO clearance in Lao PDR,” GICHD and NRA, September 2017; Lao PDR UXO Work Plan 2016-2020, NRA, Plan No.100, 1 March 2016, pp.12 and 18.

⁴⁶ By selecting villages where there is a plan for clearance to happen in the next three to four years, it will allow any changes post clearance to be captured as part of the UNDP mid-term evaluation in 2024 and final evaluation in 2026.

Village	Description
Ban Saen-Oudom	Survey planned by Unit 58 in 2023. Had clearance in 2012 and 2013 by SODI ⁴⁷ : 6 tasks of which 211,200m ² were cleared for agriculture and 4,662m ² for development. 1,230 beneficiaries and 205 CMR and 57 UXO cleared.
Ban Namphao	Four survey tasks identified CHA (total 111,881m ²) in 2020 and 2022. Surveyed by Unit 58 for cash crops and paddy fields. Between 2012 and 2014, four tasks were cleared by SODI and an unidentified operator, clearing 25,118m ² of agricultural land and 51,158m ² of development land. Benefited 3,429 people. 31 CMR and 1 UXO removed.
Ban Thongsaen	Clearance by Unit 58 with KOICA funds in 2020 and 2022 comprised two clearance tasks for agriculture land (99,087m ²) and one task for development (2,490m ²). 116 CMR and 390 UXO were removed, benefiting 2,221 people. Ban Thongsaen is a target village for the KOICA rural development project and is within a Focal Development Area.
Ban Phonphaeng	Clearance by Unit 58 with KOICA funds between 2017, 2019 and 2020. Four tasks completed comprising 117,342m ² of agricultural land and 6,887m ² for development. 44 CMR and 506 UXO were removed, benefiting 6,085 people. A previous task was completed by APOPO ⁴⁸ in 2014, clearing 7,187m ² for agriculture, benefiting 9 people. However, no CMR or UXO were reported cleared.

In Xiengkhuang province, the study was undertaken in two districts, Kham and Pek, and in four villages within each district.

In Kham district the choice of villages was as follows:

Village	Description
Ban Hin	Replacement for Ban Houayphat which could not be reached due to road conditions. Eleven tasks were cleared for agriculture (390,577m ²) between 2021 and 2022 with New Zealand funding. 339 CMR and 152 UXO were removed benefiting 208 people.
Ban Khangkhe	5 tasks surveyed in 2021 and 2022 by UXO Lao with New Zealand funding (total size of CHA, 2,092,859m ²). Had some previous clearance by UXO Lao in 2016 for agriculture (32,196m ²), with 23 people benefiting. 143 CMR and 1 UXO were reported cleared.
Ban Xang	4 tasks, cleared by UXO Lao with New Zealand funding. Three tasks were cleared in 2021, and 1 task in 2018. The tasks include both agriculture (90m ²) and development tasks (28,041m ²). However, no items were removed during the clearance. 473 people benefited from the clearance.

⁴⁷ SODI (Solidaritätsdienst International e.V. – Solidarity Service International) is a German organisation that undertook mine clearance in both Lao PDR and Vietnam. According to the NRA IMSMA database, SODI was operational in Bolikhamxai province from 2010 – 2014.

⁴⁸ APOPO (Anti-Persoonsmijnen Ontmijnende Product Ontwikkeling – Antipersonnel Mine Detection Product Development) is a Belgian and US registered NGO that trains mine detection rats and dogs. APOPO's work in Lao finished in 2014 pending further funding. See APOPO, "[What we do: Detecting Landmines and explosives: Where we work: Laos](#)," no date.

	In 2003, 2009 and 2011, UXO Lao cleared 3 agricultural tasks (44,209m ² in total), benefiting 373 people and removing 832 CMR and 295 UXO.
Ban Longpiw	15 agricultural tasks cleared (682,277m ²), with one task cleared in 2018, six in 2019, five in 2020 and three in 2021. 1,118 CMR and 471 UXO were cleared, with 493 beneficiaries. One task was undertaken in 2017 (103,467m ² agricultural land, for 68 beneficiaries), with the operator not defined. 210 CMR and 105 UXO removed. JMAS undertook 3 tasks for agricultural land (70,590m ²) in 2020, benefiting 114 people. 32 CMR and 23 UXO were cleared.

In Pek district, the choice of villages was as follows:

Village	Description
Ban Gnotpiang	A priority village for UXO Lao to survey in 2023. In 2019 and 2021, clearance of 26 tasks for agricultural land was undertaken by UXO Lao with New Zealand funding. 276,214m ² cleared for agriculture, benefiting 344 people. 555 CMR and 67 UXO cleared.
Ban Napheung	4 tasks surveyed by UXO Lao with New Zealand funding in 2021. In 2022, 2 tasks for agricultural land were cleared (52,147m ²), benefiting 36 people. 109 CMR destroyed and 6 UXO. Between 2009 and 2017, 20 tasks were cleared by UXO Lao (274,757m ² agriculture land and 36,020m ² development land, benefiting 410 beneficiaries). 888 CMR and 327 UXO cleared.
Ban Latbouak	22 tasks cleared for development and agriculture between 2018 and 2022 by UXO Lao with New Zealand funding. 733,562m ² cleared for agriculture, and 12,070m ² for development, benefiting 797 beneficiaries. 988 CMR and 435 UXO cleared. Between 2008-2016, UXO Lao cleared 14 tasks, 323,714m ² for agriculture and 8,216m ² for development, benefiting 366 people. 1 bomb, 294 CMR and 236 other UXO cleared.
Ban Na'O	12 tasks for agriculture and development cleared between 2016, 2018, 2020, and 2022 by UXO Lao with New Zealand funding. 443,747m ² for agriculture, 151,564m ² for development, benefiting 4,546 people. 974 CMR and 376 UXO cleared. In 2004, 2007 and 2010, MAG cleared 9 tasks (21,217m ² agriculture and 24,373m ² development), benefiting 62 people. 57 CMR and 105 UXO cleared. Between 2008-2018, UXO Lao also cleared 22 tasks (620,367m ² agriculture and 263,188m ² development) benefiting 484,521 beneficiaries. 895 CMR, 1 mine, and 355 UXO were cleared.

3.3. Key Informant Interviews

Key informant interviews (KIIs) are individual interviews conducted with persons particularly knowledgeable and reliable sources on specific topics. Interview guides were developed for these interviews, including around ten to twenty open-ended questions. The interviews took around 45-60 minutes.

3.3.1. National level stakeholders

KIIs were conducted with HMA operators and other relevant stakeholders at national level in Vientiane Capital. Question areas covered survey, clearance, prioritisation, and impact assessment in line with the national and UXO sector strategies and development frameworks. An interview was

also conducted via Zoom with representatives from LuxDev prior to the fieldwork to explore their experience of UXO clearance for development activities. Email questions were sent to KOICA at their request, but a response had not been received at the time of writing this report. The full list of national level stakeholders consulted can be found in Annex 4.

3.3.2. Provincial and District stakeholders

In Bolikhamxai and Xiengkhuang, Key Informant Interviews were conducted with provincial and district authorities with the aim to get an understanding of the development priorities of their sector, progress over the last five years, and plans going forward. The interviews explored how UXO contamination impacted implementation of plans, and how UXO clearance was considered during planning processes. The interviews enabled the team to collect some provincial and district level data related to poverty, development, agriculture, infrastructure, and others.

A meeting was held with UXO Lao in Xiengkhuang province to discuss prioritisation, survey and clearance, and post clearance assessment and impact. UXO Lao provided information regarding the households with land surveyed and cleared in the target villages which assisted greatly with identifying village level informants. The consultants also met with a technical advisor from Quality Solutions International (QSI), which provides support to UXO Lao.

The NRA and its' provincial offices supported setting up interviews with the district and provincial authorities. The list of provincial and district authorities consulted can be found in Annex 4.

3.4. Community-level data collection

3.4.1. Semi-structured Interviews (SSI)

Question guides for the SSI were drawn up thematically, with primary question areas and sub-questions that were used to probe and provide a conversational approach. The questions were open-ended to allow respondents to elaborate and to discuss issues important to them.

The SSI were conducted at community level with a range of different community members, including village leaders, to understand if and how UXO contamination, clearance and survey had impacted their lives and livelihoods, including food security, changes in household assets, increases in income generation opportunities, agricultural productivity, and access to public services.

The selection of interviewees at village level was conducted in consultation with the PRA and DRA, and with reference to the clearance and survey data obtained from the NRA. In Xiengkhuang province, UXO Lao also provided information on the households with land that had been surveyed and cleared, and these beneficiary lists were used as the starting point for identifying interviewees. As much as possible, the consultants tried to interview a broad demographic range of people, ensuring that gender, ethnicity, and disability were all considered. However, frequently the interviewees were men as they were perceived to have more information regarding the UXO contamination and/or had attended meetings. People with disabilities were not directly interviewed, although household members were interviewed in Ban Xang in Kham district, Xiengkhuang province.

It was anticipated that a maximum of five SSI would be conducted in each village, although the number of interviews varied depending on the size of the village and the time and availability of respondents. In a few villages, the opportunity to interview respondents was limited due to their unavailability. In two cases – Ban Napheung and Ban Gnotpiang, focus groups discussions (FGDs)

were conducted as an alternative to SSI.⁴⁹ In Ban Napheung, one focus group comprised people whose land had been surveyed, and in Ban Gnotpiang, one focus group was held for male beneficiaries of clearance, and one for women. In total, 48 SSI were conducted, 21 in Bolikhamxai province and 27 in Xiengkhuang province, as shown in the table below.

Village	Interviewees (SSI)	Total
Bolikhamxai, Khamkeuth district		
Ban Saen-Oudom	Vice village chief (f); former village chief (m); villager (1x m)	3
Ban Namphao	Village chief (m); deputy village chief (f); villagers (4 x m)	6
Ban Phonphaeng	Village chief (m); villagers (3 x f, 2 x m)	6
Ban Thongsan	Village chief (m); deputy village chief (m); villagers (4 x m)	6
Xiengkhuang, Pek district		
Ban Gnotpiang	Village chief (m); deputy village chief (m) and FGD	2
Ban Napheung	Village chief (m); deputy village chief (m) and FGD	2
Ban Na'O	Villager (1 x m)	1
Ban Latbouak	Village chief (m); villagers (2 x f, 1 x m)	4
Xiengkhuang, Kham district		
Ban Hin	(FGD only)	0
Ban Khangkhe	Village leader (m); villagers (5 x m)	6
Ban Xang	Village chief (m); deputy village chief (f); villagers (1 x m; 3 x f)	6
Ban Longpiw	Village chief (m); villagers (3 x f, 2 x m)	6
Total SSI		48

3.4.2. Focus Group Discussions (FGD) and Timelines

The FGD were conducted in villages where clearance had taken place: Ban Thongsan in Bolikhamxai, and in Ban Long Piw, Ban Hin, Ban Latbouak, and Ban Na'O in Xiengkhuang. It was planned to conduct a second FGD in Ban Phonphaeng in Bolikhamxai province, but this was not possible due to a village wedding.

The FGD were centred around the development of a timeline, which was used to explore the changes, both positive and negative, that had occurred in the villages over an identified timeframe, agreed by the FGD participants. The changes discussed by the group included changes to infrastructure, education, health, agriculture, and access to other services such as electricity and water. Once the changes were mapped on the timeline, the participants were asked if and how UXO contamination had affected progress, and if and how UXO clearance had contributed to the changes. In this way, the FGDs enabled a mapping of the village over a period of several years or decades and highlighted where UXO clearance had supported development and change.

⁴⁹ These FGD were held in addition to the planned FGD with key village people in villages with clearance, which is discussed in the next section.



Timeline mapping in Ban Long Piw, Kham district, Xiengkhuang province

The FGDs comprised mixed groups of around six to seven people per village, all identified as key people in the village who had some knowledge of village history and decision-making. This included village chiefs and their deputies, elders, members of farmers groups, the Lao Women's Union, the Lao Youth Union, and other relevant groups. The benefit of the group discussion is that the group members provide mutual support and a means of verifying and analysing the information as the discussion progresses. The consultants asked follow-up questions to probe and deepen conversation, and concluding questions were asked about future plans.

The FGDs were an opportunity to explore the causal mechanisms of impact through HMA programming and help to elicit stories of significant change from the community. What was interesting about the timelines was that UXO contamination and UXO clearance were often not raised by participants as contextual factors inhibiting or, conversely, facilitating change, but once introduced as a topic, the discussions did demonstrate how clearance had helped to progress changes in the village, above and beyond making people feel safer.

The FGD sessions were intended to run for an average of one hour to a maximum of 90 minutes to prevent participant fatigue, however on a few occasions the FGDs took longer, often due to the enthusiasm of the participants to recall the changes and when they happened.

3.4.3. Photographic documentation

Some photographs were taken in the field to add context to the study. This included photographs of agricultural land and community development land that had been cleared. Permissions for photography were obtained from the participants and people were not photographed. Some of the photographs from the field work are included within this report to help record evidence of change and impact at community level.

3.4.4. Gender and diversity

As much as possible, the consultants tried to ensure that a range of people, of different ages, gender, and ethnicity, were interviewed in the villages and participated in the FGD. However, it is acknowledged that fewer women participated in the study than we would have liked. Key people in the village were predominantly men, with the exception of some vice-chiefs and members of the Lao Women's Union. The set-up of interviews was assisted by the PRA and DRA staff, all men, and often resulted in male interviewees who were deemed to know more about the UXO issue. However, with perseverance we were able to identify more women to interview, and an all-women FGD was also held in Ban Gnotpiang in Pek district.

The villages selected for the study had populations that covered three of the main ethnic-linguistic groups in Lao: Lao-Tai, Mon-Khmer and Homon-lumien.⁵⁰ Lao, Yang, Tai, Moy, Khmou, and Hmong people were among the interviewees.

3.4.5. Translation and interpretation

The research tools were translated into the Lao language by the Lao consultant, and all interviews were conducted in Lao with translation to English. Despite interviewing people of different

⁵⁰ See, Open Development Laos, "[Ethno-Linguistic Groups in Lao PDR](#)," updated 22 March 2019.

ethnicity, the interviews were conducted without need for translation to the different ethnic languages. Interview notes were written up in English at the end of each day.

3.5. Research Protocol and ethics

The principles of Do No Harm were adhered to during the research, ensuring as much as possible that the research and actions taken to complete the work would not cause unintended harm to the local communities and authorities, the NGOs, UNDP, and the NRA.

- Before the interviews or FGD are conducted, the participant's informed consent was asked for. Interviews and focus group discussions only went ahead if the participants agreed to take part. Bearing in mind the potential loss of time in livelihood or household activities, the consultants sought to arrange interviews and focus group discussions in advance and at times that suited the participants. In some cases, FGDs were held in lieu of individual interviews, as this suited the participants better. The participants were informed of the approximate length of the interview prior to starting and were told that they could stop the interview at any time they wished.
- The village chief (Nai Ban), or his/her deputy, was met with before interviews were conducted so that the purpose of the research could be presented, and consent obtained. The meetings and appropriate permissions were secured with assistance and guidance from the Provincial and District Regulatory Authority staff.
- It was made clear that remuneration was not offered for participation. The consultants followed UNDP protocol and guidance on remuneration.
- Confidentiality of the participants names in relation to the data presented are protected in this report so that they are not traceable back to its source.
- People were not photographed as part of the research, and permissions for photography (of development outcomes, villages, infrastructure etc) was obtained from the relevant authorities or stakeholders.
- No children under 18 were interviewed.

3.6. Analysis Framework

The indicators of the SDG 18, the Ninth NSEDP, and the Safe Path Forward III are high-level indicators, and it was recognized that the study would not be able to measure progress towards these indicators, although some indication may be provided of contribution. The consultants therefore decided to use the Sustainable Livelihoods Framework (SLF) as the analysis framework for assessing household and community impact. The SLF recognizes that household livelihoods are complex and intertwined, and that the wider context may also impact on livelihood outcomes.⁵¹

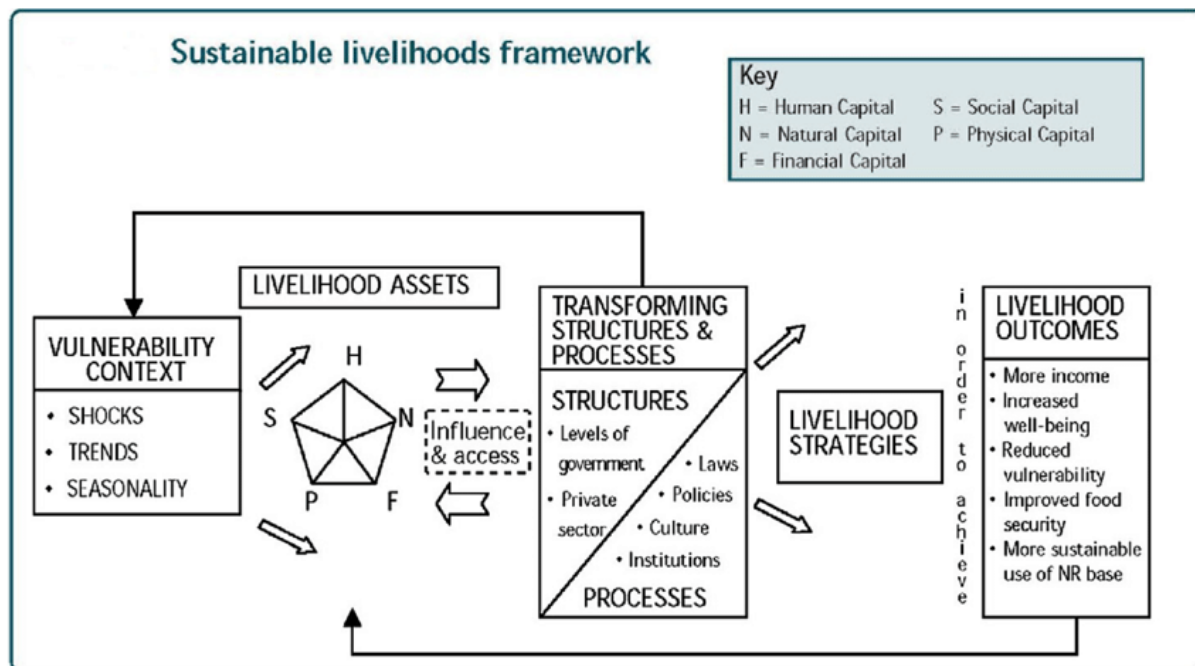
The SLF approach is based on the understanding that people, particularly the poor whose access to any given asset tends to be limited, require a range of assets to achieve positive livelihood outcomes. In other words, people undertake a complex range of different livelihood strategies in order to maximise their income, to overcome consumption shortfalls and to minimise risk. The framework centres on five capital assets on which the poor will build their livelihood strategies:

- Human assets, including the quantity and quality of human labour available. Includes health, food security, access to education, skills, etc.
- Social assets, focusing on the ability to increase social networks, fulfil social and cultural obligations and gather information.

⁵¹ GICHD, "Sourcebook on Socio-Economic Impact Survey," GICHD, December 2011.

- Financial assets, including the ability to purchase basic goods and services and to save small amounts.
- Physical assets, including access to basic infrastructure such as schools, clinics, markets, wells and roads, tools, and equipment
- Natural assets, including access to forest, farmland, and water resources and any including environmental impacts.

The framework considers the effect of vulnerability on household livelihoods, for example the impact of livelihood shocks, such as natural disasters, conflict, or sickness; seasonality, which can affect market prices, health, employment, and agricultural opportunities; and trends, including population or economic trends and market prices. The access that households may have to the five capitals on which they base their livelihood strategies may in turn be restricted or enhanced by the structures, organisations and processes, laws and policies of society and the degree to which these processes are enforced. This illustrates how access to the assets that contribute to household livelihoods can be impacted positively or negatively by external factors. If a household has a strong and wide range of assets, they can choose from a wider range of livelihood strategies and are better able to withstand negative external impacts. Households with fewer assets tend to be more vulnerable to shocks.⁵²



Source: UK Department for International Development (DFID), "[Sustainable Livelihoods Guidance Sheets: 1.1: Overview](#)," April 1999.

The consultants analysed the qualitative data collected during the study using the following broad set of indicators developed by the consultants with reference to the descriptors of the five capitals

⁵² See: DFID, (2001), "Sustainable Livelihoods Guidance Sheets," London, DFID; Collinson, S. (2003) "Power, livelihoods and conflict: case studies in political economy analysis for humanitarian action," HPG Report 13, ODI; and Levine, Simon, (2014), "How to Study Livelihoods: Bringing a Sustainable Livelihoods Framework to Life," ODI Working Paper 22.

of the SLF and drawing on relevant areas of enquiry raised by the literature review and during the interviews with mine action stakeholders in Vientiane.⁵³ It should be noted that these indicators are not measurable in terms of numbers, but rather are intended to provide an indication of progress (or lack of progress) under each of the assets. The extent to which data was collected on each of these indicators depended on the information provided by respondents during the field research, and data available at district and village level.

Livelihood Framework Assets	Indicators
Human	<ul style="list-style-type: none"> • Safety of livelihood activities/reduction in risk taking activities • Children attending school • Ability to seek health services
Social	<ul style="list-style-type: none"> • Access to information from local authorities, traders, others (including clearance operators) • Ability/time to visit friends and family, attend ceremonies etc • Involvement in meetings and community decision making
Financial	<ul style="list-style-type: none"> • Increase and/or change in household income • Investment in tools, machinery, livestock etc • Ability to save
Natural	<ul style="list-style-type: none"> • Access to land and resources • Ability to farm (type of crops, use of machinery etc) / or changes in livelihood activities • Changes in environment (positive or negative)
Physical	<ul style="list-style-type: none"> • Access to roads and community infrastructure • Changes in condition of house • Access to clean water, electricity, trade/markets
Vulnerability (shocks, seasonality, trends, etc)	<ul style="list-style-type: none"> • Ability to deal with household, livelihood or external shocks • Impact of seasons on livelihood stability
Enabling environment	<ul style="list-style-type: none"> • Support provided post-clearance (loans, provision of assets, training etc) • Information provided by clearance operators on survey and clearance process

⁵³ See DFID, "[Sustainable Livelihoods Guidance Sheets](#)," April 1999.

While it was recognized that the study would not be able to measure progress towards some of the high-level indicators within the government policies and strategies, it was found that the Poverty Reduction Graduation Criteria of the Lao government⁵⁴ corresponded to some extent with the SLF asset base and the indicators developed.

Criteria for graduation of families from poverty	Criteria for graduation of villages from poverty
<ul style="list-style-type: none"> • Have safe and strong housing • Have assets and equipment necessary for their livelihoods and income generation • Have labour, stable income, or employment • School age family members receive lower secondary school education • Have access to clean water and stable source of energy • Have access to primary public health services 	<ul style="list-style-type: none"> • Own or have access to primary or lower secondary school • Own or have access to a health centre or primary health care services • Own or have access to clean water source • Have roads that can be used all year round • Have access to communication and transportation services • Have access to market to buy/sell/exchange products • Have access to electricity from the national grid • Over 70% of the total families in the village have graduated from poverty

The analysis considered the following questions:

- Who has benefited from UXO clearance, and what benefits have accrued in terms of the 5 assets of the livelihood framework? What impact has this on household vulnerability and resilience?
- Who has not benefited from UXO clearance, and what are the factors contributing to a lack of positive impact?
- How do prioritisation mechanisms used to prioritise survey and clearance influence the overall impact of the mine action actions? Is there a difference noticeable between the methods of UXO Lao as compared to Unit 58?
- What is the role and contribution of UXO/mine action coordination mechanisms in influencing outcomes?
- What is the influence of demographics (gender, age, ethnicity, disability etc) and poverty levels on the achievement of successful outcomes?
- How much does UXO clearance impact land utilization relative to poverty levels?
- What are the external factors that have been observed that contribute to successful change, or conversely, negative or no change?
- What are the benefits of the clearance of agricultural land as compared to the clearance of community development land?
- Does the clearance of agricultural land make a difference in terms of the time needed for land preparation and the cultivation of crops? If not, what are the benefits to people of having their land cleared?

⁵⁴ Decree on the Criteria for Poverty Graduation Development, No. 348, Government of Lao, Vientiane Capital, 16 November 2017 (unofficial translation).

- What is the impact of land being surveyed but not cleared? Does the impact of having land surveyed differ from having contaminated land that has not been surveyed?
- What are the perceptions of local people and local authorities to the survey and clearance process? Are they consulted and informed?
- What are the perceptions of provincial and district departments regarding the contribution of UXO survey and clearance to their development plans and priorities?
- How do the impacts and changes observed and documented contribute to the goals laid out in the UXO Sector Strategy, the SDG 18, and the 9th NSEDP?

3.7. Study challenges and limitations

There were several challenges and limitations encountered in the undertaking of this assessment. Where possible, the team attempted to mitigate the challenges, although they remain relevant to the extent they impacted on the conduct and scope of the research as explained below.

- The timeframe for conducting the study was relatively short, and the study was conducted by two consultants. This had obvious limitations in terms of the amount of data that could be collected to inform the analysis and resulting recommendations. The scope of the study was restricted in terms of the number of villages visited and the number of people interviewed, which means that the study findings cannot be extrapolated to other districts or provinces in the way that larger survey findings could. However, the qualitative approach employed by the study allowed the consultants to explore the topics in more depth and to better understand the causal factors that maximise or minimise impact. The study findings have also been compared with the findings of previous post-clearance assessments conducted in Lao PDR, to compare the findings and draw out common themes.⁵⁵
- The design of the study as laid out in the TOR requires an understanding of the impact of UXO contamination (the baseline) for comparison to an analysis of the impact post-survey and clearance. This design therefore does not provide a pure baseline against which future studies can measure progress, although it does provide information on the situation before clearance and the situation after clearance in the villages visited. However, the qualitative data collected could help to inform the design of a quantitative baseline survey which could be conducted on a larger scale and repeated at regular intervals to capture change.
- There was limited quantitative data available to the consultants in terms of figures for poverty and wellbeing. Village-level data was also limited. This meant that the study has not been able to provide analysis of quantitative data in line with the qualitative data, except for the clearance and survey data that was available on IMSMA.
- The timeframe of the study, with the fieldwork being conducted within one month, made it challenging to understand changes that may occur over time. However, the timeline methodology employed during the Focus Group Discussions helped to gather information on changes over a historical time frame, and the contribution of clearance to these changes.
- In some villages there were challenges to find enough people to interview. This was for several reasons. In some cases, people were busy and unable to participate (it was harvest season in some areas, and in other areas there were other village meetings on or events such as weddings). In addition, in a few cases there was an apparent lack of knowledge about survey or clearance activities among the population (despite the team having the names of

⁵⁵ In particular: Jo Durham and Vong Nanthavong, "Post-UXO Clearance Impact Assessment in Lao PDR," September 2010; and Shiqi Guo, "The Legacy effect of unexploded bombs on educational attainment in Laos," *Journal of Development Economics*, Issue 147, November 2020.

households that had benefited from clearance), and so this made it difficult to identify people whose land had been surveyed, and in some cases cleared. The challenges of ensuring a good cross-section of interviewees in terms of gender have been discussed in section 3.4.4 above.

4. Findings

Understanding the impact of UXO clearance is challenging, because to be done well it requires a comprehensive understanding of the livelihoods of people living in contaminated areas and the complexities of how people maintain and adapt livelihoods. Ideally, longer-term, longitudinal research is required to capture the dynamics of change, the livelihood choices made, and the influence of the structures and processes that interact with and shape livelihoods and decision-making.⁵⁶ The time available for this research did not allow for a deep dive into the livelihoods of the people we met, but rather a rapid appraisal.

The Sustainable Livelihoods Framework and the five livelihood capitals – human, social, financial, natural, and physical - has been used to organise and present the findings, although it is acknowledged that livelihoods cannot be divided neatly into the five assets but are instead somewhat messy, complex, and interconnected. The information provided by the study respondents during interviews and focus group discussions is placed at the centre of the findings. The findings presented do not represent individual households, but rather an overview of a range of perspectives from household respondents and local authorities across the communities visited.

While the study aimed to look at the clearance and survey supported by UNDP – so specifically survey and clearance by UXO Lao in Xiengkhuang province funded by the New Zealand government, and by Unit 58 in Bolikhamxai province funded by KOICA – the findings also include examples of other survey and clearance conducted in the villages over time, as this helped to provide a more holistic picture of how UXO clearance has contributed to change and development within UXO affected communities. Where possible, it is noted which tasks were cleared with UNDP support.

4.1. Human

Under the human capital of the livelihood framework, we examined how people perceived and dealt with the risk of UXO prior to clearance, and their perception of the situation post clearance in terms of their own safety and ability to work or live on previously contaminated land. Changes to education and health care are also described under this section.

4.1.1. Living with UXO

The extent of UXO contamination in Lao PDR has meant that many people, particularly in the nine most contaminated provinces, have lived with UXO for many years. UXO, in many areas, have been ubiquitous, and people interviewed often reported that it felt normal (*“thommada”*) to live and conduct their livelihoods in areas which have contamination. This sense of normality is one of the things that makes it difficult to assess the impact of UXO clearance, as lives have very much carried on despite UXO contamination. As one respondent noted, “people learn to live with the threat, like snake bites.” Farmers interviewed often stated that they had “no choice”, and that if they didn’t cultivate their land, they would have nothing to eat.

In several of the villages visited, people talked about the situation of contamination in the past and the sheer number of UXO that littered the ground. Both men and women reported habitually moving UXO when they came across them in their fields. UXO were often removed to bamboo clumps, or to edges of fields. One man explained how he found four or five bombies⁵⁷ in his field in 2010 and carried them to the edge of his field on a spade. In Ban Latbouak in Pek district and

⁵⁶ Simon Levine, “How to study livelihoods: Bringing a sustainable livelihoods framework to life,” Working Paper 22, ODI, September 2014.

⁵⁷ “Bombies” is the terminology used in Lao for cluster munition bomblets.

Ban Longpiw in Kham district, men spoke of collecting up UXO in their shirt tails and jackets and removing them from fields to bury in deep holes. The story of UXO being buried in deep holes at the edges of fields was one that was repeated many times, and people often expressed concern that these UXO remain deeply buried in the ground, even after clearance.

People often reported that when the UXO teams started to come to the village, they were told about the danger of UXO from risk education teams and were warned not to touch or move them. In some cases, people reported that having more knowledge about the dangers of UXO made them feel more insecure and anxious.

Today, in the villages visited during the study, UXO are rarely found on the surface of the ground. Many people interviewed reported that they had not found any UXO in recent years, even when living in areas known to be contaminated. This perhaps created a false sense of security, as people reported that they did not take extra precautions when farming.

In Ban Napheung in Xiengkhuang, the village authorities said they were now finding fewer UXO as they had been coordinating with the UXO clearance teams for over ten years. Previously, the UXO had often been found in the fields, and people had to work their land more carefully and felt afraid. The village had been a bombing target during the war due to an ammunition depot that had been situated on the road nearby.

In Ban Thongsaen in Bolikhamxai province, one villager told us that he had always been very aware of UXO in the village as his sister's children had been killed when they were playing with UXO in 1997. However, he had been growing cassava and corn on his land and was not aware there were any UXO. He had used a big tractor to clear his land. However, when the clearance team came to clear his land, they told him they had found UXO.

However, people were still finding UXO in their fields, albeit not as frequently as in the past.

A man in Saen-Oudom village, Bolikhamxai, reported digging and clearing land around a fishpond when he hit a bombie with a knife. He said the bombie broke in half, but it did not explode. He reported the bombie and Unit 58 came to clear it as a roving task. He hasn't seen any more UXO and is now digging a new pond, although feels concerned that there may be bombies in the area.

In Ban Long Piw, Xiengkhuang, as the team arrived in the village, a man came to report that he had just found a UXO in his land. UXO Lao, which has a camp close to the village, were notified and came to destroy the bombie within half an hour. However, the farmer said that he had found several UXO in past years and that he wants to have his land cleared.

In areas with UXO contamination, some degree of risk-taking is common. Many villagers have now received risk education or been in contact with UXO teams, and so understand that when UXO are found, they can report, and a roving team will come to dispose of the item. However, this does not necessarily mean that people do not engage with UXO. While some people did mark the location of UXO with a stick in their fields, others reported moving the UXO to the side of their field so that they could continue farming. It appears that people regularly move the UXO they find in their fields, even if they then report the UXO to the authorities for clearance by roving teams.

People said that despite knowing there might be UXO in their land, they continued to farm and to use hand-tractors or large tractors to prepare and plough their land, particularly on land they had been farming for a long time. They said that it was normal for them to do so. Other people reported feeling more anxious and afraid while working on land that they thought might have contamination. UXO Lao in Xiengkhuang noted that people were often more afraid if they found a bombie on their

land as they knew that there may be others around. Farmers did report that if they found a UXO on their land, they often did work more cautiously and gently.

When people were extending their fields into areas that they had not cultivated before, there was often more caution and fear that there might be UXO. People were less keen to clear and extend their land if they suspected UXO contamination. In Ban Na'O, a woman village representative noted how important it was to have clearance so that people could extend their rice land safely as UXO had often been removed from the fields and placed on the bunds or edges of the field, which made extending fields riskier.

Children often go to the fields with their parents and are therefore exposed to the risk of finding UXO in the field. Given that children form a large proportion of UXO casualties in Lao PDR (over half the casualties so far in 2022), this remains a serious concern. In several of the villages, when asked about UXO accidents, the main accidents that were remembered were those involving children. In Ban Thongsaen in Bolikhamxai there had been two accidents involving children, one in 1992, when three children died, and one in 1997, when two children died, and one was injured. The children killed were related to a few of the families whose land was cleared by Unit 58 in June 2022. One man recalled that he had been six years old at the time of the accident and it was his nine-year-old friend who died. He said that when he found UXO on his land he asked someone else to remove and dispose of them.

4.1.2. Living with land cleared of UXO

The UXO sector clears and destroys many thousands of UXO every year. In 2021, it was reported that 84,790 UXO were removed and destroyed through clearance operations and roving tasks, of which 66,800 were cluster munition remnants.⁵⁸ The clearance of UXO has made a significant difference in terms of the overall safety within communities, ensuring that UXO on the surface are removed when found, and that land is cleared and returned to communities. When villagers find UXO, they often report to the village head, who is then able to report to the district for a roving team to come and clear. The quick response of roving teams is crucial for reducing risk by removing the immediate hazard. Most villages visited reported that the clearance of a reported UXO would take place within one or two days, or at most a week.

The clearance of UXO does significantly reduce the risk that people are exposed to daily, even if people are not consciously aware of the risk. It ensures that farmers can work in their fields more safely, and that there are fewer UXO around for children to pick up.

People reported that once UXO had been cleared from their agricultural land and community land they felt safer and had more confidence to conduct their livelihood activities. People sometimes described the clearance of land as providing an “open way” or a “gateway” that gave them more opportunity and confidence to farm or to invest. In terms of clearance of land for community infrastructure such as schools, pagodas or village meeting halls, people often said that it made them feel proud that the land had been cleared. This is a similar finding to that of an impact assessment conducted in Lao PDR in 2010, which found that UXO clearance increased safety and optimism and people reported feeling proud and confident.⁵⁹

Women interviewed often said that having their land cleared of UXO also reduced their anxiety of having their children in the fields with them. When there was a threat of UXO contamination, they

⁵⁸ NRA, “UXO Sector Annual Report 2021,” Vientiane Capital, 2022.

⁵⁹ Jo Durham and Vong Nanthavong, “Post UXO Clearance Impact Assessment in Lao PDR,” September 2010.

felt they had to watch their children more carefully, and so this concern was removed when the UXO were cleared.

4.1.3. Enhancing education

UXO clearance of land prior to schools being built or rehabilitated appears to have had a positive impact in terms of increasing the access of children to school, and in some cases, their ability to stay in school for longer due to the school being able to offer more grades. This contributes to the 9th NSEDP goal of improving the quality of all levels of education and conditions created for access.⁶⁰ Given that 60% of the population are young people, ensuring that they have adequate access to education is important.

While schools were often present in villages before clearance, they were usually locally built of wood, often by the villagers themselves, and sometimes comprised only one or two classrooms. Following UXO clearance, larger, permanent school buildings have been constructed, dormitories have been built, and school yards and sports grounds made safe. The construction of many of these permanent school buildings appear to have been built with funds from overseas development aid (ODA), and with support from international development organisations, with UXO clearance a requirement of the donors before construction began. Benefits reported by villagers included having less distance for children to travel (particularly if they want to stay on to study the higher grades), fewer children per classroom, and more functional buildings in which to teach.



School classrooms being constructed on cleared ground in Ban Thongsanen, Bolikhamsai

In Ban Thongsanen in Bolikhamsai province, UXO clearance by Army 58 in 2020 and 2021, funded by KOICA as part of their new integrated rural development project, enabled the construction of a new school building with four classrooms and a dormitory. The village authorities noted that this meant the school could offer classes up to grade seven, and the number of children per class was reduced from 70 to 80 children per room to 40 children per room, providing a better educational experience. The dormitory also enabled children from neighbouring villages to come to the school to study, while staying in the school grounds. The expansion of the school is important for the village which

comprises a cluster of three villages and is in a Focal Development Area. The population of the area is therefore expected to continue to increase. The school buildings were still in construction at the time of the visit.

In Ban Long Piw in Xiengkhuang, the first village school was a small wooden school built in 1986. The primary school was rehabilitated in 1997 with the construction of permanent classrooms, and in 2015 two more classrooms were built following UXO clearance. The secondary school similarly expanded in 2016 when Korean funding⁶¹ supported the construction of two buildings to accommodate grades one to seven, and a dormitory. The land was cleared of UXO before the construction. Before the school was expanded, children had to travel to another village to study and they would drop out of school if they were unable to get there.

⁶⁰ Lao PDR, “[Ninth Five-Year National Socio-Economic Development Plan](#) (2021-2025),” Vientiane, March 2021.

⁶¹ Presumably KOICA, although the team were not able to confirm this.

The team found one case where school grounds had been cleared by UXO Lao, but the school was not in use. In Ban Gnotpiang in Xiengkhuang, the grounds of the small village primary school had been cleared of UXO, but the school was no longer in use due to there being few children of school age to attend. Instead, the children travelled 5km to school in a neighbouring village. The school was used by the UXO Lao clearance team for accommodation when they came to clear the agricultural land in the village.

The clearance of school grounds enables children to play in a safe environment, something that is particularly important in Lao PDR, given that children form a large percentage of overall casualties, which is thought to be due to their curiosity and propensity for picking up and playing with strange objects. The Cluster Munition Monitor 2022 reported that in 2021 the proportion of child casualties from cluster munitions globally increased to 66% of total recorded casualties where the age was known, up from 44% in 2020.⁶² In Lao PDR in 2021, more than half (16) of the 30 recorded cluster munition remnants casualties were children (11 boys and five girls).⁶³

The safety of children was often mentioned to be of particular concern to villagers, and in villages like Ban Thongsaen where accidents involving children in the 1990s had occurred close to the school grounds, villagers said they felt happy that the school and the land around it had been cleared. The school playground and surroundings in Ban Na'O in Xiengkhuang had been cleared, which was reported to have reduced the concerns of parents when their children left the school at playtimes and at the end of the day. In Ban Latbouak the village chief stressed how important it was to get the school land cleared of UXO as he felt it would be his responsibility if any of the children were hurt.

While the study was unable to examine school retention rates in the villages, it is likely that having better access to school and the ability to study through to the higher grades, may well contribute to school retention rates.

4.1.4. Enhancing access to health services

UXO clearance has allowed the construction of new health centres or the extension or rehabilitation of existing structures. A few of the villages visited during the study reported that UXO clearance had taken place to allow for the construction of health centres. Ensuring access to primary health care is a priority of the 9th NSEDP, which aims to strengthen primary healthcare so that people take the initiative to stay healthy.⁶⁴

In Ban Long Piw, the first health centre had been built in 2010, but in 2017 UXO clearance was undertaken, and a new health centre was constructed with support from France. This enabled better access to primary health care services, which villagers reported has helped to improve health, moving people away from a reliance on traditional medicine and enabling them to easily get vaccines for children and maternal health care for pregnant women. For more serious illnesses, people must travel to their nearest district hospital.

4.1.5. Houses and household yards

In many villages visited, it was not clear if any clearance had taken place in and around the housing. Often houses had been built before any clearance had taken place, and any surface UXO were removed many years ago. However, new housing was being built – often permanent cement houses. Some villagers reported that they were planning to build houses on their agricultural land

⁶² Cluster Munition Coalition, “Cluster Munition Monitor 2022,” ICBL-CMC, August 2022.

⁶³ NRA, “IMSMA dashboard,” viewed 15 December 2022.

⁶⁴ Lao PDR, “[Ninth Five-Year National Socio-Economic Development Plan](#) (2021-2025),” Vientiane, March 2021.

for their children or grandchildren and were unsure if the land would be safe for construction, even if the land had been cleared of UXO for agricultural purposes.

People also raised concern about the clearance of their household yards because to keep their yards and surroundings clear, they swept the yards and burned the rubbish. Lighting fires on contaminated land is known to be one of the main causes of UXO accidents in Lao PDR, and people were concerned that there was still some risk. It is possible that this information was gained from risk education presentations, and it was also not stated whether any precautions were taken to mitigate risk, such as building up the soil before lighting fires, or lighting fires in the same place to prevent accidents. Cutting grass in yards and other communal areas was also seen as a risky activity that people were worried about.

4.2. Social

Under the social capital of the livelihood framework, we have looked at the clearance of facilities that enable village meetings and ceremonies. Access to information, community gatherings and the ability to worship and attend ceremonies are all important activities contributing to people's wellbeing and sense of community. We also look at communication regarding the survey and clearance process. Villager understanding of the process of survey and clearance of UXO is important as it contributes to the ability of people to plan and to understand how they can use their land once survey or clearance is completed.

4.2.1. Village Offices

Village meeting halls and offices have been built on land cleared of UXO, or UXO have been cleared from land around existing village halls.

Villagers and local authorities noted that village halls were important for village meetings and the sharing of information. Having adequate facilities for meetings was seen to be particularly important in the cluster villages and the Focal Development Area of Ban Thongsaen where growing populations required larger meeting halls.

Several villages visited, including Ban Thongsaen in Bolikhamxai, and Ban Napheung and Ban Na'O in Xiengkhuang had new village offices constructed on land cleared of UXO. In Ban Napheung the village office land was cleared in 2004-2005, and a new office was built. Before the office was built, the village authorities had a small room at the back of the school as an office and had to hold meetings with the villagers in the pagoda. The village authorities said that it was much better that they now had a purpose-built office and hall for village meetings.

In Ban Na'O the village meeting hall was constructed in 2018-2021 on land close to the school. The school land and the land for the village meeting hall were cleared of UXO by UXO Lao with New Zealand funding. Ban Na'O is a large village with over 2,300 people. The old village hall was a crude wood structure with a metal roof that was too small to hold meetings, and the metal roof made it too hot, so people did not want to stay for meetings. The new village hall is much larger and has adequate space for village meetings and activities.

4.2.2. Pagodas

Pagodas are often focal points within Lao villages and serve the function of bringing people together for the annual festivals and ceremonies.

In Ban Latbouak in Xiengkhuang, the land for the pagoda was cleared of UXO by UXO Lao in 2021, and villagers reported helping to cut back the grass before the land was cleared. Previously, people in Latbouak had to attend the pagoda in Ban Xi Muang, about 1 km away. In 2016 a wooden

temple with a tin roof was built in Latbouak, and the construction of a new, concrete temple started in 2017. The grounds of the pagoda were cleared of UXO. The pagoda is an important building in the village and the village leader reported that people from 16 neighbouring villages attend the pagoda. The main festivals are celebrated at the pagoda, including Kathin in March, the rocket festival in June, and the ancestor festival in October. In November, after the harvest, there is a big festival where the villagers come to the pagoda and cook food for the monks and play music. The UXO clearance is important because villagers light fires on the temple grounds to keep warm and to cook food. A fence has been erected around the pagoda grounds and they also plan to plant some trees there.

In Ban Na'O in Xiengkhuang, the pagoda grounds were first cleared of UXO in 1997 as there was a project to plant trees at the temple. The temple grounds were extended and cleared of UXO more recently as there is a plan to construct a meditation building that will accommodate between 200 to 300 monks.

4.2.3. Communications regarding survey and clearance

While UXO clearance has facilitated the building of meeting halls, pagodas and markets which has encouraged social gatherings and information sharing, information provision regarding UXO clearance and survey has not always been adequate. Poor communication about prioritisation, survey, and clearance, can hinder development and overall impact of UXO clearance.

Previous studies have raised questions about how well mine action operators include and consult women, and the effectiveness of written and verbal communications, particularly among the rural poor and ethnic minority groups.⁶⁵ The Lao voluntary review of progress towards the SDGs also noted that language barriers limit access and comprehension of information.⁶⁶

Prioritisation

A 2017 study on prioritisation in Lao PDR found that people at village level could not explain how multiple clearance tasks had been prioritised.⁶⁷ This impact assessment also found that there is often limited knowledge about the decisions taken to prioritise land for clearance. Village chiefs frequently reported that they were not involved in deciding what land was cleared, particularly agricultural land, but that the organisations just came to the village and explained what they would do. One village chief reported that some farmers had requested clearance of their land two years ago, but the land had not yet been cleared, whereas other households had requested last year, and their land had been cleared already. He did not understand why the initial request for clearance had not yet been dealt with. In Long Piw village, the householder who found a UXO on his land during the visit of the team said that he had found ten UXO in recent years, but his land had still not been cleared, whereas other land in the village had been cleared. A lack of understanding about how decisions for clearance are made can lead to frustration and may prevent people using their land to its full potential.

Village authorities appear to have more agency when it comes to the selection of UXO clearance for community infrastructure and had often been instrumental in requesting clearance for school construction or the building of village offices and meeting halls. However, it was not clear how

⁶⁵ Rebecca Roberts and Kiengkay Oumany, "Moving towards achieving SDG 18: Removing the UXO obstacle to development in Lao PDR," UNDP, 13 September 2021.

⁶⁶ Government of Lao, "Voluntary National Review on Implementation of the 2030 Agenda for Sustainable Development," July 2021.

⁶⁷ Katherine Sweet, "Prioritisation policy, procedures and practices relating to UXO clearance in Lao PDR," NRA and GICHD, September 2017.

quickly clearance occurred following village requests, and how these requests were included within clearance workplans. Operators interviewed noted that they needed to be certain that funds were in place for building construction before they put the requests into their clearance plans.

Several village chiefs said that they would like to have clearer information about the prioritisation process and an understanding of what land had been surveyed and what land had been cleared. One chief specifically requested that comprehensive maps should be provided to the village authorities so that they can see the progress of clearance and survey in the village and can also understand which land remains contaminated. He said that he would be happy to attend training to learn more about prioritisation, survey, and clearance.

Understanding survey processes

In areas where people have been farming for several years without encountering UXO, the conduct of survey seems to have raised concerns that the land might have UXO they didn't know about, making them feel anxious and worried. There also appears to have been a lack of consistent communication from survey teams to villagers about the survey process, what they have found during survey, and the impact that this might have for their farming.

In Ban Napheung in Xiengkhuang, villagers were unclear about the status of their land, which was surveyed in 2021 by UXO Lao with New Zealand funding. They reported not having received any documents after the teams conducted the work and so they were not sure which land had been surveyed. One villager had heard that the survey team had cleared 2 bombies on his land, but he didn't know when they would come back to clear the land fully. He said he had farmed the land without fear before, but now felt more scared to work the land and was working more cautiously and carefully.

In Ban Long Piw a woman reported that the UXO team came in 2020 and found one UXO on her land, but that they only cleared a corner of her land. She does not understand why they did not clear the whole area of land and said it made her feel afraid when farming. The PRA for Xiengkhuang thought that the land was on the edge of a CHA, hence only part of the woman's land was cleared. However, clear information regarding the survey of the CHA and subsequent clearance may have helped this farmer feel safer when using her land.

A respondent familiar with the US funded Cluster Munitions Remnants Survey noted that in the areas where the US funds Non-Technical Survey, ordnance is cleared if it is found during the survey process, with the intention to increase confidence among villagers. It was believed however, that villagers were confused as to the purpose of technical survey, and that they often thought this amounted to clearance of their land. The NRA has started to provide some additional information to villagers to try and better explain the survey process, and it seems that this is a sensible step. The sector is also considering whether the technical survey process could be reduced, with teams going straight to clearance of CHA. Certainly, within the villages visited as part of this study, villagers were confused about the survey process and there was a lack of clear understanding about what having land surveyed meant and when subsequent clearance would happen. The concept of CHAs was not understood and the terminology was never used by the villagers or village authorities spoken to.

Ban Khangkhe is a Hmong village in Kham district, Xiengkhuang province, established in 1997 with villagers relocated from Nong Het district. There is a population of just over 1,000 and 139 households.

UXO Lao came to survey the village in December 2021, once the rice had been harvested. The village authorities recall that the team surveyed about 60% of the village rice fields and had said that they would come to clear the following year, once the rice had been harvested. The village authorities had the list of households whose land had been surveyed and helped to take the research team to meet the households. However, we found that the knowledge of the survey process among these households was extremely limited.

One villager reported that he didn't remember anyone coming to survey his land and he didn't attend any meeting. He said it was possible that his son or daughter had attended, although it is his name that is on the list of beneficiaries. Another family also said that they were not aware their land had been surveyed, although they were also on the list of the village chief. They had found a UXO in their corn field but had just moved the UXO to the side of the field and continued working. Yet another villager on the list of beneficiaries said that he had seen the team in the village, but not on his land, and he was not informed about what they were doing. Another said that he had not found any UXO on his land and thought his land had not been surveyed.

Only one villager among those interviewed recalled and had information about the survey that took place on his 1.2 hectares of rice land. He had been farming with a large tractor and had turned up three to four bombies as he ploughed. He removed them to one side of the field and reported them to the village chief. The roving team came to destroy them, and the survey team came later and surveyed his land. They informed him that they would come back to clear it. He says he feels a bit safer, but he thinks that there are still some UXO. He thinks it would be good to have some more information about the survey and clearance, for example, if they could inform him about the amount of land surveyed, how many UXO they found, and when the clearance would happen.

Understanding clearance processes

In Bolikhamxai, in several villages, people spoke of their land being cleared more than once. In Ban Thongsan, it was reported by several villagers that the rice fields around the school cleared by Unit 58 in 2021 and 2022 had in fact been cleared previously by two different entities. These reports were difficult to cross-check as nobody could remember when the land was cleared or the name of the organisations that did the work. It is possible that there was some initial clearance after the war that people remembered, or that roving tasks had been conducted to dispose of individual items, or that people had mistaken survey for clearance. Whatever the explanation, the result was that these villagers felt uncertain that their land was fully clear of UXO after the clearance of Unit 58, as they felt that each time clearance happened, more UXO were found.

The team also came across a few cases where people were unaware that their land had been cleared. It appears that in some instances documentation regarding clearance is provided to a group leader, but the knowledge of other households in the group regarding the clearance of their land perhaps relies on information being passed on by the group leader or local authorities. In Ban Latbouak, one woman reported that she had heard her land had been cleared because her neighbour, the group leader had come to tell her, but she didn't have any information about the clearance. In Ban Na'O in Pek district, there appeared to be similar confusion about whether land had been cleared.

In Ban Na'O village, a cattle farmer requested clearance of the hilly land behind his house where he hoped to keep a bull that he would raise for fighting. He had started to clear the land himself but found some bombies. He burnt some of them, but with the help of a friend who works for the "UXO organisation" (UXO Lao), he submitted a request for clearance in 2012. The team came in 2016 to remove the UXO that he had found, and they then came again in 2017 to survey the land and that of his neighbours. They came in 2019 to clear the land over a period of two to three months. He says he doesn't know how many UXO they removed, but that he could see there were a lot of red flags in the ground. He received documentation from the organisation but hasn't read it all as it is quite long and complicated. However, he knows that his neighbours also had their land cleared.⁶⁸ The team talked to two of the neighbouring households who had their names on the list of beneficiaries of the clearance (a total of 13 beneficiaries were listed). Both neighbours talked to were women, and neither of them knew that their land had been cleared. One of the women said that she would like to use the land for grazing but had not used it at all because she thought that the land still had UXO.

Clearance documentation

Following clearance, most households are provided with a clearance completion document. This document commonly comprises around 10 pages, outlining the task carried out, the GPS coordinates of the area cleared, the depth cleared to, and the UXO found with GPS coordinates. The documentation is quite detailed and dense, and many villagers, even though they had copies of these documents, hadn't been able to read them fully or to understand all the information. There were several respondents in different villages who said that their documents were written in English, and they couldn't read them.⁶⁹ One village chief said that he had received a report about clearance, and although he was educated and able to read, the document contained technical language that he did not understand. People suggested that they would like a simpler document, that outlined the key information they needed, including what land was cleared, to what depth and for what land-use purpose, how many UXO were cleared, and whether the land was safe to farm. A short summary sheet, written in Lao language, might be adequate to provide the information villagers need.

In many cases women do seem to have less knowledge about the clearance process than men. In Ban Gnotpiang, women noted that the UXO organisation had a meeting in the village, but it was mainly the men who attended. The women don't have a clear understanding of how much land was cleared and why some land was cleared rather than other areas. Only three out of eight women said that they could read the hand-over documents given by the organisation, and even then, they could only understand a little bit. They were not clear to what depth the land had been cleared, or what UXO had been cleared from their land. The men's group were clearer on information regarding the UXO cleared and the depth of clearance, although most had not read the documents fully.

4.3. Financial

Under financial capital we look at increases or changes in household income, investment in tools, machinery and livestock, and changes in land value as a result of UXO clearance.

⁶⁸ The study team were also provided the list of beneficiaries of this clearance task by UXO Lao.

⁶⁹ Some of the completion documents viewed by the study team had text in both Lao and English.

4.3.1. Household income

It was difficult to assess if changes in household income could be attributed to UXO clearance, as in the instances where household income had improved, this was often attributed by households to other factors, namely agriculture promotion and extension, improved rice varieties, the introduction of cash crops and garden crops, the establishment of local food processing factories, increases in market demand, and an increase in the number of traders visiting villages and buying produce. In many villages people were increasingly taking up vegetable gardening, growing crops such as cabbage, spring onions, cucumber, and garlic which they could use for home consumption and sale. This was also being promoted by organisations working on improving nutrition within rural areas. The government strategy of one district, one product, intended to boost economic growth within districts, had also helped to promote products such as honey and tea. Improved farming techniques, agricultural diversity and cash crops have improved livelihoods and moved people beyond subsistence agriculture. An increase in household income has led to an increase in household assets.

In Bolikhamxai province, district and provincial authorities noted that over the last ten years there had been many changes – increased mechanisation of farming, more variety of seeds and improved seed stocks. While consumption had previously been at household level, people were now able to sell produce at market and to Vietnam. The improvement in roads had also helped to boost the ability of people to sell their produce. In Xiengkhuang province, the provincial department of agriculture noted that the main factors that had moved people out of poverty included an increase in agriculture production and livestock raising, better agricultural processing and the expansion of trade with Vietnam and China. However, it was also noted that UXO clearance had helped people to feel safer and maybe encouraged them to extend their land and grow more.

As an example of the economic growth in Xiengkhuang province, in Kham district the authorities reported that in 2018 an average household income had been about US\$700-800 per year, but since growing corn and special varieties of rice and sago palm, and raising livestock, the annual household income had increased to an average of US\$1,200.

While increased confidence in farming land once it had been cleared of UXO could potentially encourage farmers to experiment with different crops and rice varieties, it seems that often this experimentation happened with or without UXO clearance, and there were other contextual factors, such as market prices and the availability of new seeds and techniques, that were more likely to have influenced change.

Unit 58 have a plan to conduct survey in Ban Saen-Oudom village in Khamkeuth district in 2023, although some clearance was conducted by SODI from 2012-2014.

The local authorities reported that cassava has been grown by villagers for about two years and has made a big change in people's livelihoods compared to growing rice. The cassava can be processed at factories in Khamkeuth and Viengthong, and then sold to Vietnam. They also grow eagle wood which they can sell. While they have grown these trees for a long time, they have become more commercially important in recent years. Households have improved incomes and they are able to buy more assets and to send their children to the upper secondary school and college.

Low production was rarely equated by respondents with UXO contamination, although farmers often said that if they knew their field was in a UXO contaminated area they had to work more slowly and carefully. However, none reported that this affected productivity. In Ban Napheung village in Pek district, the farmers reported that the main problem affecting their production was water because there was no irrigation and rainfall patterns were no longer predictable. Often, after UXO clearance, villagers reported that production remained the same. In Ban Latbouak a woman said that her rice land had been cleared in 2022 before the rice production season. Following rice production, she had been able to get 110 bags of rice, which is the same as before clearance. It was enough for her household consumption and to sell.

In all the villages visited, the production of cash crops such as cassava, peanuts, sweetcorn, and tea, has helped people to improve their livelihoods and move beyond subsistence farming. People reported that due to the introduction of new crops they were less tied to seasonal production and were able to produce crops throughout the year. For example, in Ban Long Piw, villagers said that the use of fertilizer and the introduction of a new rice variety, *Khao Kai Noi*, had made a difference to their production. Before they were able to get about 30 bags of rice hectare, but now they were able to get about 70 bags. Despite not being directly attributable to the clearance of UXO, the increase in household income has meant that people are able to buy more assets, that they have built cement houses, and are able to send their children to school and save some money.



Tea processing equipment in Ban Gnotpiang, Pek district

Operators spoken to reported that prioritisation of clearance considered the seasons, so that rice fields would be cleared after harvest during the dry season, and in the wet season community land, grazing land, and development and infrastructure projects would be cleared. This was in recognition that people are usually farming contaminated land and to ensure that the UXO clearance did not negatively impact agricultural production. However, in Ban Thongsan in Bolikhamxai, the UXO clearance by Unit 58 took place in June 2022, during the growing season and some villagers had crops damaged. One farmer said that he was cultivating rice, and about 10 kg were destroyed. Another farmer reported losing about 100kg of cassava, and a third reporting losing about 20-30% of his crop. It was reported that some of the landowners had not allowed the clearance to take place because it was the growing season. The farmers interviewed who had crops damaged did, however, say that they were pleased their land had been cleared because they felt safer.

4.3.2. Land value

In neighbouring Cambodia, demand for land has meant that land cleared of mines has increased in value, which on occasion has led to land conflicts or land grabbing following land release. In the villages visited in Bolikhamxai and Xiangkhuang, often the value of land was not known. However, there were indications that land value is increasing in some of the more developed villages, along roads, and in the focal development areas, which are attracting more people and investment.

In Ban Thongsan, people reported that there had been a change in land price following UXO clearance, although the land values given seemed to vary greatly. One respondent said that prior to clearance his one hectare of land was worth around 60 million kip (\$US 3,400), but that it was now worth 70 to 80 million kip. Another reported his land had been worth US\$26,000 before

clearance but someone had offered US\$30,000 after clearance. Another farmer in the village said that he had sold 0.8 hectares of land for 115 million kip (around US\$6,000) after clearance. The land was situated along the road which was desirable as it could also be used for house construction. Economic growth in Khamkeuth district and the status of Ban Thongsaen as a focal development area appear to be key factors in driving an increase in land prices.

In discussion with the provincial and district authorities, there was often an equating of investment with development, and respondents spoke of wanting land cleared of UXO to encourage national and international investors. The desire for economic growth, outlined in the NSEDP, may create more pressure on land, and particularly land that is known to be clear of UXO. This could mean that land cleared for local populations may be in danger of being acquisitioned for other purposes. It will be important for the NRA to ensure that provincial and district authorities understand what counts as clearance for humanitarian development, as opposed to commercial development and investment, and to ensure that humanitarian funding for UXO clearance continues to benefit local populations. This is something that may need to be carefully monitored by the NRA in coming years.

In Pek district, the team heard that a Japanese company investing in cattle farming had tried to obtain 5,000 hectares of land that had been cleared of UXO some years ago in a focal development area. This led to a conflict with the households whose land it was. In the end the company was able to lease 2,000 hectares of this land from the villagers. A Chinese company, growing lychee, was also said to have rented land from villagers in the same area. The team was not able to confirm these reports, but they have been included in the report to highlight the potential for increased competition in the future over UXO cleared land.

4.3.3. Tourism sites

Tourism is one of the priorities for economic development in Xiengkhuang province, along with the production of livestock and the development of agricultural processing industries. Tourism is cited as one of the key sectors for growth in the NSEDP and as having a high potential for labour force participation.⁷⁰ However, the value of the tourism sites is important in Lao, not only from a financial perspective, but also in terms of the Laotian pride in their national heritage. Clearance of UXO for tourism has provided some financial opportunities for villagers. Women reported that they were able to sell weaving and other handicrafts to tourists, and villagers have been able to sell food to the passing trade.

UXO clearance has taken place in and around tourism sites in Xiengkhuang, including to caves, waterfalls, hot springs, and some of the Plain of Jars sites. The Plain of Jars received World Heritage Status in 2019, and according to provincial officials, UXO clearance was one of the requirements for the site to be considered for the award.⁷¹ UNESCO reported that the day-to-day management of the sites is provided by nearby villages based on contracts established with the Provincial Government, with a formula for sharing the income from the ticket sales with local communities.⁷²

⁷⁰ Lao PDR, “[Ninth Five-Year National Socio-Economic Development Plan](#) (2021-2025),” Vientiane, March 2021.

⁷¹ “[Plain of Jars officially celebrated as Laos third World Heritage Site](#),” Southeast Asian Archaeology, 2 December 2022.

⁷² UNESCO, “Megalithic Jar Sites in Xiengkhuang – Plain of Jars,” 6 July 2019

In Xang village, Kham district, there are four small jar sites and a hot spring. New Zealand provided support to the village to develop the tourism potential through a project that ran from 2013-2016. The road was improved, and New Zealand supported the clearance of UXO from the access road and the jar sites. Bungalows were built at the hot springs and the villagers were trained to provide food, homestay, massage and to work as tour guides.

The villagers reported that before COVID-19 there were quite a lot of foreign visitors who came to the jar site, and women were able to sell handicrafts and weaving to the tourists. Around 30 households in the village produced products to sell to the tourists. Following the pandemic, the visitors have been mainly domestic, but during December 2022 they expect more tourists as there is a celebration of the Jar Site World Heritage status and a National Sports Day will be held in the province. Seven people from the village continue to help maintain the jar site. The hot springs are now run by a private company, but some money still goes to the village and women sell their woven scarves to visitors.

A cave site near Ban Long Piw had been cleared of UXO and villagers were able to sell flowers and candles at the cave and had small shops to sell handicrafts and food. Similarly, in Ban Na'O in Pek district, situated near the Jar Site One and Tham Hi cave, which were cleared of UXO by MAG, the women's group rent a booth to sell handicrafts.

It is expected that tourism to Lao PDR will increase in coming years with more tourists arriving from China and other parts of Asia following the completion of the Laos-China railway from Vientiane to Kunming, and so the clearance of UXO from tourist sites may well help to provide opportunities to boost local village incomes.

4.3.4. Improving the financial situation for Persons with Disability

The study was able to look at one project which had supported UXO clearance for animal raising activities for households with a person with disability (PWD). In 2021, the Quality of Life Association (QLA) funded by New Zealand, provided UXO clearance and support to five households with PWD in Ban Xang, Kham district, Xiengkhuang province. Household land was cleared for the five families so that they could construct animal pens, and the families were then provided with young pigs or a goat. Full information about the project was not obtained, but according to the QLA website, QLA coordinates a range of livelihood initiatives to help beneficiaries achieve a sustainable livelihood.⁷³

Three women project beneficiaries were interviewed to discuss their experiences and to find out how the project had supported their livelihoods. Two of the women had a disabled family member, and one of the women was disabled (deaf) and her husband was blind.

Two of the women had been given piglets to raise. They said that the organisation had provided enough food for the piglets for two months, and after that they had to buy the pig food which cost about 70,000 kip (about US\$4.00) per bag. The women said that it was quite difficult looking after the pigs as they also had to find vegetables for them to eat. One woman is now growing vegetables near her house to save time having to collect them.

Both women have now sold on some of their piglets. One woman sold one pig for two million kip (approximately US\$ 115) and the other sold all three pigs for 4 million kip (approximately US\$230). Both women used the money to pay for health care for family members who were sick. The first woman had two pigs remaining, although one pig died when he got his leg stuck in the slats of the pen floor. The second woman has some money remaining from the sale of her three pigs and is

⁷³ QLA Laos, "[What we do: Livelihoods and Development Programs](#)," no date.

planning to buy a new pig or a cow, as she thinks it will be less work to look after a cow. Despite the work involved in caring for the animals, the additional money gained by raising the pigs helped the families through a health shock in that they were able to cover medical expenses, and the women still have some resources (a remaining pig and some additional money) to invest in the future.

The third woman had yet to see any benefits accrued from her animal raising. She was given two goats by the project, although one died before it had been vaccinated. The remaining goat had a kid, but this was killed by the neighbours' dog. The goat is pregnant again and she plans to raise more kids so that she can sell them. The woman said that the goat was quite easy to look after as it ate grass and was able to roam freely.

UXO clearance was conducted on the household land where the animal pens were built, although none of the women reported that any UXO had been removed and destroyed during the clearance. Given that persons with disabilities are often vulnerable to poverty and suffer health inequalities,⁷⁴ the support to livelihood activities following clearance provided a small safety-net to deal with a health shock which may otherwise have resulted in greater poverty and deprivation.

4.4. Natural & Environment

Under the natural capital, findings include how UXO clearance has affected access to land and resources and how farmers work the land, and indications of environmental impact.

4.4.1. Access to and use of land

In areas with UXO contamination, people often access and use land before clearance, but have developed various coping mechanisms to work their land, including not digging too deeply, working around contamination, marking any UXO found with a stick, or moving the UXO out of the way.

During the research it was often difficult to understand if there was any change in agricultural techniques or land use following clearance, and there were differing opinions among farmers as to what techniques might be safer to use in UXO contaminated land. An international respondent interviewed reflected that in the past in Bualapha district in Khammouan province there had been limited agricultural activities due to contamination but following clearance it was noted that people were spending more time and resources on agricultural land. As this study was not a longitudinal study, it was more difficult to assess the changes that occurred over time, and so we had to rely on respondents' recollections of how land use had changed since before clearance.

Clearance of UXO can increase the amount of land that a household will use, and it appears that farmers were less confident to clear land they had not used before if it was suspected or known to have UXO contamination. Villagers also reported that they often did not like to burn the land when clearing, as this might cause UXO to explode. In Ban Gnotpiang, villagers had their tea plantation land cleared of UXO by UXO Lao 2021. They reported that they wanted to extend their plantation land and so would like more clearance, although five families had already extended their land without UXO clearance. In Ban Naphueng, a farmer said he wanted to extend his land. He had 1.2 hectares but farmed one hectare. He had started to clear the vegetation from the 0.2 hectares but found a UXO, and so he stopped using the land. He said that he didn't want to use the land while it had UXO, but once it was cleared, he would clear the bush with a tractor.

⁷⁴ World Health Organization, "[Newsroom: Disability](#)," 2 December 2022.

As discussed in the previous section, in some cases, villagers reported changing the crops they grew on the land after clearance, although often choices of crops grown were related to market prices and outside agricultural support rather than having land cleared of UXO. For example, a family in Ban Phonphaeng in Khamkeuth district said that they had grazed a cow on the land near their rice field, but that once the land had been cleared of UXO, they hired a tractor to come and plough the land so that they could grow cassava. They said they felt more confident to clear and plough the land after clearance but had decided not to keep the cow as the land had been too small for raising animals and they were able to sell the cassava.

4.4.2. Changes in farming practices

Changes in farming practices were evident in many of the villages visited, although again these changes weren't necessarily happening because UXO had been cleared from the land. More mechanisation of farming, new rice varieties, the growing of cash crops and an increase in animal raising and the preparation of fenced grazing land were some of the changes observed and reported by respondents. It seems that having the land cleared of UXO can increase confidence, but there were also concerns raised about the depth to which UXO are cleared.



Rice harvesting in Ban Latbouak, Pek district

Some villagers reported that they did change their farming techniques after clearance, although often the changes appeared to be quite subtle. Before UXO clearance people often said that they had to work more slowly and carefully, or to dig the land more softly. Following clearance, people reported that they felt more confident to dig and plough the land which enabled them to improve the quality of the soil.

Many of the villages in Xiengkhuang and Bolikhamxai were using hand-tractors for cultivation, and some were using (often renting) large tractors. However, it did not appear that this increased investment and use of agricultural machinery was connected to the clearance of UXO from agricultural land, and people

were using tractors on land before UXO clearance as well as on land where clearance had happened.

Farmers reported that using machines helped to speed up ploughing and allowed the land to be upgraded as the ploughing helps to retain soil moisture and aeration, which enhances the germination and growth of the crop. People said that the hand-tractors were useful as they could also be used for transporting people, crops, and goods.

There were mixed views on the risk of using tractors on UXO contaminated land. Some respondents said that they felt the tractor might be damaged if it hit a UXO. Other respondents said they felt that using tractors were safer than working the field by hand as they didn't need to break up the soil with a hoe, and the tractor turned the soil and so would bring UXO to the surface where they could be removed.

Despite using tractors, some farmers reported that there were still some activities in rice fields, such as clearing grasses and digging drainage channels and bunds, that could not be done by a tractor, and which still had to be done by hand. These were activities that people often said they felt were unsafe to do in contaminated areas, and that they felt more confident to do once land

had been cleared. Some farmers had small parcels of land that were on uneven land that still needed to be worked by hand.

Agricultural extension agencies and development organisations are keen that activities should be done safely. The district officials in Kham said that as they support villagers to farm and try out new agricultural techniques and varieties, it is important that UXO do not get in the way.

4.4.3. Clearance depth

Despite most villagers reporting feeling safer due to clearance, concerns were expressed in many villages about the depth of the clearance and whether this meant that the land was safe for different purposes, such as for house building, digging ponds or field drainage, or farming some types of crops that required deeper digging of the land, for example, tea, corn, and cassava.

The Lao PDR National Standards for UXO Clearance, Chapter 7, state that the depth of clearance should be determined on the intended land use and types of UXO likely to be encountered. The default depth for clearance is currently 25cm, based on the most common use of land, rice farming.

Villagers said that there were some crops that they grew that required digging to a deeper depth than for rice – this included cassava, tea, and corn. In Ban Gnotpiang, farmers said that they dug to about 15cm for rice, but for the tea plantations they were required to dig deeper, up to 25cm deep. With increased use of tractors, farmers require rice fields to be dry before they can prepare and plough the land, and so drainage channels were being dug to allow the water to drain, which they also had concerns about in relation to UXO. Villagers in Ban Napheung and Ban Latbouak said that they were worried about digging in the rice fields for ants and crabs in case they hit UXO that were deeply buried. The ants could be sold for 100 million kip per kilo (around US\$5,700) in the dry season.

With the increase in livestock raising and the fencing of grazing land, farmers also reported that they were concerned about digging in fenceposts. This was particularly a concern in Xiengkhuang where there is a drive to raise buffalo, cattle, and horses for export to China and Vietnam. In a few cases people said that they wanted to build houses on former rice fields and were worried if the land would be safe to dig foundations.

4.4.4. Environmental changes

No environmental changes were reported because of UXO clearance, although in some villages it was observed that the changing seasonal patterns were affecting agricultural productivity. There were some indications that the clearance of UXO from land could lead to increased clearance of forest land as people tried to extend their farming land for cash crops. In particular, the clearance of land for cassava has seen agricultural land encroach into forested areas, although it was not clear how much UXO clearance has contributed to this. In Khamkeuth district, the department of agriculture said that they planned to discourage the planting of cassava due to the fact that it degraded soils and people were beginning to cut down forest areas for plantations.

4.5. Physical

In this section the findings look at how UXO clearance has contributed to improvements in physical capital. This includes the basic infrastructure needed to support livelihoods, including the building or rehabilitation of roads, access to markets, and the provision of water. The lack of integration between public investment planning, development projects and UXO clearance is also discussed.

4.5.1. Roads and infrastructure

Many villagers talked about the benefits of improved road infrastructure in their villages, both the main roads and roads to fields and tourist sites. Roads have often been graded and the primary roads have an asphalt surface. Secondary roads have been provided with gravel surfaces. In Pek, the district authorities noted that 99% of villages had access roads, although he was not aware that any UXO clearance had taken place when the roads were rehabilitated.

In Saen-Oudom village, the road to Khamkeuth district town was rehabilitated in 2014. At that time a large 500lb bomb was discovered and had to be removed to enable the road construction to be completed. Today the road is an important trade route, connecting the village to the district town and the border with Vietnam and Khammouan province. UXO clearance was also reported to have taken place in Ban Xang, to support the improvement of the access road to the village and the tourist sites of the Jar sites and hot springs.

4.5.2. Markets

In Latbouak village, the village authorities requested UXO clearance of the market area. While the market is held only two days each week, on market days it was reported that it was crowded with villagers and traders. The clearance of the market area was seen as important due to its central position within the village and the number of people it served.

4.5.3. Water and irrigation

In some of the villages, clearance for irrigation had benefited agricultural production, including the ability to produce dry season rice. Some gravity water system pipelines were also cleared of UXO before installation, allowing clean water to be brought to villages such as Ban Hin.

In Xiengkhuang province, UXO Lao will be undertaking clearance work for the IFAD project, “Partnerships for Irrigation and Commercialisation of smallholder agriculture project (PICSA)”, funded by IFAD, the ADB and GIZ. The project aims to focus on the provision of irrigation schemes as part of a larger project to link markets and services.⁷⁵ The UXO clearance was expected to start in December 2022.

4.5.4. Planning UXO clearance for infrastructure and development

Despite the inclusion of UXO action into development policies and Lao PDR’s own specific SDG to address the impact of UXO contamination, there appears to be very limited integration of UXO clearance into provincial and district development planning and into the planning of development organisations. During the study the team interviewed the provincial and district departments of planning and investment, as well as departments of agriculture and rural development and labour and social welfare. It was found that while there is an annual planning process for each sector at provincial and district level, the planning for UXO clearance is not systematically integrated, and if UXO clearance is required, it is requested at a later stage and added into UXO clearance operator workplans as “emergency tasks.” Annual UXO clearance workplans have some flexibility for emergency tasks, but these can cause delay and may cause other UXO clearance tasks to be dropped off workplans.

Despite working in UXO contaminated areas, many international and local development organisations also fail to plan for UXO clearance. LuxDev shared their experience of working in Bualapha district in Khammouan province. Undertaking a community development project including infrastructure construction, LuxDev had not taken into account the need for UXO

⁷⁵ IFAD, “[Operations: Country: Laos: Projects and Programmes](#),” no date.

clearance prior to the project beginning, and clearance had to be factored in while the project was underway. Initially LuxDev relied on private companies for clearance, using a budget from project tenders. It was only later in project implementation that they were able to develop a partnership with MAG for clearance, ensuring that there was a budget in place to pay for the work. As a result of the partnership, 32 planned agriculture and infrastructure projects were cleared of UXO for over 6,000 beneficiaries. LuxDev noted that the partnership with MAG significantly improved the process for clearance, with better community engagement and flexibility to changes in planning.

UXO operators have noted that it is often challenging to work in partnership with development agencies due to the current MoU process which does not allow for multi-year workplans or consortium projects. Partnerships with development organisations are therefore few and far between, even though development and agricultural support following clearance can significantly enhance the impact of UXO clearance and maximise development outcomes. The building of schools, pagodas, village halls and health centres on UXO cleared land provide a valuable service to local communities as outlined in this report, and the building of access roads and other infrastructure such as latrines or wells would also have similar positive benefits. Agricultural extension has clearly supported farmers to increase their production and agricultural know-how, and if implemented with poorer communities on land cleared of UXO could similarly help to boost livelihoods and income. This will be discussed in the following section.

5. Maximising development outcomes

The study found that while there are some clear improvements to livelihoods and people's wellbeing resulting from, or facilitated by, UXO clearance, there are opportunities to enhance the development outcomes of UXO clearance by strengthening the prioritisation process, by improving and joining-up planning processes, by including UXO clearance in district and provincial planning processes, and by ensuring post-clearance support to communities. As the UXO operators start to shift from the Cluster Munition Remnants Survey to a greater focus on clearance of the identified CHA, it is important that efforts are increased to maximise the development outcomes of UXO clearance. The following are some observations on areas that can be focused on to improve overall development outcomes.

5.1.1. Demystifying prioritisation

Currently the process for prioritising agricultural land for clearance was not clear to many villagers and village authorities, and villagers are often passive recipients of UXO clearance. This does not encourage people to be interested or involved in the process, and it may also detract from people being able to plan for their land and to take informed decisions about their livelihoods, particularly in heavily contaminated areas.

There is work ongoing in the NRA, with the support of Tetra Tech and UNDP, to develop a clear and transparent national process for task prioritisation, which will help to prioritise CHAs that have already been identified and will also enable priorities to be assigned to newly identified CHAs. The prioritisation process for clearance should ensure that not only does clearance take place in the areas that are contaminated with UXO, but that it also enables and supports agricultural and socio-economic development within affected communities. This could include prioritisation of CHA within the government Focal Development Areas (FDAs), to support the government priority of support to these areas.

Once the new prioritisation system has been developed, it will be important for the NRA to ensure that village, district, and provincial authorities are aware of the system and understand how it relates to them in terms of identifying priorities for UXO clearance within CHA. The NRA has been conducting some outreach already to provincial and district authorities and to villages, and it is recommended that lessons from this work are documented and used to support continued outreach and engagement in the future.

5.1.2. Communication on clearance and survey

Improving communication at village level on clearance and survey processes is vital to help households plan effectively for how to use their land and to prevent situations where people are either not using land or are feeling anxious when they do. Clearer, simplified, and systematic communication for households that have had land surveyed or land cleared will increase understanding of the processes and confidence in the land cleared. Providing clarity about depth of clearance and which activities may be conducted safely on cleared land is important. Village authorities should also be kept informed on land surveyed and cleared within villages. The NRA should ensure that all operators have good systems of community engagement in place for adequately informing villagers, both men and women, about the UXO action undertaken on their land.

Clearance documentation should be provided to every household whose land has been cleared. Effort should be made to ensure that not just the head of the household but also that other adult members in a house know about the clearance. The sector may want to consider providing a

simplified cover sheet in Lao language as part of the clearance documentation provided, containing the essential information that villagers need to know. Similarly, having information regarding the CHA would be useful for villagers so that they know how much of their land is included within the CHA, whether areas not included within the CHA may still have contamination, and what implications this has for their farming.

5.1.3. Integrated planning for UXO clearance

The amount of land currently cleared for development projects is quite small (20%), but this could potentially be increased with more joined up planning and implementation at district and provincial level. Alignment of the provincial, district and village development plans with UXO clearance plans is critical to maximise the impact of UXO clearance.

Currently at provincial and district level, despite there being a thorough annual planning process at sector level which feeds up into the national-level socio-economic development plan, there is a lack of inclusion of planning for UXO clearance. Most of the clearance for development tasks is often submitted late once UXO clearance workplans are already in place, and so these development tasks are included within clearance workplans as “emergency tasks”. There is a need for proactive planning processes to be put in place so that sector plans can consider UXO clearance before the plans are approved, and to ensure that budgets are put in place. Village planning processes should also be supported to include consideration of UXO clearance.

The draft Safe Path Forward III notes that training had been provided to strengthen UXO management for provincial and district authorities to integrate UXO work into the socio-economic development plan in 15 provinces.⁷⁶ Since 2019, in Xiengkhuang province there has been an annual meeting in September when the NRA and PRA meet with departments in the province to discuss the priorities for development and the need for UXO clearance. This seems like a good system that could be strengthened and adopted more widely to ensure that UXO clearance is planned for development projects and that budgets are in place to fund the plans.

The capacity development project planned by NRA to support the district regulatory authorities may also help to support better planning processes and integration with other sectors.

5.1.4. Linking to development assistance

The consultants believe that linking UXO clearance explicitly to post-clearance development support will significantly maximise the gains of UXO clearance and support poverty alleviation and socio-economic development. In the villages visited, there were only a few examples of development support following UXO clearance on agricultural land, although it was clear that farmers who had received support in terms of seeds, training, the provision of new rice varieties or cash crops, and other agricultural support have been able to improve production and increase household incomes and overall livelihood resilience. The building of schools, health centres and other community infrastructure has provided new opportunities for villagers in terms of access to services and information. If provincial and district planning processes can be better integrated with UXO clearance planning, the benefits of UXO clearance can be maximised.

In addition to improving the integration of UXO clearance with sector planning at provincial and district level, it will also be important to continue to strengthen partnerships between the UXO sector and development organisations and extension services which can provide livelihood support to help villagers best use cleared land. This may require advocacy with development

⁷⁶ NRA, “National Strategic Plan for the UXO Sector in the Lao PDR 2021-2030: The Safe Path Forward III,” Vientiane Capital, June 2022, draft English translation.

organisations to create awareness of UXO contamination and the plans for clearance of CHA. Where possible formal partnerships could be built with the sector at national and at provincial level to promote support in areas cleared of UXO. If possible, changes to the MoU process should also be considered to enable UXO and development partners to collaborate, for example through multi-year projects or consortium projects which would require a more flexible MoU process.

In the meantime, there may be simpler ways to try to maximise the benefits of UXO clearance, such as an approach to draw on the expertise of organisations working in the same areas, rather than having a fully integrated approach.⁷⁷ More active dialogue with district agricultural departments may help to promote agricultural support to areas where UXO have been cleared. Operators may also be able to adjust workplans to allow clearance of more development tasks. For example, in 2023 UXO Lao will include about 20 hectares for development projects outside of CHA which will allow for clearance of irrigation, water supplies, health centres or school toilets.

⁷⁷ This was the approach being used by Humanity and Inclusion in Houaphanh province.

6. Conclusions and recommendations

Unpicking the complexities of livelihoods in rural areas of Lao PDR to understand how UXO clearance contributes to development and agriculture is challenging. However, through in-depth interviews and focus group discussions this study has found that UXO clearance has contributed to improvements in livelihoods and people's wellbeing in several areas.

Clearance reduces the risk that people are exposed to daily when living in contaminated areas. Clearance of land for community infrastructure has improved access to schools and health centres, and has provided opportunities for greater community interaction, information sharing, and the marking of important cultural ceremonies. UXO clearance of tourism sites has facilitated tourism and provided opportunities for villagers to earn income by selling handicrafts or food to tourists. Some households have also benefited from raising animals on land cleared of UXO. The contribution of clearance to improving agricultural productivity and income is less clear and other factors have more clearly contributed. Agricultural extension, bringing new techniques and seed varieties, has improved productivity, and increased market demand and food processing facilities have contributed to the ability of farmers to sell their produce. However, farmers reported feeling more confident to work on land that had been cleared, and clearance also enables farmers to extend their land. While farmers reported UXO clearance provided an opportunity or "open way" to invest, there was less evidence to suggest that investments occurred only because of UXO clearance, but rather that other factors also played a part. The mechanisation of farming and the use of tractors has occurred regardless of the clearance of UXO, although there are still questions about the safety of some activities which require farmers to dig the ground more deeply. The building and rehabilitation of infrastructure in terms of roads, water systems, irrigation and markets has contributed to the overall improvement of livelihoods and the connectivity of villages, and UXO clearance has clearly contributed to this where it has been undertaken.

However, in areas with UXO contamination, risk taking is still common. People interviewed often said that when they found UXO in their fields, they would remove the UXO to the side of the field so that they could continue farming. This was an action taken even if they also reported the UXO for the organisations to clear. A lack of information or understanding about survey and clearance processes and how clearance is prioritised creates frustration at village level and potentially hampers better land use planning and more proactive participation in clearance processes by villagers. There remains a lot of potential to improve and maximise the outcomes of UXO clearance through improved communication and outreach, joined-up planning at provincial and district level for task prioritisation, and strengthening of linkages to development organisations and agricultural outreach.

The recommendations from this study aim to support the NRA and UNDP in their work to strengthen the UXO sector and to help to maximise the development outcomes of clearance. The recommendations are as follows:

- In line with ongoing work, a clear, national-level prioritisation system for UXO clearance should be developed and implemented by all operators. The system should support clearance in high priority areas (CHA) that can contribute to poverty reduction targets. Work should be undertaken to clearly communicate the prioritisation process to village, district, and provincial authorities to enable them to actively contribute and participate in planning for UXO clearance.

- Review how villagers are informed about clearance and survey processes to ensure that landowners and people who farm the land are fully aware of UXO operations on their land and know how this may affect their ability to work the land. Strengthen community engagement processes to improve communication on these issues, ensuring that both men and women are involved and informed.
- As part of the handover documents provided to landowners and village chiefs, consider providing a clear summary sheet in Lao language to attach to the handover document for each household to explain the key information related to each clearance task. Ensure that handover documents are provided to all households where clearance has taken place.
- Consider discussing the issue of clearance depth and whether in some cases clearance may need to be to a deeper depth for certain land use such as ponds and fence posts, and shallower for other land use to speed up productivity.
- Support and strengthen district and provincial planning processes to include UXO clearance requirements and budget at the planning stages, and to ensure that development tasks can be included within annual clearance workplans, rather than added in as emergency tasks at a later stage. Consider ways to increase the number of development tasks that operators can take on every year, ensuring that the tasks are for humanitarian development and in poorer villages and districts.
- In contaminated provinces and districts with identified CHA, the NRA should advocate and liaise with development organisations, or support operators to do so, to improve opportunities for integrated UXO clearance and development projects. Support UXO organisations to work with district agricultural services and other services that could support livelihood improvement in areas that will be cleared of UXO. Consider and discuss other opportunities to encourage and enhance partnerships between UXO operators and development partners.
- Support risk education operators to respond to the habitual risk taking of people moving UXO when they find them so that they can continue farming, and to adapt messages to reflect changes in farming, including the use of tractors.

A photograph of a man in a green polo shirt and a wide-brimmed hat, smiling and holding a small plant in his right hand. He is standing in a field of tall green grass. The background shows a blue sky with white clouds and a dark, forested hill. The image is framed by a large, dark blue geometric overlay consisting of several diagonal lines and shapes. The word "ANNEXES" is written in white, bold, sans-serif capital letters in the bottom left corner of the blue overlay.

ANNEXES

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Annex 1: Literature Review

1.1. Country context

The Lao People's Democratic Republic (Lao PDR), is situated in mainland Southeast Asia, bordered by Cambodia to the southeast, China and Myanmar to the northwest, Thailand to the west and southwest, and Vietnam to the east. Lao PDR has a total population of around 7.1 million and has been among the fastest growing economic in Southeast Asia with an average growth rate of 7.8% between 2006 and 2016.⁷⁸

According to the World Bank, Lao PDR had a gross domestic product (GDP) per capita of 2,551 USD in 2021, a slight decrease from its GDP of 2,609 USD in 2020.⁷⁹ The UNDP Human Development Index (HDI), a composite index measuring average achievement in three basic dimensions of human development – a long and healthy life, knowledge, and a decent standard of living – ranked Lao as 142 out of 191 countries and territories in 2021, placing it in the category of medium human development.⁸⁰ In 2021, life expectancy at birth was 68.1 years, and the expected years of school attendance was 10.1 years. The HDI for Lao PDR has been on an upward trajectory, increasing from 0.405 in 1990 to 0.551 in 2010, and 0.608 in 2020, with a slight decrease to 0.607 in 2021. When the HDI is adjusted for inequality and gender development, Lao PDR ranked 140 out of 191 countries in 2021, with its HDI falling by 24.4% to 0.459, indicating inequalities in human development within the country.⁸¹

Poverty rates have fallen from 46% (2007-2008) to 18.3% (2018-2019).⁸² A 2022 World Bank report states that there is evidence to suggest that while poverty had reduced, income inequality is increasing.⁸³ The national poverty rate fell from 33.5% in 2003 to 23.2% in 2013 and to 18.6% in 2019. The COVID-19 pandemic was expected to reverse the downward trend and poverty was projected to rise to 21.5% in 2020.⁸⁴ However, despite improvements in living standards and access to basic services, poverty remains high, particularly among rural subsistence farmers and the minority ethnic groups.⁸⁵

Lao PDR is one of the most ethnically diverse countries in the region.⁸⁶ There are four main ethno-linguistic groups: Lao-Tai (62.4%), Mon-Khmer (23.7 percent), Hmong-Lu Mien (9.7%) and Chinese-Tibetan (2.9%). These groups are officially divided into 50 ethnic groups, although there are more than 200 ethnic sub-groups.⁸⁷ Major ethnic groups include Lao (53.2%), Khmu (11%) Hmong (9.2%), Phouthay (3.4%), and Tai (3.1%).⁸⁸ The ethnic Lao are mainly settled on the plains and practice wet rice cultivation, whereas the non-Lao ethnic groups, live in the peripheral mountainous areas and practice swidden (shifting) cultivation. Poverty rates are higher and educational attainment and

⁷⁸ United Nations, "Draft Country Programme Document for Lao PDR, 2022-2026," 2 June 2021, DP/DCP/Lao/4; and Eighth NSEDP mid-term review 2018.

⁷⁹ World Bank, "[GDP per capita, \(current US\\$\) – Lao PDR](#)," The World Bank Group, 2022, accessed 13 October 2022.

⁸⁰ UNDP, "[Human Development Report 2021-2022: Uncertain Times, Unsettled Lives: Shaping our future in a transforming world](#)," New York, UNDP, 2022.

⁸¹ UNDP, "[Human Development Report 2021-2022: Uncertain Times, Unsettled Lives: Shaping our future in a transforming world](#)," New York, UNDP, 2022.

⁸² World Bank, "[Lao People's Democratic Republic Poverty Profile and Poverty Assessment 2020](#)," 20, October 2020.

⁸³ World Bank, "[Systematic Country Diagnostic Lao PDR, 2021 Update: Executive Summary](#)," 2022.

⁸⁴ Government of Lao, "Voluntary National Review on Implementation of the 2030 Agenda for Sustainable Development," July 2021.

⁸⁵ World Bank, "[Systematic Country Diagnostic Lao PDR, 2021 Update: Executive Summary](#)," 2022.

⁸⁶ Open Development Laos, "[Ethnic Minorities and Indigenous People](#)," 28 August 2018.

⁸⁷ Open Development Laos, "[Ethnic Minorities and Indigenous People](#)," 28 August 2018.

⁸⁸ Lao Population and Housing Census, 2015, Lao Statistics Bureau.

access to services are lower among ethnic minority groups than among the ethnic Lao.⁸⁹ Language barriers limit access and comprehension of information.⁹⁰ Inequalities in Lao PDR have been reported to be increasing and structural barriers prevent those in poverty, in particular rural populations, ethnic minority groups and women, from realising their human rights.⁹¹ Gender inequalities remain high, especially in rural areas and among ethnic groups. Many women lack equal access to economic opportunities, resources, and decision-making institutions.⁹²

The population is not only diverse, but also young, with around 60% of the population under the age of 25.⁹³ The majority of the population live in rural areas. The 2015 Population and Housing Census recorded that over 60% of the population lived in rural areas and depended on subsistence agriculture.⁹⁴ Other reports have cited approximately 80% of people living in rural areas and practicing subsistence farming.⁹⁵ For these people, access to land and forests is essential for cultivating rice and vegetables, gathering forest products, raising animals, and accessing rivers for fishing, bathing, and drinking water. Land is a safety net.

Disabilities in Lao are often caused by UXO, road traffic accidents, disease, and congenital conditions. The 2015 Population and Housing Census indicated that more than 160,000 (2.7%) of people over five years of age were living with a disability. Disability prevalence is higher in remote geographic areas and among the ethnic groups.⁹⁶

The Government of Lao PDR plans to prioritise and prepare for graduation from its Least Developed Country (LDC) status over a five-year preparatory period from 2021–2026. According to the Ninth Social-Economic Development Plan (2021-2025), the country's major growth driver is its rich and diverse natural resources. Sectors highlighted for potential growth are agriculture, tourism, energy, and transport, with agriculture and tourism having the most potential for labour force participation.⁹⁷

Lao PDR ranked 87 out of 117 countries in the 2020 World Hunger Index and the proportion of hungry people was reported to have declined from 33% to 23% over the past decade. However, food insecurity is unevenly distributed across districts and low-income households and farm labourers were most likely to be affected by COVID-19.⁹⁸

Lao PDR has experienced some of the impacts of climate change and natural disasters that have affected lives and property in the last two to three years. The World Bank has highlighted that economic growth, which has relied on natural resources, particularly through mining, hydropower generation and agricultural activities, has resulted in natural resource depletion and environmental

⁸⁹ World Bank Group, "Why are Ethnic Minorities Poor? The Relative Effects of Endowments, Opportunities and Market Place Discrimination. Lao Poverty Policy Brief," 2017.

⁹⁰ Government of Lao, "Voluntary National Review on Implementation of the 2030 Agenda for Sustainable Development," July 2021.

⁹¹ UN OHCHR, "[Statement by Professor Philip Alston, United Nations Special Rapporteur on Extreme Poverty and Human Rights on his visit to Lao PDR, 18-28 March 2019](#)," 28 March 2019.

⁹² United Nations, "Draft Country Programme Document for Lao PDR, 2022-2026," 2 June 2021, DP/DCP/LAO/4.

⁹³ Ninth Five-Year National Socio-Economic Development Plan (2021-2025), Vientiane Capital, March 2021.

⁹⁴ Lao Population and Housing Census, 2015, Lao Statistics Bureau.

⁹⁵ UN OHCHR, "[Statement by Professor Philip Alston, United Nations Special Rapporteur on Extreme Poverty and Human Rights on his visit to Lao PDR, 18-28 March 2019](#)," 28 March 2019.

⁹⁶ Government of Lao, "Voluntary National Review on Implementation of the 2030 Agenda for Sustainable Development," July 2021.

⁹⁷ Ninth Five-Year National Socio-Economic Development Plan (2021-2025), Vientiane Capital, March 2021.

⁹⁸ Government of Lao, "Voluntary National Review on Implementation of the 2030 Agenda for Sustainable Development," July 2021.

degradation, increasing vulnerability when combined with climate change risks.⁹⁹ The Mekong River fell to record low levels in 2020 due to reduced rainfall and the operation of hydropower dams. In 2018, the collapse of a hydropower dam in Attapeu Province caused the worst flooding in decades, displacing over 6,000 people.¹⁰⁰ The COVID-19 pandemic has also had a negative effect on the country's socio-economic development, undermining progress towards achieving the 2030 Agenda for Sustainable Development.¹⁰¹ It was reported to have caused economic growth to have declined by 2.5% in 2020.¹⁰² Income shocks, as a result of the pandemic, were reported to have particularly affected vulnerable households.¹⁰³ Resilience in communities is low due to the prevalence of monoculture, lack of diversity in livelihoods, limited infrastructure, and remoteness of human settlements.

Lao PDR's National Green Growth Strategy 2030 is seen by the Lao Government as a key tool to ensure the meeting of its long-term socio-economic development objectives, in particular, LDC graduation and achieving the SDGs in 2030. The strategy aims to promote economic growth to improve the living standards of people in urban and rural areas and creating jobs and income generating activities; enhance the efficiency, effectiveness, and sustainability of the country's use of finite natural resources for maximum benefit, especially forest resources, land, minerals, water resources, water sources, and biodiversity, among others; and mitigating the risks and vulnerabilities of the country's economy in relation to natural disasters and the increasingly volatile global economic situation that is difficult to predict; and reducing or limiting the increase in pollution, waste, and greenhouse gas emissions that are the main causes of climate change, natural disasters and many diseases.¹⁰⁴

1.2. UXO contamination

Lao PDR has the world's highest level of contamination by unexploded submunitions, as a result of bombing by the United States (US) during the Second Indochina War, from 1964–1973.¹⁰⁵ During this period, more than 500,000 bombing missions dropped over two million tons of ordnance. US bombing data indicates that there are around 70,000 individual target locations across Lao PDR.¹⁰⁶ Among those, more than 270 million cluster submunitions (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%.¹⁰⁷ Some of the most common types of cluster munitions found in Laos include the BLU 26, BLU 3B, BLU 61, and BLU 63.¹⁰⁸

Extensive contamination from other explosive remnants of war (ERW) in Lao PDR include both air-dropped and ground-fired UXO. Over 186 types of munitions have been found in Lao, including

⁹⁹ World Bank, "[Systematic Country Diagnostic Lao PDR, 2021 Update: Executive Summary](#)," 2022.

¹⁰⁰ World Bank, "[Systematic Country Diagnostic Lao PDR, 2021 Update: Executive Summary](#)," 2022.

¹⁰¹ Ninth Five-Year National Socio-Economic Development Plan (2021-2025), Vientiane Capital, March 2021.

¹⁰² World Bank, "Economic Monitoring Report, 2020."

¹⁰³ World Bank, "[Systematic Country Diagnostic Lao PDR, 2021 Update: Executive Summary](#)," 2022.

¹⁰⁴ Ninth Five-Year National Socio-Economic Development Plan (2021-2025), Vientiane Capital, March 2021.

¹⁰⁵ The Second Indochina War is also referred to as the Vietnam War in the West and is known as the American War in Vietnam. The full conflict spanned 1955–1975 and encompassed civil wars in Vietnam, Lao PDR, and Cambodia, with the opposing sides backed by communist and anti-communist interests.

¹⁰⁶ [Lao PDR Convention on Cluster Munitions Article 7 Report](#) (for calendar year 2019), Form F, p. 4.

¹⁰⁷ Lao PDR [Convention on Cluster Munitions Article 4 deadline Extension Request](#), 26 February 2019.

¹⁰⁸ [Lao PDR Convention on Cluster Munitions Article 4 deadline Extension Request](#), Part B, detailed narrative, 26 February 2019, p. 5; and [Lao PDR Convention on Cluster Munitions Article 7 Report](#) (for calendar year 2019), Form F, p. 7.

bombs, artillery shells, grenades, and landmines.¹⁰⁹ Lao PDR is also contaminated to a lesser extent by antipersonnel and antivehicle mines.

All eighteen provinces¹¹⁰ in Lao PDR are reported to have UXO contamination and fifteen to have contamination by cluster munition remnants contamination, with nine heavily contaminated: Attapeu, Champasak, Huaphanh, Khammouan, Luangprabang, Salavan, Savannakhet, Xekong, and Xiengkhuang.¹¹¹ The heaviest contamination is found in Xiengkhuang province and along the former Ho-Chi Minh trail to the east of the country along the border with Vietnam.¹¹² Forty-two of the 46 poorest districts are affected by UXO, suggesting a correlation between contamination and the prevalence of poverty.

There is no reliable estimate of contamination by cluster munitions, mines or other ERW in Lao PDR. Extrapolation from US bombing records provided an estimate of contamination of 8,470km².¹¹³ A survey is being undertaken in Lao PDR that is intended to produce an evidence-based assessment of the extent of cluster munition contamination in the provinces where the survey is being undertaken. Survey is being conducted in six provinces funded by the US and limited survey is ongoing in another five provinces. As of the end of 2021, 1,523km² (152,300 hectares) of confirmed hazardous area (CHA) had been identified through survey.¹¹⁴ It is expected that this figure will rise as ongoing survey identifies and confirms contaminated areas.

Under United States funding, “proactive” survey has been ongoing in five provinces in the south (Attapeu, Champasak, Salavan, Savannakhet, and Xekong), and in Xiengkhuang province in the north with the operators (HALO Trust, MAG, and NPA), conducting survey in the villages assigned to them by the NRA at the beginning of the CMRS process. The villages assigned for survey focused on populated areas within provinces, and excluded some areas and villages in more remote or strategically important areas such as along national borders.¹¹⁵ When CMRS is complete in allocated villages, the operators will move to a “reactive” mode, undertaking survey based on reports of cluster munition findings in areas which weren’t included in the initial village task listing.¹¹⁶ In the provinces of Attapeu, Salavan, Savannakhet and Xekong, a baseline has been established in the surveyed villages, and survey is ongoing in Champasak and Xiengkhuang. Due to the high level of contamination in Xiengkhuang, discussions are also ongoing as to whether to continue with the survey or concentrate on clearance. However, Lao PDR has not yet been able to establish an accurate baseline of contamination across all UXO contaminated areas.

According to the NRA IMSMA dashboard, from 1997 until the end of 2022, a total of 772.70km² (77,270 hectares) has been cleared across 15 provinces and Vientiane capital, of which 603.43km² (60,343 hectares, 78%) was for agricultural land and 169.27km² (16,927 hectares, 22%) was land for development. At least 874,058 UXO have been cleared and destroyed, of which 591,326 were cluster munition remnants, 1,196 were mines, 867 were bombs, and 280,669 were other ERW. A

¹⁰⁹ Landmine and Cluster Munition Monitor, [Country Profile: Impact: Lao PDR](#), last updated 2 December 2020.

¹¹⁰ Officially 17 provinces and one prefecture, Vientiane capital.

¹¹¹ [Lao PDR Convention on Cluster Munitions Article 4 deadline Extension Request](#), Part B, detailed narrative, 26 February 2019, p. 1.

¹¹² [Lao PDR Convention on Cluster Munitions Article 7 Report](#) (for calendar year 2019), Form F; Lao PDR [Convention on Cluster Munitions Article 4 deadline Extension Request](#), 26 February 2019.

¹¹³ [Lao PDR Convention on Cluster Munitions Article 7 Report](#) (for calendar year 2020), Form F, p. 4.

¹¹⁴ [Lao PDR Convention on Cluster Munitions Article 7 Report](#) (for calendar year 2021), Form F, p. 6; Lao PDR Convention on Conventional Weapons (CCW) Protocol V Article 10 Report (for calendar year 2021), Form A.

¹¹⁵ The HALO Trust, for example, reported that it had surveyed 492 villages out of 1,010 in Savannakhet province.

¹¹⁶ Comment from Rupert Leighton, Chief Technical Advisor, UNDP.

total of 5,123,174 people were reported to be the beneficiaries of the clearance.¹¹⁷ The clearance of agricultural land is a top priority, as is the clearance of educational, community and government facilities, public infrastructure, and tourism sites.¹¹⁸ However, the figures show that far more land is cleared for agriculture than for other development purposes.

Cluster munition remnants and unexploded ordnance have killed and injured at least 50,899 people in Lao PDR between 1964 and 2021.¹¹⁹ In 2021, 35 incidents were recorded in Lao PDR, resulting in 63 casualties; a significant increase from 33 casualties in 2020 and 26 casualties in 2019. However, overall, the annual number of casualties in Lao PDR has decreased substantially from 304 in 2008 to 99 in 2011.¹²⁰ In 2022, a total of 13 incidents were recorded, resulting in 17 casualties.¹²¹

1.3.Provincial context: Bolikhamxai and Xiengkhuang

1.3.1. Bolikhamxai province

Bolikhamxai province is bordered by Xiengkhuang to the northwest, Vietnam to the east, Khammouane province to the south, and Thailand to the west. The province includes the Annamite Mountain range to the east towards Vietnam, while to the west are the Mekong River and Thailand.

Lao's largest hydroelectric project, Nam Theun 2 dam began operation in March 2010. The dam diverts water from the Nam Theun, a tributary of the Mekong River, to the Xe Ban Fai River and generates a capacity of 1,070MW of energy which is exported to Thailand. Along with Khammouane and Savannakhet provinces, Bolikhamxai is one of the main tobacco producing areas of Laos, and also one of the main producers of sugar cane and oranges.¹²² GDP in Bolikhamxai comprises agriculture (34%), industry (44%) and services (22%).¹²³

Bolikhamxai was one of four provinces that was reported to have seen an increase in poverty from 2013 to 2019.¹²⁴

The population of the province in 2021 was 320,000 (160,000 female),¹²⁵ distributed over seven districts: Pakxan, Thaphabat, Pakkading, Borikhane, Khamkeut, Viengthong, and Xaichamphon. According to the NRA dashboard, there have been 18 UXO accidents in Bolikhamxai between 2008 and 2022, resulting in 33 casualties, the majority of whom were men (13 injured, 5 killed) and boys (5 injured, 5 killed). Interestingly, the majority of casualties occurred in Pakxan district (4 incidents resulting in 14 casualties). Khamkeuth had 9 casualties from 8 incidents, and Vienthong had 5 casualties from 2 incidents.¹²⁶

¹¹⁷ NRA, "[IMSMA dashboard](#)," accessed 19 October 2022.

¹¹⁸ NRA, "National Strategic Plan for the UXO Sector in the Lao PDR 2021-2030: The Safe Path Forward III," Vientiane, June 2022, draft English translation.

¹¹⁹ Landmine and Cluster Munition Monitor, [Country Profile: Impact: Lao PDR](#), last updated 2 December 2020.

¹²⁰ NRA, "[IMSMA Dashboard](#)," undated; and Landmine and Cluster Munition Monitor, [Country Profile: Impact: Lao PDR](#), last updated 2 December 2020.

¹²¹ NRA, "[IMSMA Dashboard](#)," accessed 11 January 2022.

¹²² Wikipedia, Bolikhamxai Province, 2022

¹²³ Bolikhamxai Provincial Statistic Center, 2022

¹²⁴ Government of Lao, "Voluntary National Review on Implementation of the 2030 Agenda for Sustainable Development," July 2021. The other provinces were Xayabouly, Khammouan and Attapeu.

¹²⁵ Laos Statistical Information Services, 2022

¹²⁶ NRA, "[IMSMA Dashboard](#)," accessed 20 October 2022.

The Lao Army Humanitarian Demining Unit, Unit 58, has conducted survey and clearance in Bolikhamxai since 2017. As of August 2022, 18 villages in Khamkeuth district had been surveyed by Unit 58, and 2 villages in Viengthong.¹²⁷

District	# of villages	CHA tasks	CHA (m ²)	Clearance (m ²)
Khamkeuth	18	27	1,525,313 (152.53 ha)	438,523 (43.85 ha)
Viengthong	2	3	67,224m ² (6.72 ha)	0

KOICA is initiating a five-year project in Bolikhamxai province with will link rural development and UXO action. The project is to be implemented in cooperation with the Ministry of Agriculture and Forestry and the NRA and UXO sector. A new centre for training in rural development will be established and survey and clearance operations will be undertaken by Unit 58. Funding has been set aside to conduct a baseline and endline study to assess the impact of the project, including the impact of adopting an integrated approach to UXO and livelihood activities.¹²⁸

1.3.2. Xiengkhuang province

Xiengkhuang province is situated in the northeast of Lao PDR, bordering Vietnam. It consists of seven districts. The topography of Xiengkhuang includes the vast Plain of Jars plateau in the centre of the province, with mountainous areas on all sides. Xiengkhuang is on average 1,100 metres above sea level and the province experiences a temperate year-round climate.

Xiengkhuang province is the main maize producing area of Lao PDR. The provincial capital, Phonsavan, is the centre for trade and tourism.

The population of Xiengkhuang was 270,000 inhabitants of which 132,000 were female, in 2021.¹²⁹ The population comprises five main ethnic groups: Lao Phouan is the largest group, followed by Hmong, Phou Thai, and Khamu. The main economic activity is agriculture, including lowland and upland rice farming, animal breeding, and cash cropping.

Xiengkhuang is the second most severely UXO-contaminated province in the Lao PDR. UXO contamination includes the residue of many land battles that were waged throughout the entire period of the Indochina conflict, as well as the remnants of intense aerial bombing from 1964-1973.¹³⁰ As of December 2021, 1,628 CHAs had been identified in Xiengkhuang, comprising 767.94km² (76,794 hectares) across 244 villages.

The NRA dashboard records a total of 223 mine/UXO incidents between 2008 and 2022, resulting in 316 casualties. Of these men were the biggest group (106 injured and 29 killed), followed by boys (99 injured and 14 killed). Pek district had the greatest number of casualties at 129, followed by Kham with 61, Phaxai with 36, Khoun and Nonghed with 30 each, Phoukout with 24 and Mokmai with 6 casualties.¹³¹

¹²⁷ NRA, “[CHA dashboard](#),” accessed 19 October 2022.

¹²⁸ Rebecca Roberts and Kiengkay Oumany, “Moving towards achieving SDG 18: Removing the UXO obstacle to development in Lao PDR,” UNDP, 13 September 2021.

¹²⁹ Lao Statistics Bureau, Ministry of Planning and Investment

¹³⁰ UXO Lao: Lao National Unexploded Ordnance Programme

¹³¹ NRA, “[IMSMA Dashboard](#),” accessed 20 October 2022.

In Xiengkhuang, survey and clearance are conducted by UXO Lao and MAG since 2014/2015. The NRA CHA dashboard indicates that as of August 2022, 248 villages had been surveyed and CHA identified covering 868,610,000m² (86,861 ha). Of this, 71,744,232m² (7,174.42 ha) had been cleared, and 796,865,768m² (79,686.57 ha) was remaining to be cleared. UXO Lao works in the districts of Kham, Mokmai, Pek and Phoukout.

District	# of villages	CHA tasks	CHA (m ²)	Clearance (m ²)
Kham	36	129	20,897,198 (2,089.71 ha)	6,456,169 (645.61 ha)
Mokmai	2	3	258,813 (25.88 ha)	0
Pek	66	307	52,069,815 (5,206.98 ha)	20,124,771 (2,012.47 ha)
Phoukout	26	166	25,748,178 (2,574.81 ha)	12,502,761 (1,2502.76 ha)

1.4. Legal and Policy Framework for the UXO/Mine Action Sector

1.4.1. Convention on Cluster Munitions

Lao PDR became a State Party to the Convention on Cluster Munitions in March 2009, with the treaty entering into force on 1 August 2010. Under Article 4 of the Convention on Cluster Munitions, Laos was required to destroy all cluster munition remnants in areas under its jurisdiction or control no later than 1 August 2020. In January 2019, Lao PDR submitted an extension request which was approved at the Ninth Meeting of States Parties, confirming a new Article 4 clearance deadline of 31 July 2025. Due to the extent of contamination, it is unlikely that Lao PDR will meet this deadline, and it will be required to submit further requests to extend its Article 4 deadline.

Lao PDR is not a signatory to the Mine Ban Treaty, although it has indicated that mines may become more of a problem in some provinces as development progresses. Lao PDR joined the Convention on Conventional Weapons (CCW) in 1983 and has signed Additional Protocols I, II, III and V.

The Lausanne Action Plan (LAP) lays out a set of five-year strategic commitments to further states' efforts to address the impact of cluster munitions. The LAP was adopted by States Parties to the Convention on Cluster Munitions at the second review conference in September 2021 and covers the period 2021-2026. The LAP underlines that progress in implementing the Convention is essential not only to address the humanitarian consequences of these weapons, but also to advance the achievement of the Sustainable Development Goals, the promotion of international peace and security, human rights, and international humanitarian law.¹³² Action 23 of the LAP states that States Parties should "Ensure that activities related to survey and clearance are given due priority based on clear nationally driven humanitarian and sustainable development criteria, which take account of environmental concerns, and that national programmes consider gender, as well as and the diversity of populations in all appropriate activities related to survey and clearance of

¹³² Convention on Cluster Munitions, "[Lausanne Action Plan](#)," September 2021, p.3.

cluster munition remnants within affected communities.” The LAP also states that “all States Parties should apply evidence-based land release methodology, taking into account the IMAS, and explore innovative approaches and new ways of working to improve programme performance.”¹³³

A recent evaluation of UNDP support to the UXO Sector noted that the approaches within the sector have been shaped by obligations to the CCM, with a focus on survey and clearance, which could be at odds with the Lao aspiration to promote development and the achievement of the SDGs.¹³⁴ This was based on the fact that marginalized groups tend to live in more remote and less accessible areas that are harder to clear than more densely populated and developed area. The evaluators concluded that “A ‘no one left behind,’ approach to UXO Action is likely to reduce clearance rates because the geographical areas are technically more difficult to clear and may not support the country’s macro-economic development and progress towards the SDGs as effectively as focusing on interventions in the more accessible populated areas.”

1.4.2. SDG 18

The 2030 Agenda for Sustainable Development, adopted by United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet. At its heart are 17 Sustainable Development Goals (SDGs) which aim to end poverty, protect the planet, and improve the lives and prospects of everyone everywhere.

Recognizing the contribution that the clearance of UXO can make towards the reduction of poverty and hunger, the improvement of health, education, and well-being, and towards other development targets, in 2016 the Government of Lao launched an 18th Sustainable Development Goal (SDG 18): Lives Safe from UXO. The current indicators and targets for this SDG 18 area as follows:¹³⁵

SDG 18: Lives Safe from UXO		
Targets	Indicators	Links to other SDGs
18.1 By 2030, ensure that annual casualties from UXO accidents are eliminated to the extent possible	18.1.1 Number of reported UXO casualties disaggregated by age group 18.2.2 Percentage of population in contaminated villages (disaggregated by age group, sex and persons with disabilities)	SDG 3: Health and well-being SDG 10: Reduced inequalities SDG 11: Sustainable cities and communities
18.2 By 2030, ensure that residual UXO activities undertaken and all known UXO contamination in high priority areas and all villages defined as ‘poor’ cleared	18.2.1 Percentage of high priority hazardous areas remaining to be cleared (disaggregated by high priority villages) 18.2.2 Number of villages defined as ‘poor’ with confirmed hazardous areas remaining to be cleared	SDG 1: No poverty SDG 2: Zero hunger SDG 4: Education SDG 11: Sustainable cities and communities

¹³³ Convention on Cluster Munitions, “[Lausanne Action Plan](#),” September 2021, pp.9-11.

¹³⁴ Rebecca Roberts and Kiengkay Oumany, “Moving towards achieving SDG 18: Removing the UXO obstacle to development in Lao PDR,” UNDP, 13 September 2021.

¹³⁵ Extracted from Rebecca Roberts and Kiengkay Oumany, “Moving towards achieving SDG 18: Removing the UXO obstacle to development in Lao PDR,” UNDP, 13 September 2021. The SDG 18 indicators were in the process of being revised at the time this impact assessment report was written.

18.3 ¹³⁶ By 2030, ensure that all identified UXO survivors and victims have their needs met in health, and support provided for livelihoods/employment to the most poverty-risk survivors	18.3.1 Proportion of active age UXO survivors unable to earn sufficient income with access to basic income security 18.3.2 Percentage of UXO survivors and victims mainstreamed into health, education, and employment services	SDG 3: Health and well-being SDG 5: Gender equality SDG 8: Decent work and economic growth SDG 10: Reduced inequalities
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The NRA monitors progress towards the SDG indicators on an annual basis.¹³⁷

1.4.3. UXO targets in 9th National Socio-Economic Development Plan

The Safe Path Forward III and the UXO Sector Multi-Year plan are designed to contribute to Lao PDR's ninth National Socio-Economic Development Plan for 2021-2025, approved by the Minister for Planning and Investment in May 2021.¹³⁸

UXO clearance is included in the plan as Output 6, UXO clearance and lives safe from UXO, under Outcome 3: Enhanced wellbeing of people. The plan notes that UXO contamination is a priority issue with important implications for poverty alleviation, land use for agricultural production, habitation, tourism, or access to natural resources, posing a major challenge to socio-economic development and a threat to human lives. It notes that despite the progress in clearing UXO from agricultural land, construction land and other development project areas, the areas cleared of UXO so far are not sufficient to meet the needs.¹³⁹

The plan includes the following five-year targets and indicators for clearance and survey:

- To conduct non-technical surveys to identify confirmed hazardous areas (CHA) in 2,776 villages, and technical survey to identify CHA on 250,000 hectares, and average of 50,000 hectares per year.
- To clear UXO on 50,000 hectares of agricultural land, community areas and economic centres, and average of 10,000 hectares per year.

Target for risk education and victim assistance are also included in the plan.

The clearance target, to clear an average of 10,000 hectares (100km²) per year of land for socio-economic development purposes will require more capacity and improved efficiencies directed to clearance. Over the last five years, from 2017 – 2021, Lao PDR has cleared a total of 280.41km², an average of around 56km² per year.¹⁴⁰ In 2021, Lao PDR reported clearing 45.57km².¹⁴¹

The NSEDP lists priority activities to include conducting more non-technical survey and technical survey, increasing clearance operations, and strengthening of UXO clearance agencies in terms of technical capacity, coordination, effective planning, and responsibility of each sector. It also notes the need to increase coordination between government and civil society organizations, which play an important role in assisting the government in the implementation of UXO clearance.

¹³⁶ Survivors refers to people who have been injured in an explosive ordnance accident. Victims refers to the relatives of those who were killed and, as a consequence, require support.

¹³⁷ See, NRA, "[UXO Operational Dashboard](#)," accessed 19 October 2022.

¹³⁸ Lao PDR, "[Ninth Five-Year National Socio-Economic Development Plan](#) (2021-2025)," Vientiane Capital, March 2021.

¹³⁹ Lao PDR, "[Ninth Five-Year National Socio-Economic Development Plan](#) (2021-2025)," Vientiane Capital, March 2021, p.79.

¹⁴⁰ See Lao PDR Convention on Cluster Munitions Article 7 reports (for calendar year 2018-2022).

¹⁴¹ [Lao PDR Convention on Cluster Munitions Article 7 Report](#) (for calendar year 2021), Form F, p. 13.

The draft Safe Path Forward III noted that training had been provided to strengthen UXO management for provincial and district authorities to integrate UXO work into the socio-economic development plan in 15 provinces.¹⁴²

Despite the inclusion of UXO action into development policies and Lao PDR's own specific SDG to address the impact of UXO contamination, a recent UNDP evaluation noted that the GoL recognized the limited integration of UXO action into other sectors for development.¹⁴³ As with the UXO project intended development outcomes, it is unclear how the UXO sectors contribution to the SDGs and national development plans can be measured as the identified indicators tend to be countable outputs.

Another practical challenge that potentially inhibits integrated clearance and development projects is reported to be the system for MoU approval which, according to the Ministry of Foreign Affairs rules, does not allow a consortium of international organizations in the same MoU or for projects to cover more than one province in the same framework. The complex MoU process was also reported to cause notable delays, impeding implementation of survey and clearance, and in some cases preventing the spending of international funding or discouraging smaller donors.¹⁴⁴

1.4.4. The Safe Path Forward III, 2021-2030

The new national UXO Sector Strategy, The Safe Path Forward III, 2021-2030, was developed under the leadership of the NRA.¹⁴⁵ It is the third sector strategy, following on from the Safe Path Forward II, 2011-2020, and the Safe Path Forward I, 2003-2010. UNDP supported the development of the strategy and the process included consultation with the key stakeholders, including the international mine action operators. A draft of the Safe Path Forward III was completed in June 2022 and has been approved by the government. An English translation is being finalized.

The draft Safe Path Forward III details the objectives of the government and its development partners with the aim to reduce the humanitarian and socio-economic threats posed by UXO. It is designed to contribute to the implementation of the CCM, the SDGs 2030, and the 9th NSEDP. A key focus of the new plan is the need to ensure strong integration with development mechanisms, particularly at a provincial level, and to ensure actions are focused on community level priorities for the facilitation of development.¹⁴⁶ The overall vision combines the desire for a safer environment for Lao people and the acceleration of the socio-economic development of the country. The four goals and accompanying targets relate to risk education, clearance, victim assistance and management of the UXO sector. The targets are to:

- Reduce the number of UXO casualties to less than 380 people over 10 years (averaging less than 38 casualties per year)
- To undertake survey to identify 250,000 hectares of CHAs
- To conduct clearance of UXO from 100,000 hectares of land for agricultural and development purposes

¹⁴² NRA, "National Strategic Plan for the UXO Sector in the Lao PDR 2021-2030: The Safe Path Forward III," Vientiane Capital, June 2022, draft English translation.

¹⁴³ Rebecca Roberts and Kiengkay Oumany, "Moving towards achieving SDG 18: Removing the UXO obstacle to development in Lao PDR," UNDP, 13 September 2021.

¹⁴⁴ Mine Action Review, "[Clearing Cluster Munition Remnants 2022](#)," NPA, 1 August 2022.

¹⁴⁵ UNDP, "Background paper for UXO donor and media field visit," 31 March– 2 April 2021.

¹⁴⁶ Terms of Reference, UNDP Impact Assessment for UNDP's UXO Clearance Support, 2022.

- To support 11,400 UXO victims including livelihood development for better integration into society; and
- To integrate UXO activities into relevant sector plans.

The strategic objectives and related activities outlined in the strategy and of relevance to UXO clearance impact assessment are:

Strategic Objective 2: High priority land is cleared from UXO and put to productive use	
Main Focus 2: Effective UXO survey and clearance	<ul style="list-style-type: none"> • Develop a prioritization system as part of national planning • Develop tools and methodology to calculate and analyse costs for survey and clearance to promote the effective utilization of funds • Identify tools to monitor short- and long-term land use after clearance
Strategic Objective 4: The UXO Sector is managed effectively and efficiently	
Main Focus 4: The management of the UXO sector is prompt, efficient and effective in line with national and international standards	<ul style="list-style-type: none"> • Improve the management of the sector to better coordinate, regulate, and integrate UXO work into the national socio-economic development plan and the work of relevant sectors from central and local levels in a harmonious, efficient and effective manner

A new five-year work plan for the sector still has to be developed to replace the 2016–2020 workplan.¹⁴⁷ The four key priorities of the last workplan included: conduct of risk education in 3,000 villages; conduct of non-technical survey in 2,776 villages; conduct of technical survey to identify CHAs totalling 250,000 hectares; conduct of area clearance for land release of 50,000 hectares.¹⁴⁸

1.4.5. Convention on Rights of Persons with Disability

Lao PDR ratified the Convention on the Rights of Person with Disabilities (CRPD) in September 2009. Article 5 of the Convention on Cluster Munitions is consistent with the CRPD in that it requires State Parties, to support UXO survivors through medical care, rehabilitation, psychological support, and socioeconomic inclusion. Processes are ongoing within the GoL to advance the rights of persons with disabilities.¹⁴⁹

A Decree on the Rights of Persons with Disabilities (Decree No.137, 2014), which outlines the rights of Persons with Disabilities in line with the CRPD, was approved by the Prime Minister in January 2019. A policy and action plan on Persons with Disabilities was being developed which would include UXO victim assistance.¹⁵⁰

The 2014-2020 UXO/Mine Victim Assistance Strategy (2014-2020) aims to facilitate the integration of victim assistance into the broader provision for assistance for persons with disabilities. A new Victim Assistance Framework for 2021–2025 was in the process of being developed in 2021.¹⁵¹

¹⁴⁷ UNDP, “Background paper for UXO donor and media field visit,” 31 March– 2 April 2021.

¹⁴⁸ Lao PDR Convention on Cluster Munitions Article 7 Report (for calendar year 2021), Form J, pp.26-27.

¹⁴⁹ Landmine and Cluster Munition Monitor, [Country Profile: Impact: Lao PDR](#), last updated 2 December 2020.

¹⁵⁰ [Lao PDR Convention on Cluster Munitions Article 7 Report](#) (for calendar year 2019), Form H, p. 16.

¹⁵¹ Lao PDR Convention on Cluster Munitions Article 7 Report (for calendar year 2021), Form H, p.20.

Victims of UXO are also included within the National Policy, Strategy and Action Plan on People with Disabilities for 2021-2030 which was validated by the government in October 2020.¹⁵²

1.5. UXO Sector Operations

1.5.1. Humanitarian Mine Action Operators

There are currently six operators (two national and four international) conducting humanitarian mine action in Lao PDR:

UXO Lao: UXO Lao is a government organization working under the Ministry of Labour and Social Welfare and operating in nine provinces (Attapeu, Champassak, Houaphanh, Khammouane, Luang Prabang, Savannakhet, Salavan, Xekong, and Xiengkhuang).

Lao Armed Forces Humanitarian Demining teams (Unit 58): Unit 58 began work in 2013. Unit 58 had seven teams in 2021 and conduct clearance and survey. Unit 58 is conducting clearance and survey in Bolikhamxai province with Korean government support through UNDP.

The HALO Trust: The HALO Trust began work in Lao PDR in 2012 and conducts survey and clearance in Savannakhet province.

Humanity and Inclusion (HI): HI has been present in Lao since 1997, and conducts survey and clearance in Houaphanh province, where it also provides capacity building support to the provincial NRA. HI was also expecting to extend its work into Phongsaly province.

Mines Advisory Group (MAG): MAG has worked in Lao since 1994 and is the largest international survey and clearance operator. It is operational in Xiengkhuang province in the north and Khammouane province in the south.

Norwegian People's Aid (NPA): NPA has been operational in Laos since 2007, and works in the four southern provinces of Attapeu, Champassak, Salavan, and Xekong.

1.5.2. National Mine Action Standards

Lao PDR has 24 national UXO/mine action standards, published in both Lao and English, covering survey, clearance, risk education, victim assistance, structure and organization of the sector, medical support, and information management.¹⁵³ The National UXO Mine Action Standards (NMAS) were developed and issued by the NRA in 2012. The NMAS are due to be revised during 2023. They are aligned with the International Mine Action Standards.

The Lao National Standard Chapter 20 addresses Post Clearance Assessment and was last updated on 15 October 2012. The standard states that the aim of UXO clearance is to provide safe land and to reduce the impact of UXO. The three main requirements outlined in the standard for PCA are to: identify if land is being used; if any UXO have been found on the released land; and if further UXO action is needed. The PCA assessments are to be conducted between 6 months and 8 months after land is released. It is noted that the process and procedure for conduct of PCA to provide information to assess impact at a strategic level were still under development. Annex A contains a list of indicators of change to be measured following clearance.¹⁵⁴

¹⁵² Landmine and Cluster Munition Monitor, [Country Profile: Impact: Lao PDR](#), last updated 2 December 2020.

¹⁵³ NRA, "[Resources](#)," undated.

¹⁵⁴ NRA, "Lao PDR National UXO/Mine Action Standard, Chapter twenty: Post Clearance Assessment," 15 October 2012. See NRA, "[Resources](#)."

The PCA standard notes that clearance should only take place on land which is planned to be used within six months of clearance. Chapter Six, the standard on Survey, and Chapter Seven, the Standard on UXO clearance operations, both state that all land identified for clearance should either be high priority/high value in accordance with Lao PDR's MDG 9, or in accordance with the current UXO sector strategy, or some other priority specified by the NRA. The selection in provinces is to be coordinated by the NRA provincial offices after consultation with stakeholders including UXO affected communities and UXO clearance organisations.¹⁵⁵

The national standards make a clear distinction between UXO clearance and mine clearance, with a standard for UXO clearance operations and a separate standard for mine clearance operations.

The 2018 National Standards on Survey in Lao PDR state that non-technical survey is to be carried out on all land within a village boundary, with the aim of identifying evidence points for technical survey. Where possible, cluster munition remnants and UXO identified during non-technical survey are recorded and destroyed the same day, allowing villagers to see action being taken on the information they have provided. Technical survey is only carried out based on cluster munition evidence points and is conducted in whole villages.

The Mine Action Review (MAR) has reported that according to draft UXO Survey Procedures of September 2017, clearance must only be conducted in CHAs, unless either “official agreements with the NRA permit a dispensation” or “the UXO clearance is being paid for by a client and 100% clearance without survey is a requirement of the agreement”.¹⁵⁶ It was noted that the NRA had also said that degree of flexibility was required to accommodate donor stipulations which sometimes require full clearance of UXO in non-CHAs, for development projects such as schools, and there is an official procedure for such instances, although it was not stated where this official procedure is documented.¹⁵⁷

1.5.3. Information Management

The NRA operates a national-level Information Management System for Mine Action (IMSMA) database.¹⁵⁸ Data is also available online on the NRA website¹⁵⁹

Commentators have observed that the national IMSMA database has several problems, including incorrect or incomplete historical data, mainly UXO Lao data stored in hard-copy documents in provincial UXO Lao offices), data that has been incorrectly recorded, missing data, and delays in entering corrected data into the database.¹⁶⁰

NPA has provided support to strengthen the information management of the NRA and provincial authorities. The NMAS for Information Management has been revised, and capacity development was provided for provincial authorities in Attapeu, Champassak, Salavan and Xekong to access and use the IMSMA database. The training was also conducted in the remaining 11 provinces by the NRA.¹⁶¹

¹⁵⁵ NRA, “Lao PDR National UXO/Mine Action Standard, Chapter six: Survey,” 15 October 2012; NRA, “Lao PDR National UXO/Mine Action Standard, Chapter seven: UXO Clearance Operations,” 15 October 2012. See NRA, “[Resources](#).”

¹⁵⁶ Mine Action Review, “[Clearing Cluster Munition Remnants 2022](#),” NPA, 1 August 2022.

¹⁵⁷ Mine Action Review, “[Clearing Cluster Munition Remnants 2022](#),” NPA, 1 August 2022.

¹⁵⁸ NRA, “[Resources](#),” undated.

¹⁵⁹ See NRA, “[UXO Operational Dashboard](#).”

¹⁶⁰ Mine Action Review, “[Clearing Cluster Munition Remnants 2022](#),” NPA, 1 August 2022.

¹⁶¹ Mine Action Review, “[Clearing Cluster Munition Remnants 2022](#),” NPA, 1 August 2022.

An IMSMA virtual private network (VPN) has been rolled out and is used by all operators, except for UXO Lao. This is reported to have improved the accessibility of data, the speed and quality of data entry, and the reporting process. However, operators can only access their own data within IMSMA, and have to formally request additional data.¹⁶²

The 2021 UNDP evaluation recommended that there should be greater sharing of IMSMA data so that all stakeholders can contribute to analysis and also draw on the information to inform their own programmes.¹⁶³

1.5.4. Cluster munition remnants survey (CMRS)

Up to 2015, operators in Lao carried out general survey on areas for clearance and cleared UXO as roving tasks based on requests and reports from villagers. No baseline existed regarding the extent of cluster munition remnants contamination in Lao PDR.¹⁶⁴ In 2015, the sector adopted an evidenced-based survey methodology, the Cluster Munition Remnants Survey, designed to produce Lao PDR's first baseline estimate of cluster munition remnants contamination.¹⁶⁵

The Cluster Munitions Remnants Survey (CMRS) is designed to support Lao PDR to implement its Convention on Cluster Munitions Article 4 obligations by enabling an efficient, effective survey to inform and support planning and prioritisation of clearance activities. It applies non-technical survey and technical survey procedures to identify and define a confirmed hazardous area from a cluster munition evidence point. Boundaries of a CHA contaminated by cluster munition remnants are defined based on direct evidence from the surveys and will be used to support planning and prioritisation of clearance. The survey intends to ensure the utilization of evidence-based survey that enables clearance only of areas with confirmed contamination.

Survey is being conducted in six provinces funded by the United States, and limited survey is ongoing in another five provinces. The HALO Trust completed proactive survey in 492 identified villages in Savannakhet province in August 2022 and was starting survey in an additional 42 villages.¹⁶⁶ NPA had completed survey in 654 allocated villages in Attapeu, Champasak, Sekong, and Salavan.¹⁶⁷ Once proactive survey is completed within provinces, operators expect to work in a reactive mode, conducting survey when cluster munition remnants findings are reported. The operators are also increasing the numbers of clearance teams to facilitate clearance of identified CHA.

Operator	Province
HALO Trust	Savannakhet
HI, UXO Lao	Houaphanh, Phongsaly
MAG, UXO Lao	Xiengkhuang, Khammouane
NPA, UXO Lao	Attapeu, Champasak, Salavan, and Sekong
Unit 58	Bolikhamxai

¹⁶² Mine Action Review, "[Clearing Cluster Munition Remnants 2022](#)," NPA, 1 August 2022.

¹⁶³ Rebecca Roberts and Kiengkay Oumany, "Moving towards achieving SDG 18: Removing the UXO obstacle to development in Lao PDR," UNDP, 13 September 2021.

¹⁶⁴ [Lao PDR Convention on Cluster Munitions Article 4 deadline Extension Request](#), 26 February 2019.

¹⁶⁵ NRA, "From Survey to Safety, Quantifying and Clearing UXO Contamination in Lao PDR," March 2016; and Lao PDR, "[The Safe Path Forward II: National Strategic Plan for the UXO Sector in the Lao People's Democratic Republic 2011–2020](#)," 22 June 2012.

¹⁶⁶ Interview with Cameron Imber, the HALO Trust, 3rd November 2022.

¹⁶⁷ Interview with Aubrey Sutherland, NPA, 3rd November 2022.

Lao PDR's 2019 Article 4 deadline extension request reported that 858.29km² of CHA had been identified through survey.¹⁶⁸ As of the end of December 2021, the total extent of CHA had increased to 1,522.79km² due to ongoing survey.¹⁶⁹ According to the NRA CHA dashboard, a total of 1,664.25km² of CHAs have been identified by August 2022.¹⁷⁰

The current baseline of CMR contamination is being established through inclusive consultation with women, girls, boys, and men, including, where relevant, from minority groups, during non-technical survey at the village level¹⁷¹ However, according to the NRA, understanding of the CMRS process at local level is sometimes limited. UXO Lao reported that rural populations do not always understand the change from request-based to evidence-based clearance.¹⁷² It is especially important that villagers fully understand that, despite demolition of UXO during the CMRS process, CHAs identified through survey remain hazardous until full clearance has taken place, which may not be for many years.¹⁷³

The 2021 UNDP evaluation noted that critics have pointed to the focus on survey leading to a reduction in clearance and frustrated populations that see survey but no clearance.

1.5.5. UXO Clearance

As progress continues with the CMRS, there is a planned shift towards increasing clearance capacity and reducing survey capacity to clear the CHA identified during the CMRS. It is expected that as the survey is evidence-based, it should result in more munitions being cleared per Hectare, improving output efficiency, but not necessarily translating directly to impact.¹⁷⁴ The time gap between the conduct of survey and the eventual clearance of land is another factor that could impact use of the land, the expectations of the landowners and the eventual development outcomes.

In its 2019 Article 4 extension request, Lao PDR outlines three different estimates for CMR clearance during 2020-2025, as follows:¹⁷⁵

Clearance output per year					5-year cost	5-year clearance output
2020/21	2021/22	2022/23	2023/24	2024/25		
50km ²	50km ²	50km ²	50km ²	50km ²	USD 62.5 million	250km ²
60km ²	100km ²	150km ²	210km ²	280km ²	USD 200 million	800km ²
120km ²	200km ²	300km ²	420km ²	560km ²	USD 400 million	1,600km ²

¹⁶⁸ [Lao PDR Convention on Cluster Munitions Article 4 deadline Extension Request](#), Part B, detailed narrative, p. 7; and NRA, "From Survey to Safety, Quantifying and Clearing UXO Contamination in Lao PDR," March 2016.

¹⁶⁹ [Lao PDR Convention on Cluster Munitions Article 7 Report](#) (for calendar year 2021), Form F, p. 6; Lao PDR Convention on Conventional Weapons (CCW) Protocol V Article 10 Report (for calendar year 2021), Form A; and NRA, "[UXO Operational Dashboard](#)," accessed 19 October 2022.

¹⁷⁰ NRA, "[CHA Dashboard](#)," accessed 19 October 2022.

¹⁷¹ MAR, "Clearing Cluster Munitions Remnants 2022," NPA 1 August 2022, Emails from Mark Frankish, UNDP, 26 August 2020; Chomyaeng Phengthongsawat, NRA, 21 June 2021; and Douangsy Thammavong, NRA, 20 June 2022.

¹⁷² Rebecca Roberts and Kiengkay Ounmany, "Moving towards achieving SDG 18: Removing the UXO Obstacle to development in Lao PDR," UNDP, 13 September 2021.

¹⁷³ Mine Action Review, "[Clearing Cluster Munition Remnants 2022](#)," NPA, 1 August 2022.

¹⁷⁴ Rebecca Roberts and Kiengkay Ounmany, "Moving towards achieving SDG 18: Removing the UXO Obstacle to development in Lao PDR," UNDP, 13 September 2021.

¹⁷⁵ [Lao PDR Convention on Cluster Munitions Article 4 deadline Extension Request](#), 26 February 2019.

The clearance capacity rate in Lao PDR was about 50km² (5,000 hectares) per year at the time of the extension request submitted by Lao PDR in 2019.¹⁷⁶ The number of technical survey and area clearance teams funded by the United States increased from 123 teams (across four operators – UXO Lao, HALO Trust, MAG and NPA) to 190 teams in 2021, and 223 teams in 2022.

The minimum clearance depth in Lao PDR depth is 25cm, which is intended to capture all surface and shallow CMR contamination.¹⁷⁷

No planned or systematic landmine clearance is currently conducted in Lao PDR. According to the NRA, responsibility for clearance of mined areas predominantly falls under the remit of the Lao People's Armed Forces, and if mines are discovered, the army is called to destroy them.¹⁷⁸ International mine action organizations are not accredited to clear mines in Lao PDR but can remove individual mines if found during operations. In 2021, 56 mines were reported to have been destroyed by operators.¹⁷⁹ However, HI, who is working in Houaphanh province, was expecting funding to enable it to start clearance of landmine contaminated areas identified in the province. The capacity of the NRA to undertake quality management of mine clearance operations will need development.

1.5.6. Prioritisation

Transparent prioritisation systems establish agreed criteria to decide what clearance tasks should be done first. However, there are currently no national policies or standards as a basis for determining national clearance priorities.

A study conducted in 2017 concluded that national level criteria for prioritising clearance are generalise. In the absence of agreed criteria, each UXO operator uses its own criteria to assist decision making and work planning. Decisions made at national level are informed by policies, whereas at the operational level decisions are influenced by local priorities from the provincial and district authorities and by operators based on technical considerations.¹⁸⁰ The study also found that most local level prioritisation decisions appeared to be made by the UXO operators, with minimal input from district and provincial-level authorities. The report recommended the development of policy for the prioritisation of UXO clearance, which includes clear definitions of priorities relevant to the UXO sector, plus an accompanying set of criteria to determine those priorities and a set of indicators to measure progress towards those criteria.¹⁸¹

UXO Lao and JICA have developed a computerized prioritisation system which is being piloted in three provinces. The criteria are used to identify priority areas for the annual workplan and include: CHA; GoL or provincial focal development area; socio-economic status of the village; number of poor families.¹⁸²

¹⁷⁶ See, [Lao PDR Convention on Cluster Munitions Article 4 deadline Extension Request](#), 26 February 2019..

¹⁷⁷ Mine Action Review, "[Clearing Cluster Munition Remnants 2022](#)," NPA, 1 August 2022.

¹⁷⁸ Lao PDR National UXO/Mine Action Standards, "Chapter 12: Mine Clearance Operations," undated, p. 5.

¹⁷⁹ [Lao PDR Convention on Cluster Munitions Article 7 Report](#) (for calendar year 2020), Form F, p. 7.

¹⁸⁰ Kathryn Sweet, "Prioritisation Policy, Procedures and Practices relating to UXO clearance in Lao PDR," GICHD and NRA, Vientiane Capital, September 2017.

¹⁸¹ Kathryn Sweet, "Prioritisation Policy, Procedures and Practices relating to UXO clearance in Lao PDR," GICHD and NRA, Vientiane Capital, September 2017.

¹⁸² Rebecca Roberts and Kiengkay Ounmany, "Moving towards achieving SDG 18: Removing the UXO Obstacle to development in Lao PDR," UNDP, 13 September 2021.

The NRA, in conjunction with Tetra Tech and UNDP, was in the process of development of a nationwide prioritisation system. It was expected that the prioritisation system would be finalised in 2023.

In November 2020, the NRA conducted initial capacity building for provincial authorities on identifying priority areas following the National Standard combined with the Socio-Economic Development Plan, to help inform non-technical survey, technical survey, and clearance plans. However, COVID-19 impacted the implementation of the training and only five out of the planned fifteen provinces had been reached.¹⁸³

In its latest Article 7 report, Lao PDR reported that due to limitations in clearance capacity and technology, clearance tasks cannot always cover the entire village, and clearance is often conducted on multiple occasions in order to clear all contaminated areas in a village.¹⁸⁴

1.5.7. Gender and diversity

The CCM requires State Parties to address the needs of vulnerable groups and to ensure that UXO sector interventions are gender sensitive.

Lao PDR ratified the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) in 1981 and promulgated the Law on the Development and Protection of Women in 2004. Lao PDR has also signed the Association of Southeast Asian Nations (ASEAN) Declaration on the Elimination of Violence Against Women in the ASEAN Region. The country's 1991 Constitution guarantees equal rights for women and men and the National Commission for the Advancement of Women (NCAW), created in 2003, is responsible for promoting gender equality and empowering women.

The NRA is reported to have adopted a Gender Equality Strategy in 2011. In 2014 a decree on the establishment of the NRA board made the LWU one of the board members.¹⁸⁵ The UXO sector had been working with UN Women to develop a manual for gender mainstreaming in Lao PDR and UNDP was planning to begin a training of trainers for gender mainstreaming.¹⁸⁶

International clearance operators were reported to have gender policies in place and to disaggregate all data by sex and age. International operators were also reported to have put measures in place for considering diversity consideration into their survey and clearance programming, such as inclusion of minority ethnic groups and language groups, and persons with disabilities.¹⁸⁷ It is unclear how effective local level consultations are, and whether women in contaminated areas are systematically consulted about survey and clearance operations.

The knowledge and understanding of clearance and survey operations by communities may differ depending on which operators are working in the area. The recent UNDP evaluation found that differences in budget allocation or use of funding may explain some of the differences, with international operators better at liaising with and supporting the communities in which they work, for example staying within communities or paying local populations to clear vegetation. The extent to which provincial and district NRA staff liaise with local populations also does not seem to happen

¹⁸³ Mine Action Review, "[Clearing Cluster Munition Remnants 2022](#)," NPA, 1 August 2022.

¹⁸⁴ Lao PDR Convention on Cluster Munitions Article 7 Report (for calendar year 2021), Form F.

¹⁸⁵ UNDP Lao PDR, "[Moving Towards Achieving SDG 18: Removing the UXO Obstacle to Development in Lao PDR](#)," undated. See also, the NRA's [list of board members](#).

¹⁸⁶ Rebecca Roberts and Kiengkay Ounmany, "Moving towards achieving SDG 18: Removing the UXO Obstacle to development in Lao PDR," UNDP, 13 September 2021.

¹⁸⁷ Mine Action Review, "Clearing Cluster Munition Remnants 2022," NPA, 1 August 2022.

consistently.¹⁸⁸

1.6. Post-clearance impact assessment

1.6.1. Assessing the impact of UXO clearance in Laos

The draft Safe Path Forward III notes that one of the challenges faced by the UXO sector in Lao PDR is that tools and mechanisms for monitoring land use are limited, and there has been limited monitoring of how land release has contributed to the improvement to livelihoods or broader socio-economic development.¹⁸⁹ A recent UNDP evaluation agreed, reporting that “land for agriculture and development has been released, and the number of UXO victims is low. However, a lack of analysis and impact assessments means that it is assumed that progress has been made towards development goals, but it is not possible to quantify or describe in detail that progress.”¹⁹⁰ The evaluation concluded that it was not possible to confirm the link between UXO contamination and poverty.¹⁹¹

The NRA noted that the importance of demonstrating the development impact of UXO clearance was important, particularly as the COVID-19 pandemic had constrained donor resources and diverted attention globally.¹⁹²

Populations post-clearance have reported reduced fears of death and disability and improved harvest because of being able to dig more efficiently. This in turn freed up more time to open more land for cultivation or to pursue other livelihood activities.

A Lao Census for Agriculture conducted in 2010-2011 conducted in over 1,100 villages, of which, one in six had reported UXO contamination of agricultural land, found that UXO contamination was not among the top nine factors reported as limiting agricultural production in the contaminated villages. Similarly, a longitudinal study by the UNDP Independent Evaluation Office (IEO) published in 2016 found that contamination was rarely given as a reason for not cultivating land, but poverty was the main factor that limited access to productive assets including labour, irrigation seeds, and equipment. The study concluded that land use rarely changes pre and post clearance.¹⁹³

Health shocks, such as UXO accidents, may also impact household income and poverty. A World Bank report found that in Laos, among those in or near poverty, 13% were in that situation because of a health shock.¹⁹⁴ Global analysis also shows that a disproportionate number of people with disabilities tend to have other vulnerabilities including low educational attainment, higher rates of poverty and lower rates of participation in socioeconomic life than those without a disability.

The 2021 UNDP evaluation noted that due to differences in climate and topography of Laos, it is not possible to compare costs and efficiencies of operators direct without controlling for the

¹⁸⁸ Rebecca Roberts and Kiengkay Ounmany, “Moving towards achieving SDG 18: Removing the UXO Obstacle to development in Lao PDR,” UNDP, 13 September 2021.

¹⁸⁹ NRA, “National Strategic Plan for the UXO Sector in the Lao PDR 2021-2030: The Safe Path Forward III,” Vientiane Capital, June 2022, draft English translation.

¹⁹⁰ Rebecca Roberts and Kiengkay Ounmany, “Moving towards achieving SDG 18: Removing the UXO Obstacle to development in Lao PDR,” UNDP, 13 September 2021.

¹⁹¹ Rebecca Roberts and Kiengkay Ounmany, “Moving towards achieving SDG 18: Removing the UXO obstacle to development in Lao PDR,” UNDP, 13 September 2021.

¹⁹² NRA, “National Strategic Plan for the UXO Sector in the Lao PDR 2021-2030: The Safe Path Forward III,” Vientiane Capital, June 2022, draft English translation.

¹⁹³ Rebecca Roberts and Kiengkay Ounmany, “Moving towards achieving SDG 18: Removing the UXO Obstacle to development in Lao PDR,” UNDP, 13 September 2021.

¹⁹⁴ World Bank Group, “The Taxonomy of the Poor and its Usefulness in Policy Design, Lao Poverty Policy Brief,” 19 December 2017.

different variables. If donors require such a comparison, operators must agree on criteria that enable comparisons of similar tasks.¹⁹⁵

The same evaluation speculated that it may not be necessary to see a change in land use after UXO clearance as UXO do not create the same barrier to land access as landmines, but to see what changes occur among local populations, for example:

- This includes the impact of better harvest or having more time to focus on other livelihood activities.
- Whether health and wellbeing of a household improved because there is more food
- Whether nutritional levels are better and there is less concern that a child is malnourished
- If income has increased, how has that income been invested and what impact does that have on the household.¹⁹⁶
- Whether there are impacts on natural resources and the environment.

1.6.2. Post clearance impact assessments conducted in Lao PDR

A study conducted by Jo Durham and Vong Nanthavong in 2010 examined the question of whether UXO clearance was contributing to its overall goal of eradicating accidents and poverty. The study was conducted in three districts in three provinces: Nong in Savannakhet, Pek in Xiengkhuang, and Paksong in Champassak.¹⁹⁷

The study used a theory-based approach to evaluation which analysed the input of a new resource (cleared land) with household characteristics, reaction to the new resource and broader contextual factors to understand the outcome and impact. The study also draws on the livelihoods approach as the theoretical framework for assessment. The study found that cleared land increases safety and optimism, but how the land was used depended on the availability of assets, the household values, and their sense of self-efficacy. While demographic variables appeared to have little effect on outcome, women were excluded from pre and post clearance discussions. The extent to which assets were maintained depended on household context and the broader socio-economic context.

Jo Durham also supported UXO Lao to develop its capacity for post clearance assessment, funded by Australia's DFAT.¹⁹⁸ A pilot case study conducted in Salavan province. Relevant information from completion reports was compiled and five key indicators were developed that could be included within regular monitoring conducted by UXO Lao to show progress over time:

- How much of the land is under cultivation?
- Is the land currently used?
- For how many months does the household have sufficient rice? A) 3 months, B) 6 months, C) all year
- How safe do you feel using the land? A) very safe, B) quite safe, C) not safe at all
- Do you have access to basic facilities (school, clinic, all-weather access road)

It is not clear whether UXO Lao is implementing this post clearance monitoring tool.

¹⁹⁵ Rebecca Roberts and Kiengkay Ounmany, "Moving towards achieving SDG 18: Removing the UXO Obstacle to development in Lao PDR," UNDP, 13 September 2021.

¹⁹⁶ Rebecca Roberts and Kiengkay Ounmany, "Moving towards achieving SDG 18: Removing the UXO Obstacle to development in Lao PDR," UNDP, 13 September 2021.

¹⁹⁷ Jo Durham and Vong Nanthavong, "Post UXO Clearance Impact Assessment in Lao PDR," September 2010.

¹⁹⁸ "UXO Lao Post Clearance Impact Assessment Readiness Assessment: Summary of Key Findings," UXO Lao, Laos-Australia Development Learning Facility and AusAID, February 2015.

A study written up in an academic article in the Journal of Development Economics, found that ongoing UXO contamination negatively affected educational attainment for children living in these areas because households farming contaminated land had to do so slowly, which meant children must also contribute their labour to ensure that households produce enough food.¹⁹⁹

1.6.3. Impact assessment in Cambodia

A study by GICHD in Cambodia on the contribution of mine clearance to the SDGs found that the main land use after clearance was agriculture, housing, and roads, bridges and culverts. Impacts reported from mine clearance included:

- Greater income for female-headed households
- A correlation between annual GDP and the extent of arable land under cultivation
- An increase in land value of cleared land
- An increase in income generation.²⁰⁰

The study also compared aerial photographs of land use and infrastructure development of the same village over several years which highlighted changes in land use, housing and the development of roads and public buildings.

The Cambodia Development Resource Institute (CDRI) conducted a study for the Cambodian Mine Action Authority (CMAA) to recommend assessment indicators and appropriate datasets to measure poverty reduction and socio-economic development in post-clearance communities.²⁰¹ The study noted that the expected outcomes and impact of mine clearance must be clearly identified in order to monitor and analyse the changes in beneficiaries' livelihoods. The review of national datasets found that only the Commune Database, the ID Poor data, and the Population Census could be used to examine the social and economic outcomes of released land on communities.

MAG conducted a pilot study in 2009 to test a post-conflict impact assessment tool based on the DFID Sustainable Livelihoods Framework (SLF) and the Livelihood Assets Status Tracking System developed by Manchester University.²⁰² The study demonstrated the importance of assessing impact throughout the project cycle (before clearance, during clearance and at periods after clearance) rather than as an isolated one-off event at a specific end point. Drawing on the SLF, the methodology was able to provide a picture of the complexity of the household livelihoods and to demonstrate how the different strategies and capitals are closely interwoven and linked. It can give an indication as to which assets can help a household better move out of poverty, which can support the planning of development interventions post clearance.

¹⁹⁹ Shiqi Guo, "The Legacy of UXO on educational attainment in Laos," Journal of Development Economics, issue 147, 2020.

²⁰⁰ Angela Hoyos Iborra and Arsen Khanyan, "The Sustainable Development Outcomes of Mine Action In Cambodia," GICHD, 2021.

²⁰¹ CDRI, "Technical Paper: Outcome Assessment Methodology of Mine Clearance in Cambodia," 13 February 2012.

²⁰² Ruth Bottomley, "Post Conflict Impact Assessment: Pilot Study Cambodia," MAG, May 2009.

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Annex 3: Detailed workplan for fieldwork

Activities	November 2022																										
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Interviews in Vientiane Capital																											
Final fieldwork preparations																											
Travel to Bolikhamxai																											
Interviews with Provincial & district departments																											
Interviews in 4 villages																											
Travel to Xiengkhuang																											
Interviews with provincial & district departments																											
Interviews in 8 villages																											
Travel to Vientiane Capital																											
Analysis & reporting to UNDP																											

Annex 4: People consulted (key-informant interviews)

Vientiane Capital			
Name	Role	Organization	Date
Mr. Peter Hansen	Chief Technical Advisor	LuxDev	28 th October 2022 (by Zoom)
Mr. Peter Greindl	International Provincial Advisor	LuxDev	28 th October 2022 (by Zoom)
Mr. Chomyaeng Phengthongsawat	Director General	NRA	1 st November 2022
Mr. Phommachan Khammanichan	Chief of Clearance Unit	NRA	1 st November 2022
Mr. Khammoungkhoun Southivong	Information Management Officer	NRA	1 st November 2022
Ms. Rebecca Letven	Country Director	MAG	3 rd November 2022
Mr. Cameron Imber	Program Manager	HALO Trust	3 rd November 2022
Ms. Alexandra Letcher	Regional AVR Specialist	HI	3 rd November 2022
Mr. Yvon Chavanton	Technical Advisor	HI	3 rd November 2022
Mr. Aubrey Sutherland	Country Director	NPA	3 rd November 2022
Mr. Sasa Jelacic	Operations Manager Pakse	NPA	3 rd November 2022
Ms. Katie Harrison	Programme Coordinator	NPA	3 rd November 2022
Mr. Yusuke Kubo	Chief Advisor	JICA	4 th November 2022
Mr. Nagata Akira	Advisor	JICA	4 th November 2022
Mr. Mark Russell	Technical Advisor	TetraTech	4 th November 2022
Mr. Olivier Bauduin	UXO Program Advisor	PMWRA	4 th November 2022
Mr. Simon Rea	Task Order Leader	TetraTech	8 th December 2022 (by Zoom)
Bolikhambxai Province			
Name	Role	Department	Date
Mr. Sengphet Mounmaï	Director General	Labour and Social Welfare	7 th November 2022
Mrs. Sopha Chanthavong	Vice Director	Labour and Social Welfare	7 th November 2022
Mr. Lathanapasouk Ketavong	Coordinator	Provincial Regulatory Authority	7 th November 2022
Mr. Lamphay Pandadith	Chief of Planning Division	Planning and Investment	7 th November 2022
Mr. Bounpheng Chanthavongsuk	Deputy Chief	Agriculture and Forestry	7 th November 2022
Mr. Songphet Thomakboudy	Chief of Rural Development Division	Agriculture and Forestry	7 th November 2022
Ms. Tipphachan	Chief of International Cooperation	Planning and Investment	7 th November 2022
Khamkeuth District, Bolikhambxai Province			
Mrs. Phithaphone Sinvongsa	Vice Chief	Labour and Social Welfare	8 th November 2022
Mr. Thongvily Silivong	Vice Chief	Agriculture and Forestry	8 th November 2022
Mrs. Viengsavanh Souliya	Vice Chief	Planning and Investment	10 th November 2022

Mr. Kongchan Thonpraseuth	Technical Staff	Planning and Investment	10 th November 2022
Xiengkhuang Province			
Name	Role	Department	Date
Mr. Sengkeo Sysomboune	Coordinator	Provincial Regulatory Authority	14 th November 2022
Mr. Bounhoun Soulixay	Chief	Labour and Social Welfare	14 November 2022
Mr. Sombath Somvilay	Director General	Planning and Investment	14 th November 2022
Mr. Viengkham Chithalath	Deputy Chief	Agriculture and Forestry	14 th November 2022
Mr. Vilaphong Outhavongxai	Provincial Coordinator	UXO Lao	15 th November 2022
Mr. Kolakan	Deputy Coordinator	UXO Lao	15 th November 2022
Mr. Sisouphan	Chief of NTS and PCA team	UXO Lao	15 th November 2022
Mr. Charlie McFarlane	Operational Monitoring Technical Advisor	QSI	19 th November 2022
Pek District, Xiengkhuang Province			
Ms. Phonesy Dounggmany	Vice Chief	Planning and Investment	14 th November 2022
Mr. Kamsuk Bounkeomanyxai	Chief	Labour and Social Welfare	14 th November 2022
Mr. Southida Keomanivong	Vice Chief	Agriculture and Forestry	14 th November 2022
Kham District, Xiengkhuang Province			
Mr. Bouavone Vorlakhun	Chief	Labour and Social Welfare	15 th November 2022
Mr. Khamman Thepthida	Vice Chief	Agriculture and Forestry	15 th November 2022
Mrs. Manithong Panthavongxai	Vice Chief	Planning and Investment	15 th November 2022
Mr. Kamphai Sengvisay	Vice Chief	District Regulatory Authority	15 th November 2022

Annex 5: Research tools

5.1. Introductory information for all study respondents

We are conducting a Post-Clearance Impact Assessment of UNDP supported UXO clearance projects undertaken by UXO Lao in Xiengkhuang and Unit 58 of the Lao People's Army in Bolikhamxai.

We are interested in exploring your views and understanding on how UXO clearance can contribute to development in Lao PDR; how UXO clearance and development interventions can work better together; and what factors can contribute to maximizing development outcomes. Getting your perspectives will help to inform our impact assessment and ensure that our findings and recommendations will be relevant to the wider sector.

Your participation in this interview is completely voluntary. We expect the interview to take about 30 – 45 minutes. At any point in the interview, you may choose to stop or not discuss any details that make you feel uncomfortable. To facilitate the interview, I will be taking notes and an audio recording. We will not use your name in any external documents or reports.

Do you understand and consent to participate in this interview?

Do you have any questions before we begin?

5.2. KII - HMA organizations

Topic	Questions	What it informs
Introductions	1. Name 2. Position and responsibilities	Introduction
Prioritization – organization level	3. What system and criteria do you use to prioritize clearance of UXO contaminated land? a. For household agricultural land? For community development land? b. Is this a system specific to your organization? 4. How do you define the expected outcomes and impact before clearance? a. Are there clearly defined goals as to what the development impact will be? Or just an expectation? b. What are the priorities that your organization wants to see? (including in terms of poverty, gender, diversity and other issues)	Understanding prioritization strategy

	<p>5. If working with a development partner, how are areas prioritized for clearance?</p> <ol style="list-style-type: none"> Does this differ from other clearance prioritization? If so, how? What are the challenges? Is there anything that could be done more effectively? 	
Prioritization mechanisms at national and local level	<p>6. Is there national level guidance on prioritization?</p> <ol style="list-style-type: none"> If no, what do you think this guidance should be? If yes, how effective is the system? How could it be improved? What recommendations would you have for prioritization so that clearance can be scaled up on CHA? <p>7. How are clearance tasks currently allocated from national level? How does this support or constrain effective prioritization?</p> <p>8. Are provincial and district authorities involved in prioritization and planning for clearance?</p> <ol style="list-style-type: none"> Is clearance work tied into 5-year development plans at provincial and district level? If not, should it be? If yes, does this system work well? Could it be improved? How well are UXO clearance and development plans coordinated/integrated? 	Looking at national and local level prioritization and what needs to be in place going forward
Post Clearance Impact Assessment	<p>9. Does your organization conduct post-clearance assessments or post-clearance impact assessments?</p> <p>10. What is the process and tools used for doing this?</p> <ol style="list-style-type: none"> Quantitative or qualitative? What time period after clearance? How often is PCA/PCIA conducted and by whom? <p>11. Are there any challenges in conducting PCA/PCIA?</p> <p>12. Is data provided to the NRA?</p> <p>13. What findings have you had coming from the assessment?</p> <ol style="list-style-type: none"> Who benefits? In what ways? Who does not benefit? Were the findings expected? Were there any surprises? What lessons learned are there? How have the findings from PCA/PCIA informed prioritization and implementation? <p>14. What challenges have been encountered in understanding impact?</p>	<p>Understanding processes for conducting post-clearance assessment and findings</p> <ul style="list-style-type: none"> - Land use - Gender, diversity - Community land versus agricultural land

Maximising development outcomes	<p>15. How do you think that the development outcomes of UXO clearance can be maximised?</p> <ul style="list-style-type: none"> a. What are the challenges to achieving this? b. How could MoU system be changed/improved to support achieving development outcomes (less fixed in CHA tasks; longer MoU period and annual workplans?) c. What could be done at district level? Provincial level? National level? <p>16. Are there any examples of where development outcomes have clearly been successful? What factors contributed to this?</p> <p>17. Could more integrated approaches maximise development outcomes? For example, developing a strategic plan for clearance and development for each village?</p> <p>18. UXO clearance is included as an SDG and as targets within the 9th NESDP.</p> <ul style="list-style-type: none"> a. Are the targets realistic? b. What actions need to be taken to ensure that these goals can be met? 	Ways to maximise development outcomes
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5.3. KII - Provincial and district Authorities

Topic	Questions	What it informs
Approach and planning	<p>1. In planning process, how does the development planning correspond with the plans for UXO survey and clearance?</p> <ul style="list-style-type: none"> a) Are there any difficulties/challenges in preparing the development plan in UXO contaminated areas? b) Is it possible to link UXO clearance with development activities in the plan? <p>2. Do you think the presence of UXO is a constraint to district and village level development? Why?</p> <ul style="list-style-type: none"> a) Is the development growth in areas without UXO contamination different to the areas with UXO contamination? If yes, is it just UXO that are the reason for this difference, or are there other factors? <p>3. Are there any Focal Development Areas in your province?</p>	Identification of factors that can maximize Provincial/sector development plan – what factors contribute

Topic	Questions	What it informs
	<ul style="list-style-type: none"> a) How are they included within the PSEDP? b) Does the development of the Focal Development Areas include UXO survey and clearance? <p>4. How are Public Investment Projects, donor development projects and private development projects aligned?</p> <ul style="list-style-type: none"> a) If UXO clearance is needed for any of these projects, what is the process to request it? b) What role does the province and/or district play in planning for or coordinating UXO clearance? 	
UXO survey and clearance prioritization	<p>5. Do you have any thoughts about how the process for UXO clearance prioritization should be developed/improved?</p> <ul style="list-style-type: none"> a) What do you think are the priorities for UXO clearance in this province/district? b) Who do you think should benefit from UXO clearance? What is the best way to achieve this? c) What role should the provincial and district authorities play in the prioritization of UXO clearance? 	Understanding of the UXO prioritization process and thoughts how this can be improved
Implementation and achievement	<p>6. Please tell us about any development projects that you know of that have been completed on cleared land.</p> <ul style="list-style-type: none"> a) What and where was the project? Who benefited? b) What difference has it made to the area where the development took place? c) Do you have any data, records or documents, maps or visual materials that shows the changes of land use in these development areas (before and after the development)? <p>7. Are there any cases where cleared land has not been used for development or agriculture as planned? If NOT being used, why? What do you think are the constraints to land being used?</p>	Achievement of development projects on cleared land
Impact/benefit	<p>8. Compared with 10 years ago, are there any major changes in the livelihood of the people living in areas where UXO have been surveyed and/or cleared?</p> <p>9. What positive impacts and benefits have you noticed from infrastructure development to the livelihood improvement of the people?</p> <p>10. Who do you think has benefited the most? Who do you think has benefited the least?</p>	Perceptions of outcomes and impact and who has benefited

Topic	Questions	What it informs
	11. How do you see the impact/benefits of clearance of household agricultural land compared with clearance of development land? 12. In what ways do you think the positive impact of UXO clearance can be maximized for people living in contaminated areas?	

5.4. SSI – village leader (no survey or clearance)

Topic	Questions	What it informs
Introduction	1. Can you tell us about the village and the population - (number of male, female, ethnic groups), number of households, main source of income, number of poor households and middle and high income? 2. Can you tell us about the UXO contamination in the village? Do you know how much land is affected? a) What type of land is it – farming land? Community land? Other? b) How many HHs have UXO contaminated land now? 3. How has the UXO contamination affected the village? (Explore in depth what the impacts of UXO contamination is): a) Accidents and casualties b) Agriculture c) Livelihoods d) Access to services e) People's feeling of safety and security f) Village development g) Other?	Introduction Background of the village – population, ethnicity, UXO contamination Exploring the impact of UXO contamination
Living with UXO	4. Can you explain how people live with UXO contamination? a) How does it affect their everyday life? b) How does it affect their livelihood activities? c) How does it affect their ability to travel, to go to market or to access services? d) How does it affect their feelings of safety and wellbeing? 5. What actions can people take to prevent accidents from UXO? a) How do they protect themselves when farming? b) How do they protect their children? c) What risks do people take with UXO?	UXO clearance on agriculture and development land

Topic	Questions	What it informs
UXO survey and clearance prioritization	6. Has the village ever had any survey or clearance of UXO? 7. Have people in the village ever requested clearance of UXO? a) If yes, how did they request, and what happened? b) If no, why have they not requested? Do they know how to request? 8. Do you think survey and clearance is a priority for people in the village? If yes, why? If no, why not? 9. What are the main priorities for the village? Please list the top three priorities 10. Do you think if there was UXO clearance, some of these priorities could be met? Please explain.	Understanding of the UXO prioritization process and thoughts how this can be improved
Comments	11. Do you have any comments on the UXO contamination in your village, or on clearance or survey of UXO?	To gather any other comments not covered

5.5. SSI – villagers (no survey or clearance)

Do you understand and consent to participate in this interview? Do you have any questions before we begin?

Topic	Questions	What it informs
Introduction	1. Can you tell us about your household? a) Number of people (adults, children, PWD) b) Ethnicity c) Length of time in village d) Main livelihood activity 2. Can you tell us what household land is affected by UXO? a) How much land approximately b) What type of land – housing, paddy, upland, cash crop, other?	Introduction Background of the household, number of family members, ethnicity, livelihoods, UXO contamination
Living with UXO	3. Can you tell us how the UXO impacts your household? a) In terms of your family safety and wellbeing? b) Have any of your family been killed or injured by UXO? c) How did you feel with UXO on your land? d) Do you have to take risks with UXO when you conduct farming or other livelihood activities? 4. How does UXO impact your household livelihoods?	To understand the impact of the UXO

Topic	Questions	What it informs
	<ul style="list-style-type: none"> a) Can you farm the land with UXO? b) Do you have to take risks to farm your land? c) Are you able to grow enough to meet your household food needs? d) Are you able to use machines for farming, or grow different crops, or hire labour? e) Are you able to save money? <p>5. What actions can you take to prevent accidents from UXO?</p> <ul style="list-style-type: none"> a) How do they protect yourself when farming? b) How do you protect your children? <p>6. How does UXO contamination affect the value of your land?</p> <p>7. Does UXO contamination affect your ability to socialise with other villagers or to join ceremonies or meetings?</p> <p>8. Does UXO contamination affect your ability to travel, to go to market or to access services like the health centre or school? Please explain</p>	
UXO survey and clearance prioritization	<p>9. Has the village ever had any survey or clearance of UXO?</p> <p>10. Have you been able to request for your land to be cleared of UXO?</p> <ul style="list-style-type: none"> a) If yes, who did you request to and what was the response b) If no, why have they not requested? Do they know how to request? <p>11. Do you know if your land will be cleared in the future? Do you know if there is a plan?</p> <p>12. Is survey and clearance of UXO a priority for your household? If not, what are the main priorities for your household?</p> <p>13. Do you think if there was UXO clearance, some of these priorities could be met? Please explain.</p>	Understanding the ability of people to request UXO clearance and if it is a priority
Comments	<p>14. Do you have any comments on the UXO contamination in your village, or on clearance or survey of UXO?</p>	To gather any other comments not covered

5.6. SSI – Village leaders (survey)

Topic	Questions	What it informs
Introduction	<p>1. Can you tell us about the village and the population - (number of male, female, ethnic groups), number of households, main source of income, number of poor households and middle and high income?</p>	Introduction

Topic	Questions	What it informs
	<p>2. Can you tell us about the UXO contamination in the village? Do you know how much land is affected?</p> <ul style="list-style-type: none"> a) What type of land is it – farming land? Community land? Other? b) How many HHs have UXO contaminated land now? <p>3. How has the UXO contamination affected the village?</p> <ul style="list-style-type: none"> a) Accidents and casualties b) Livelihoods c) People's feeling of safety and security d) Other? 	Background of the village – population, ethnicity, UXO contamination and the impact of the contamination
Implementation and achievement	<p>4. Can you tell us about the UXO survey that has taken place in your village?</p> <ul style="list-style-type: none"> a) Area (ha) of UXO land surveyed and number of HH b) Do you know how much land has been surveyed that is on agricultural land? c) Do you know how much land has been surveyed that is on community land or land for development projects? d) Do you know the total number of surveyed areas in your village and their size (in hectares/m2) <p><i>Agriculture land</i></p> <p>5. Since the agricultural land has been surveyed, have there been any changes in how land is used, compared to before survey? Can you explain any changes?</p> <p>6. How do people feel about their land if it has been surveyed and UXO contamination has been found?</p> <ul style="list-style-type: none"> a) Do the owners of the land feel safer or less safe? b) Are the landowners able to continue with their agricultural production? c) Has survey changed land value? d) How do people feel generally about the survey process? <p>7. Do people have plans for their agricultural land once clearance has been conducted? What are these plans? Will there be any changes in the way they farm?</p> <p><i>Development land</i></p> <p>8. Was any land surveyed for development projects in this village? (e.g. for irrigation, school, hospital, access road, site attraction improvement etc. are</p>	Understanding of UXO survey in the village, what land has been surveyed, how people feel about the survey process, and their plans for the land once cleared.

Topic	Questions	What it informs
	<p>the projects linked to the Village Development Plan? <i>Public Investment Projects, donor development projects and private development projects</i>)</p> <p>9. Since the land for development has been surveyed, what are the next steps to plan for the UXO clearance and development of the area? Is there a clear timeline for clearance?</p> <p>10. Who will benefit from the development project once it has been completed?</p>	
UXO survey and clearance prioritization	<p>11. Was the village involved in identifying which land should be surveyed? Can you explain the process?</p> <p>12. Are people in the village satisfied that all contaminated areas have been surveyed?</p> <p>13. Do you have clear knowledge about what land will be cleared and when?</p> <p>14. Has the village been involved in prioritizing the surveyed land for clearance? Can you explain how?</p> <p>a) If not, do you think that the village should be involved in prioritizing the land for clearance? What would be the priorities? Why?</p>	Understanding of the village involvement in the survey process and how they will be involved in clearance prioritization
Comments	15. Do you have any comments on the UXO survey process and the planned clearance activities?	To gather any other comments not covered

5.7. SSI - Villagers (survey)

Topic	Questions	What it informs
Introduction	<p>1. Can you tell us about your household?</p> <p>a) Number of people (adults, children, PWD)</p> <p>b) Ethnicity</p> <p>c) Length of time in village</p> <p>d) Main livelihood activity</p> <p>2. Can you tell us what household land is affected by UXO?</p> <p>a) How much land approximately</p> <p>b) What type of land – housing, paddy, upland, cash crop, other?</p>	<p>Introduction</p> <p>Background of the household, number of family members, ethnicity, livelihoods, UXO contamination</p>

Topic	Questions	What it informs
Situation before clearance of household agricultural land	<p>3. How does the UXO contamination affect your household?</p> <p>a) In terms of your family safety and wellbeing?</p> <p>i. Have any of your family been injured or killed by UXO?</p> <p>ii. How do you feel with UXO on your land?</p> <p>b) In terms of livelihoods?</p> <p>i. Could you farm the land with UXO?</p> <p>ii. Were you able to grow enough to meet your household food needs?</p> <p>iii. Were you able to use machines for farming, or grow different crops, or hire labour?</p> <p>iv. Were you able to save money?</p> <p>c) Do you know what the value of your land was?</p> <p>4. In terms of social activities?</p> <p>i. Did UXO contamination affect your ability to socialise with other villagers or to join ceremonies or meetings?</p> <p>5. How does the contamination in the village affect your HH in terms of access to services and infrastructure?</p> <p>a) In terms of community infrastructure?</p> <p>b) In terms of access to services? Schools, health centres</p> <p>c) In terms of access the market?</p> <p>6. In terms of village development?</p>	To understand the impact of the UXO and the situation before survey
UXO survey prioritization and implementation	<p>7. Was the village involved in deciding which land should be surveyed? Can you explain the process?</p> <p>a) Household land</p> <p>b) Community/development land</p> <p>8. Were you involved in giving information about the need for your land to be surveyed? What information did you provide?</p> <p>9. Were you satisfied with the areas that were chosen for survey?</p> <p>10. Were there other areas that you felt should have been chosen for survey? Please explain.</p> <p>11. When did the survey of the UXO on your land take place?</p> <p>12. Do you remember which organization surveyed the land?</p> <p>13. Did the organization tell you clearly what land had UXO contamination and which land did not?</p> <p>a) Which land was identified as contaminated?</p>	Understanding the participation in the survey process and clarity about CHA

Topic	Questions	What it informs
	<p>14. When the survey was finished, what were you told about the UXO contaminated land? Can you use it or not?</p> <p>15. Do you know when they will come and clear your land?</p>	
Impact/benefit	<p>16. Since the survey was conducted on your agricultural land, have there been any changes in how you use the land? Please explain</p> <ul style="list-style-type: none"> a) Are there areas that you now feel more confident to use and farm? b) Are there areas where you cannot farm? <p>17. What difference has the UXO survey on your household land made to your household?</p> <ul style="list-style-type: none"> a) In terms of your livelihood? – food security, household assets, income generation opportunities, agricultural productivity (use of machines, tools, different crops) b) In terms of your HH finance – ability to earn money, ability to save money or take loans c) In terms of your feelings of safety and confidence? In terms of safety of household members, e.g. children d) In terms of being able to participate in social activities, meetings etc and access to information e) In terms of land value? f) In terms of access to services? Schools, health services, water etc. g) In terms of access to markets? h) In terms of better infrastructure? i) Other? <p>18. Do you think that people in this village have more access to information and/or are able to participate in decision making more than before? Please explain.</p> <p>19. What other factors have contributed to changes in the village livelihoods and development?</p>	To explore some of the impacts of the UXO survey and whether this has affected household livelihoods
Comments	20. Do you have any comments on the UXO survey activities in the village?	To gather any other comments not covered

5.8. SSI – Villager leaders (clearance)

Topic	Questions	What it informs
Introduction	<ol style="list-style-type: none"> Can you tell us about the village and the population - (number of male, female, ethnic groups), number of households, main source of income, number of poor households and middle and high income? Can you tell us about the UXO contamination in the village? Do you know how much land is affected? <ol style="list-style-type: none"> What type of land is it – farming land? Community land? Other? How many HHs have UXO contaminated land now? How has the UXO contamination affected the village? <ol style="list-style-type: none"> Accidents and casualties Livelihoods People's feeling of safety and security Other? 	<p>Introduction</p> <p>Background of the village – population, ethnicity, UXO contamination</p>
UXO survey and clearance prioritization	<ol style="list-style-type: none"> Was the village involved in deciding which land should be cleared of UXO? Can you explain the process? Do you think that people in the village are satisfied with the choice of areas for clearance? Do you have any thoughts about UXO clearance prioritization and how it should be developed/improved for your village? 	<p>Understanding of the UXO prioritization process and thoughts how this can be improved</p>
Implementation and achievement	<ol style="list-style-type: none"> Can you tell us about the UXO clearance that has taken place in your village? <ol style="list-style-type: none"> Area (ha) of UXO land cleared and number of HH Do you know how much land has been cleared for household agriculture? Or for development projects? <p><i>Agriculture land</i></p> Since the agricultural land has been cleared, have there been any changes in how land is used, compared to before clearance? Can you explain the changes? Are there any cases where cleared land has not been used for agriculture as planned? If NOT being used, why? What do you think are the constraints to land being used? Are some people better able to use and develop the land once it is cleared than other people? Please explain <ol style="list-style-type: none"> Has there been any support for people following UXO clearance in terms of training, loans, provision of agricultural skills, tools, etc 	<p>UXO clearance on agriculture and development land</p>

Topic	Questions	What it informs
	<p><i>Development land</i></p> <p>11. Was any land cleared for development projects in this village? (e.g. for irrigation, school, hospital, access road, site attraction improvement etc. are the projects linked to the Village Development Plan? <i>Public Investment Projects, donor development projects and private development projects</i>)</p> <ul style="list-style-type: none"> ○ Can you specify which development projects took place on UXO contaminated land that was cleared? ○ Who benefited from this development project? In what way did they benefit? ○ Do you have any data, records or documents, maps or visual materials that shows the changes of land use in these development areas (before and after the development)? <p>12. Are there any cases where cleared land has not been used for development project as planned? If NOT being used, why? What do you think are the constraints to land being used?</p>	
Impact/benefit	<p>13. What difference do you think that the clearance of UXO on agricultural land has made to people in this village</p> <ul style="list-style-type: none"> a) In terms of their safety and security? b) In terms of livelihoods? – food security, household assets, income generation opportunities, agricultural productivity (use of machines, tools, different crops) c) Being able to support their household all year round? d) In terms of land value? e) Other? <p>14. What difference do you think that the clearance of UXO of development land has made to people in this village?</p> <ul style="list-style-type: none"> a) In terms of access to services? b) In terms of access to markets? c) In terms of better infrastructure? d) In terms of land value? e) Other? <p>15. Do you think that people in this village have more access to information and/or are able to participate in decision making more than before? Please explain.</p>	To explore some of the impacts of UXO clearance and to understand what other factors may have influenced village-level changes

Topic	Questions	What it informs
	16. What other factors have contributed to changes in the village livelihoods and development?	
Comments	17. Do you have any comments on UXO survey and clearance activities in the village?	To gather any other comments not covered

5.9. SSI - Villagers (clearance)

Topic	Questions	What it informs
Introduction	<ol style="list-style-type: none"> 1. Can you tell us about your household? <ol style="list-style-type: none"> a) Number of people (adults, children, PWD) b) Ethnicity c) Length of time in village d) Main livelihood activity 2. Can you tell us what household land was affected by UXO? <ol style="list-style-type: none"> a) How much land approximately b) What type of land – housing, paddy, upland, cash crop, other? 3. When did the clearance of the UXO on your land take place? <ol style="list-style-type: none"> a) Was all of your land that had UXO contamination cleared? If no, what land was not cleared b) Do you remember which organization cleared the land? 4. Did you want to have your land cleared? Why? 	<p>Introduction</p> <p>Background of the household, number of family members, ethnicity, livelihoods, UXO contamination</p>
Situation before clearance of household agricultural land	<ol style="list-style-type: none"> 5. When your land was contaminated with UXO, how did it affect your household? <ol style="list-style-type: none"> a) In terms of your family safety and wellbeing? <ol style="list-style-type: none"> i. Were any of your family killed or injured by UXO? ii. How did you feel with UXO on your land? b) In terms of livelihoods? <ol style="list-style-type: none"> i. Could you farm the land with UXO? ii. Were you able to grow enough to meet your household food needs? 	To understand the impact of the UXO and the situation before clearance

Topic	Questions	What it informs
	<ul style="list-style-type: none"> iii. Were you able to use machines for farming, or grow different crops, or hire labour? iv. Were you able to save money? c) Do you know what the value of your land was? <p>6. In terms of social activities?</p> <ul style="list-style-type: none"> i. Did UXO contamination affect your ability to socialise with other villagers or to join ceremonies or meetings? 	
Situation before clearance of community / development land	<p>7. When the community land was contaminated with UXO, how did it affect your household and others in your community?</p> <ul style="list-style-type: none"> a) In terms of community infrastructure? b) In terms of access to services? Schools, health centres c) In terms of access the market? d) In terms of village development? 	Understanding the impact of the UXO and situation before clearance
UXO survey and clearance prioritization	<p>8. Was the village involved in deciding which land should be cleared of UXO? Can you explain the process?</p> <ul style="list-style-type: none"> a) Household land b) Community/development land <p>9. Were you involved in giving information about the need to clear your land of UXO?</p> <p>10. Were you satisfied with the areas that were chosen for clearance?</p> <p>11. Were there other areas that you felt should have been chosen for clearance? Please explain.</p>	Understanding of the UXO prioritization process and if villagers were involved
Implementation and achievement	<p><i>Agriculture land</i></p> <p>12. Since the agricultural land has been cleared, have there been any changes in how you use the land, compared to before clearance? Can you explain the changes?</p> <ul style="list-style-type: none"> a) If there is no change, why do you think the clearance of UXO has not improved your ability to farm? What are the other reasons that prevent you improving your farming? b) Did you receive any support following UXO clearance in terms of training, loans, provision of agricultural skills, tools, etc. If yes, how did this help? Who provided the support? 	UXO clearance on agriculture and development land

Topic	Questions	What it informs
	<p><i>Development land</i></p> <p>13. Can you specify which development projects took place on UXO contaminated land that was cleared?</p> <ul style="list-style-type: none"> a) Who benefited from this development project? In what way did they benefit? b) Did your household benefit from the development project? How? 	
Impact/benefit	<p>14. What difference has the clearance of UXO on your household land made to your household?</p> <ul style="list-style-type: none"> a) In terms of their safety and security? b) In terms of your livelihood? – food security, household assets, income generation opportunities, agricultural productivity (use of machines, tools, different crops) c) In terms of your HH finance – ability to earn money, ability to save money or take loans d) In terms of your feelings of safety and confidence? In terms of safety of household members, e.g. children e) In terms of being able to participate in social activities, meetings etc and access to information f) In terms of land value? g) Other? <p>15. What difference do you think that the clearance of UXO of development land has made to people in this village?</p> <ul style="list-style-type: none"> a) In terms of access to services? Schools, health services, water etc. b) In terms of access to markets? c) In terms of better infrastructure? d) In terms of land value? e) Other? <p>16. Do you think that people in this village have more access to information and/or are able to participate in decision making more than before? Please explain.</p> <p>17. What other factors have contributed to changes in the village livelihoods and development?</p>	To explore some of the impacts of UXO clearance and to understand what other factors may have influenced village-level changes

Topic	Questions	What it informs
Comments	18. Do you have any comments on UXO survey and clearance activities in the village?	To gather any other comments not covered

5.10. Timeline Exercise

The research purposes of the timeline exercise are as follows:

- to understand the main changes that have occurred in the village over a period of time (e.g. in the last 20 or 10 years);
- to map changes to livelihoods and community wellbeing over the identified time period and whether the changes are perceived to be positive or negative;
- to understand what factors have contributed to these changes in livelihoods and wellbeing, and to understand how the survey and clearance of UXO contamination has contributed (or not) to livelihood changes
- To think forward – what would they like to see happen in the next five years to improve their livelihoods and wellbeing

Methodology

The timeline is created using a participatory process.

- Each focus groups will consist of 5-6 people (no more).
- The participants will be people who are particularly knowledgeable about the village, or aspects of the village

Materials Required

Flipchart paper, cards, coloured pens.

Time Needed

This exercise will take at least 1 hour. If it seems to be taking longer, encourage participants to treat it more as a brainstorming exercise about ‘major changes and events’.

Steps:

1. Defining the time period

The first step is to draw a horizontal line and to ask participants how far back they would like to go in discussing changes in the village. Once agreed, write the date they wish to start at the left of the horizontal line, and 2022 “now” at the other end. Then mark in the years

in-between (or five-year periods). Explain that above the line we will record positive changes, and below the line we will record negative changes.

2. Draw different events along the timeline to map a livelihood and wellbeing history of the village

The next step is to discuss and map the major changes to livelihood and wellbeing that have occurred in the village that have affected most people in the village (rather than personal events that have only impacted on certain families). The changes can be positive changes, but also negative changes. We can use symbols and pictures to depict the events if needed.

- First ask a general question – have your livelihoods changed in the last ten/twenty years? If yes, how have they changed:
- Prompt – “What have been the main changes to livelihoods and the social and economic situation of this village?” Ask when those changes happened – just approximately – and whether they were positive or negative.

Agricultural developments

Ask what has changed in terms of agriculture and livestock over the years – (e.g. when irrigation was available, when people moved from communal to private farming, when cash crops were introduced, when agricultural machinery began to be used, etc).

Ask what changes these agricultural developments have made in terms of household food security, finances, access to markets etc.

Village Infrastructure

Ask about the major things that have happened in the village in terms of building and infrastructure (for example, building or renovation of the pagoda, the school, new roads, village meeting halls etc). What major infrastructure projects have taken place, and what smaller infrastructure projects have taken place.

Schools, health centres, pagodas etc

Ask how the schools have developed over the years in terms of buildings, number of grades, number of children etc, and what difference this has made. Ask similar questions about health centres and access to health care. Questions can also be asked about pagodas, village meeting halls, and other important village infrastructure – so not only what has been built, but what change it has made.

Explore if there are any other major developments the villagers would like to talk about

3. Contributing factors – ask what contributed to these changes and developments

Village led

Which of the changes and activities were led by the village – for example, in developing a plan, making decisions etc.

Outside support

Which of the changes and activities were supported by outside assistance – e.g., from development actors, local government, outside investors etc.

Natural events

Ask about big natural events that disasters that happened to the village, e.g floods, droughts, etc. that maybe hampered village livelihoods and wellbeing.

UXO contamination

Ask about the UXO impact – how did the contamination affect the village?

Did survey and clearance affect any of the changes? – draw circles around the events and changes that were impacted by UXO contamination or clearance or survey

Other factors

Were there any other factors that either impacted positively on livelihoods and wellbeing, or negatively?

3. Map future plans onto the timeline

Discuss what the village would like to see in the next five years to improve their development and wellbeing.

- Discuss what things they can manage themselves
- Where they would need outside support
- Whether UXO contamination creates a challenge (or opportunity) for any of these plans

