

ARTICLE 4 DEADLINE: 1 AUGUST 2025

LAO PDR WILL REQUIRE MULTIPLE EXTENSIONS BEFORE REACHING COMPLETION

KEY DATA

CLUSTER MUNITION CONTAMINATION: MASSIVE

NO RELIABLE ESTIMATE

OF CLUSTER MUNITION CONTAMINATION

SUBMUNITION CLEARANCE IN 2022

50.72 km²

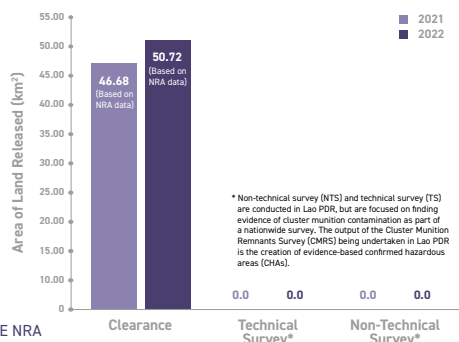
(BASED ON CLEARANCE DATA REPORTED BY THE NRA)

SUBMUNITIONS DESTROYED IN 2022

65,293

(BASED ON DATA REPORTED BY THE NRA AND INCLUDING 20,426 SUBMUNITIONS DESTROYED DURING SPOT TASKS)

LAND RELEASE OUTPUT



KEY DEVELOPMENTS

Clearance output in Lao People's Democratic Republic (Lao PDR) in 2022 was again higher than the previous year. This was largely the result of the continued shift towards clearance since 2021, which has seen the United States (US) increase its funding for clearance capacity to address the confirmed hazardous areas (CHAs) identified through the ongoing Cluster Munition Remnants Survey (CMRS). Clearance output in 2022 finally reached the 50km² target envisaged in Lao PDR's 2019 Convention on Cluster Munitions (CCM) Article 4 deadline extension request, but still fell 50% short of the 100km² clearance per year envisaged in Lao PDR's 9th National Socio-Economic Development Plan.

The new national strategy for the unexploded ordnance (UXO) sector, "Safe Path Forward III" (2021–30), was adopted in January 2023. Work on a national prioritisation system for clearance was initiated in the first half of 2022, with the support of Tetra Tech, and the National Regulatory Authority (NRA) aims to launch the national prioritisation process in 2023.

RECOMMENDATIONS FOR ACTION

- The NRA should develop a national planning and prioritisation system to support cluster munition remnants (CMR) survey and clearance as a matter of urgency.
- The NRA should report and communicate on the progress made in the clearance of identified CHAs.
- Procedures for issuing, amending, or renewing memorandums of understanding (MoUs) should be streamlined to avoid inefficiencies and excessive delays. Lao PDR should also consider permitting longer-term MoUs to help attract more investment into the sector while maximising impact.
- The NRA should complete a review of the national standards to ensure that best practices are effectively disseminated across all operators.
- The NRA should ensure the Information Management System for Mine Action (IMSMA) database is accurate and up to date, incorporating the results of the ongoing nationwide CMRS. The NRA should ensure that historical operational data that are not already in the database are available to operators engaged in survey and clearance.

- The NRA should take on board the recommendations of the international clearance non-governmental organisations (NGOs) and expand the mine action toolbox to include the use of mine/explosive detection dogs (MDDs/EDDs) and drones in order to increase operational efficiency.

ASSESSMENT OF NATIONAL PROGRAMME PERFORMANCE

Criterion	Score (2022)	Score (2021)	Performance Commentary
UNDERSTANDING OF CMR CONTAMINATION (20% of overall score)	7	7	Lao PDR does not yet have a reliable estimate of CMR contamination, but is undertaking a nationwide survey of populated areas. As at end 2022, 1,745km ² of CHA had been identified through survey. Proactive, systematic CMRS of assigned villages from the official list has now been concluded in five provinces (Attapeu, Champassak, Saravan, Savannakhet and Xekong); and is ongoing in Xiengkhouang. CMRS is also being undertaken in five other provinces, although not systematically, as funding has been sporadic in these provinces. Of the remaining seven provinces, four are known to have significant contamination but do not currently have funding for CMRS and the remaining three have low levels of contamination and are deprioritised. Since 2021, there has been a greater focus on clearance rather than survey, to address the CHAs generated through CMRS.
NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT (10% of overall score)	6	6	There is strong national ownership from the NRA and mine action in Lao PDR is also firmly linked to the government's sustainable development planning. However, MoU procedures continued to be complex, causing notable delays and significantly impeding implementation and expansion of survey and clearance, and in some cases preventing the spending of international funding.
GENDER AND DIVERSITY (10% of overall score)	7	7	Gender mainstreaming in the UXO sector is led by the NRA, and supported by the Lao Women's Union. In its new "Safe Path Forward III" strategy (2021–30), the NRA states that gender mainstreaming is important for the national strategic plan and work plans, that data needs to be disaggregated by sex and age, and that women must be engaged in work planning and the implementation of projects. Clearance operators report having gender policies in place and also putting measures in place to take into account diversity considerations in their survey and clearance programming, such as inclusion of minority ethnic groups and language groups, older people, and persons with disabilities. For example, HALO has continued its relationship with ARMI (Association for Rural Mobilisation and Improvement) in Savannakhet to provide employment opportunities to people with disabilities. Humanity and Inclusion (HI) considers older persons with disabilities as an underrepresented group and efforts are made to collaborate with local partners to ensure their rights are appropriately addressed. NPA continued its efforts to broaden inclusivity with the support of "Proud To Be Us Laos", a national organisation campaigning for the rights and non-discrimination of all persons regardless of sexual orientation, gender, identity, and expression (SOGIE).
INFORMATION MANAGEMENT AND REPORTING (10% of overall score)	6	6	There are ongoing efforts to correct historical data in IMSMA, and to improve data collection forms and other information management systems and processes to ensure the quality and transparency of data, especially given the increased volume of data resulting from the ongoing nationwide CMRS. The NMAS on information management (IM) was reviewed and updated in 2019, but had yet to be formally approved as at May 2023. A technical working group (TWG) on IM meets quarterly.
PLANNING AND TASKING (10% of overall score)	6	6	The new national strategy for the UXO Sector, "Safe Path Forward III" (2021–30) was adopted in January 2023. The strategy was elaborated in consultation with relevant stakeholders, including civil society organisations, donors, and clearance operators. The target by 2030 is to have identified 2,500km ² of CHA and cleared 1,000km ² of land for agricultural and development purposes. This is an ambitious target, which is more than double the current clearance output. Since 2021, there has been a shift towards increasing clearance capacity and reducing survey capacity. Clearance output in 2022 finally surpassed the lowest of the three annual clearance scenarios (50km ² clearance per year) envisaged in Lao PDR's extension request. Currently, there is no comprehensive national-level prioritisation matrix of clearance tasks, but Tetra Tech is supporting the NRA to address this. Work on the national prioritisation system was initiated in the first half of 2022 and the NRA aimed to launch the national prioritisation process in 2023.

Criterion	Score (2022)	Score (2021)	Performance Commentary
LAND RELEASE SYSTEM (20% of overall score)	8	8	Lao PDR is currently revising its UXO Survey Standards, which specify the minimum standards and requirements for the survey of all cluster munition-contaminated areas. Land release operations in Lao PDR are conducted by a range of national and international implementing partners. While survey and clearance operations are adapted to the local threat and context and adopt an evidence-based land release methodology, there is still room for improvement, such as through the use of drones and MDDs, which is not currently permitted.
LAND RELEASE OUTPUTS AND ARTICLE 4 COMPLIANCE (20% of overall score)	8	8	Lao PDR is continuing the nationwide CMRS of cluster munition contamination, with the amount of CHA continuing to increase each year as the survey progresses. In 2022, the CMR clearance output increased compared to the previous year, while the amount of land confirmed through survey as CHA decreased, reflecting the shift in emphasis towards more clearance of the CMR contamination confirmed through survey.
Average Score	7.1	7.1	Overall Programme Performance: GOOD

CLUSTER MUNITION SURVEY AND CLEARANCE CAPACITY

MANAGEMENT

- National Regulatory Authority (NRA) Board
- National Regulatory Authority (NRA) Office

NATIONAL OPERATORS

- UXO Lao
- Humanitarian teams of the Lao People's Army (Unit 58)
- Commercial operators

INTERNATIONAL OPERATORS

- The HALO Trust (HALO)
- Humanity and Inclusion (HI)
- Mines Advisory Group (MAG)
- Norwegian People's Aid (NPA)
- Commercial operators

OTHER ACTORS

- Asian Regional Mine Action Center (ARMAC)
- Geneva International Centre for Humanitarian Demining (GICHD)
- United Nations Development Programme (UNDP)
- Tetra Tech

UNDERSTANDING OF CMR CONTAMINATION

Lao PDR does not yet have a reliable estimate of CMR contamination,¹ but is undertaking a nationwide CMRS of affected villages that should produce a more evidence-based assessment of the extent of CMR contamination.² US bombing data indicate 70,000 individual target locations across Lao PDR.³

All 18 provinces are contaminated with UXO, including CMR, but to different degrees,⁴ and the three provinces of Luang Namtha, Bokeo, and Xayabuli are not significantly contaminated by CMR.⁵ The nine provinces most heavily affected by CMR are: Attapeu, Champassak, Houaphanh,

Khammouane, Luang Prabang, Saravan, Savannakhet, Xekong, and Xiengkhouang.⁶

In 2015, survey procedures were approved and Lao PDR initiated systematic technical survey (TS) using the CMRS methodology to determine the extent of contamination in populated areas.⁷ This does not take into account other land, notably forested and mountainous areas, which constitute a significant proportion of the country and of estimated contaminated area,⁸ and which pose a challenge to identifying the exact size and location of the contaminated areas in each province.⁹ Systematic CMRS of all villages

1 Article 4 deadline Extension Request 2019 (hereafter, CCM Extension Request 2019), Part B, Detailed Narrative, p. 5.

2 Interview with Phoukhieo Chanthasomboune, Director, National Regulatory Authority (NRA), Vientiane, 4 May 2016; and NRA, "From Survey to Safety, Quantifying and Clearing UXO Contamination in Lao PDR", March 2016.

3 "US bombing records in Laos, 1964-73, Congressional Record", 14 May 1975; and Lao PDR's CCM Article 7 Report (covering 2022), Form F.

4 Article 7 Report (covering 2022), Form F; and email from Khammoungkhoun Southivong, Information Management Officer, NRA, 8 June 2023.

5 Email from Olivier Bauduin, UXO Program Advisor, US Embassy Vientiane, 21 July 2023.

6 CCM Extension Request 2019, Part B, Detailed Narrative, pp. 1 and 5; and Executive Summary, p. 1; and National Strategic Plan for the UXO Sector in the Lao PDR 2021-2030, "Safe Path Forward III" (hereafter, Lao PDR, "Safe Path Forward III"), p. 4.

7 Article 7 Report (covering 2022), Form F; and email from Olivier Bauduin, US Embassy Vientiane, 21 July 2023.

8 Email from Douangsy Thammavong, Deputy Director, NRA, 20 June 2022; and Article 7 Report (covering 2022), Form F.

9 Article 7 Report (covering 2022), Form F.

assigned in five provinces in the south (Attapeu, Champassak, Saravan, Savannakhet, and Xekong) has now been concluded,¹⁰ with the exception of 9 villages subsequently assigned to Norwegian People's Aid (NPA) in Attapeu and 7 villages in Champassak in 2023, all of which had been concluded by July).¹¹

The US now considers that the "proactive" phase of survey (i.e. the systematic village-by-village approach to survey using the NRA's list of contaminated villages) has been concluded in these five provinces and the provinces are now in a "reactive" phase of survey.¹² Considering the high level of CMR contamination in Lao PDR, previously unknown CMR evidence points will continue to be discovered even after completion of systematic CMRS of villages. Adequate TS capacity has been maintained by NPA and The HALO Trust (HALO) to respond to new evidence points.¹³ The completion of proactive survey in these five southern provinces is notwithstanding the fact that survey of some villages or parts of villages in Lao PDR is restricted, often for reasons of national security. Furthermore, it is unclear to what extent survey of villages assigned to UXO Lao has been fully "completed" in these five provinces, as UXO Lao does not complete survey of entire villages in the same way that

HALO, MAG, and NPA do. Systematic village-to-village CMRS (proactive survey phase) is still underway in Xiengkhouang province, which is the most contaminated province.¹⁴

Some survey is also being undertaken in five other provinces (Bolikhambxai, Houaphanh, Khammouane, Luang Prabang, and Vientiane province), although not systematically, as funding for TS/CMRS has been sporadic in these provinces. Of the remaining seven provinces, three (Oudomxay, Vientiane Capital, and Xaisomboun) are known to have significant contamination but do not currently have funding for TS/CMRS. In the fourth remaining province, Phongsaly, HI began CMRS in two districts at the start of 2023.¹⁵ The remaining three (Bokeo, Luangnamtha, and Sainyabuli) have low levels of contamination and are deprioritised.¹⁶

As at the end of 2022, a total of 1,745km² of CHA had been identified through TS (see Table 1);¹⁷ an increase on the almost 1,530km² of CMR-contaminated area as at the end of 2021.¹⁸ The amount of CHA is expected to continue to increase over the next few years, although since 2021, there has been a shift towards increasing clearance capacity and reducing survey capacity, in order to clear the CHAs identified during the CMRS up to now.

Table 1: Cluster munition-contaminated area confirmed through survey (at end 2022)¹⁹

Province	Villages	CHAs	Total area (km ²)
Attapeu	123	1,576	147.75
Bolikhambxai	52	35	1.80
Champassak	139	471	27.23
Houaphanh	119	479	46.47
Khammouane	106	685	130.84
Luang Prabang	54	280	27.94
Saravan	359	2,486	121.41
Savannakhet	422	4,983	211.42
Vientiane	21	5	0.39
Xekong	151	1,322	93.20
Xiengkhouang	256	1,842	936.84
Totals	1,802	14,164	1,745.29

In its 2019 Article 4 deadline extension request, Lao PDR estimated that the total CMR contamination is approximately 8,470km², a figure unchanged since its September 2011 clearance statement to the CCM Second Meeting of States Parties.²⁰ No estimate of CMR contamination was given in Lao PDR's latest Article 7 report (covering 2022).

10 Article 7 Report (covering 2022), Form F. In its response to Mine Action Review's questionnaire, however, the NRA said that survey had not yet been completed in any province (email from Khammoungkhoun Southivong, NRA, 8 June 2023).

11 Email from Katherine Harrison, Programme Coordinator, NPA, 9 May 2023; and additional information from Sasa Jelacic, NPA, 4 July 2023.

12 Email from Olivier Bauduin, US Embassy Vientiane, 21 July 2023; and Article 7 Report (covering 2022), Form F.

13 Emails from Olivier Bauduin, US Embassy Vientiane, 21 July 2023; and Katherine Harrison, NPA, 9 May 2023; and Article 7 Report (covering 2022), Form F.

14 Article 7 Report (covering 2022), Form F; and presentation by Peter Haymond, Ambassador of the US to Lao PDR, minutes of the UXO Sector Working Group meeting, 16 September 2022.

15 Email from Alexandra Letcher, HI, 6 April 2023.

16 Article 7 Report (covering 2022), Form F.

17 Email from Khammoungkhoun Southivong, NRA, 8 June 2023.

18 Email from Douangsy Thammavong, NRA, 20 June 2022.

19 Email from Khammoungkhoun Southivong, NRA, 8 June 2023.

20 CCM Extension Request 2019, Part B, Detailed Narrative, pp. 3 and 5; and Executive Summary, p. 4; and Article 7 Report (covering 2021), Form J.

Lao PDR certainly has the world's highest level of contamination by unexploded submunitions as a result of the Indochina War of the 1960s and 1970s. The United States conducted one of the heaviest aerial bombardments in history, dropping more than two million tonnes of bombs between 1964 and 1973,²¹ including more than 270 million submunitions (known locally as bombs). The failure rate is not known, but Lao PDR reports it may have been as high as 30 per cent, and an estimated 80 million submunitions are thought to have remained unexploded at the end of the war.²² Lao PDR estimates that over 75 million submunitions remain.²³

During the period of its Article 4 extension period (2020–25), Lao PDR will focus survey on populated areas of the most heavily contaminated provinces currently being surveyed, but the remaining affected provinces will also need to be surveyed in order to quantify the extent of CMR contamination nationwide.²⁴

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 (NTS) at the village level.²⁵

OTHER EXPLOSIVE REMNANTS OF WAR AND LANDMINES

Lao PDR also has extensive contamination from other explosive remnants of war (ERW), including both air-dropped and ground-fired unexploded ordnance (UXO), though the extent of contamination is not known. Clearance operators have reported the presence of at least 186 types of munition in Lao PDR. These range from 20lb fragmentation bombs to 3,000lb general-purpose bombs, as well as artillery shells, grenades, mortars, and rockets.²⁶ Humanity and Inclusion (HI) also reported discovery of explosive ordnance mounted with mechanical or time-delay fuzes, other items such as XM 146 sensors, and items with all-ways acting fuzes (such as BLU 26 and BLU 74 submunitions), found on slopes and which could easily roll downhill if disturbed. Such devices present a particular hazard and it is risky to move them.²⁷ Lao PDR is also contaminated, but to a much lesser extent, by anti-personnel mines and anti-vehicle mines (See Mine Action Review's *Clearing the Mines* report on Lao PDR for more information).

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

The NRA, created by government decree in 2004 and active since 2006, has an inter-ministerial board composed of representatives from government ministries and is chaired by the Minister of Labour and Social Welfare.²⁸ A 2018 decree, "On the Organisation and Operations of the National Regulatory Authority for UXO in Lao PDR" defines the position, role, duties, rights, organisational structure, and the working principles and methods of the NRA.²⁹ A new National Decree on UXO management was endorsed by the government in July 2022.³⁰ In an important development for the UXO sector, the NRA was set to be moved from under the Ministry of Labour and Social Welfare to the Ministry of Foreign Affairs from August 2023, which would likely demand a period of transition.³¹

The NRA acts as the coordinator for national and international clearance operators and serves as the national focal point for the sector. This includes overall management and consideration of policy, planning, projects, and coordination of the implementation of the national strategy nationwide, as well as NRA planning and coordination functions at the provincial and district levels.³² The current director of the NRA has been in post since June 2019.³³ Trainings were provided in 2019–20 to strengthen UXO management for provincial and district authorities to integrate UXO work into the socio-economic development plans in 15 provinces.³⁴ Effective coordination is needed to help prioritise clearance of the huge number of CHAs already in the database as a result of the ongoing CMRS.³⁵

21 CCM Extension Request 2019, Part B, Detailed Narrative, pp. 1 and 5.

22 Ibid., p. 1.

23 Article 7 Report (covering 2022), Form F.

24 CCM Extension Request 2019, Executive Summary, p. 5; and Part B, Detailed Narrative, p. 23.

25 Emails from Mark Frankish, UNDP, 26 August 2020; Chomyaeng Phengthongsawat, Director General, NRA, 21 June 2021; and Douangsy Thammavong, NRA, 20 June 2022.

26 CCM Extension Request 2019, Part B, Detailed Narrative, p. 1.

27 Emails from Alexandra Letcher, Regional Armed Violence Reduction (AVR) Specialist – Mekong and Myanmar-Thailand, Humanity and Inclusion (HI), 6 April and 28 June 2023.

28 CCM Extension Request 2019, Part B, Detailed Narrative, p. 18.

29 Government Decree No. 67, dated 12 February 2018; CCM Extension Request 2019, Part B, Detailed Narrative, p. 17; and Statement of Lao PDR on National Implementation Efforts, CCM Eighth Meeting of States Parties, Geneva, 3 September 2018.

30 Government Decree No. 210, dated 29 July 2022. Presentation by Chomyaeng Phengthongsawat, NRA, minutes of the UXO Sector Working Group meeting, 16 September 2022.

31 Email from Olivier Bauduin, US Embassy Vientiane, 21 July 2023.

32 CCM Extension Request 2019, Part B, Detailed Narrative, p. 18.

33 Email from Olivier Bauduin, US Embassy Vientiane, 29 September 2020.

34 Lao PDR, "Safe Path Forward III", p. 10.

35 CCM Extension Request 2019, Part B, Detailed Narrative, p. 26.

Lao PDR contributed US\$17,000 towards the rental of the NRA office in 2022 and training of UXO Lao deminers,³⁶ slightly less than the US\$18,000 contributed in 2021.³⁷ Lao PDR also makes in-kind contributions to mine action including the salaries of the humanitarian clearance teams of the Lao People's Army (Unit 58), and through tax exemptions for visas, and importing vehicles and equipment for humanitarian operators.³⁸ Clearance operators are, however, required to pay visa fees for expatriates and the previous tax concession of tax exemption for international experts was removed from all MoUs after 2018.³⁹ In addition, a new Income Tax Law means that NGO international staff now pay income tax since the start of 2021.⁴⁰ Lao PDR has said that it requires US\$50 million annually for clearance and mine risk education.⁴¹ The NRA plans to diversify the sources of funding in the current Article 4 extension period, including engaging the private sector and non-institutional donors.⁴²

During the Association of Southeast Asian Nations (ASEAN) summit in September 2016, Lao PDR launched sustainable development goal (SDG) 18, "Lives Safe from UXO", which focuses on freeing the country from UXO. The inclusion of UXO as a specific output in the NSEDP for 2021–2025, launched in April 2021, demonstrates Lao PDR's commitment to removing UXO as a barrier to development.⁴³

UNDP provides programmatic and technical support to the NRA and UXO Lao, including with regard to information sharing and coordination, albeit at a reduced capacity compared to previous years.⁴⁴ Further capacity development in information management (IM), quality management (QM), and operations support is provided, primarily to UXO Lao, and to a lesser extent the NRA, through a US-funded contractor, Tetra Tech.⁴⁵

In 2022, UXO Lao received a range of capacity development support through various implementing partners.⁴⁶

HI provides capacity development support to the provincial NRA in Houaphanh and Phongsaly provinces.⁴⁷

In 2019, Lao PDR reported it had begun to create a Country Coalition "by modifying the existing mechanism through

the Round Table Meeting process". However, progress had been delayed by the outbreak of COVID-19.⁴⁸ In May 2022, Lao PDR announced during the CCM intersessional meetings that a Country Coalition had been set up under the existing name of the "UXO Sector Working Group", which the national authorities had developed from their existing coordination mechanism. Lao PDR hope that the "new" UXO Sector Working Group, which is based on a multi-stakeholder approach, will improve practical measures and further explore resource mobilisation to accomplish its Article 4 extension work plan.⁴⁹ The SWG, which is led by the chair of the NRA board, and co-chaired by UNDP and the US Ambassador in Vientiane, meets biannually. The SWG met once in 2022, on 16 September, attended by members of the NRA board and staff, foreign ambassadors, representatives from line ministries of the Lao government, UXO provincial authorities, and UXO clearance operators.⁵⁰ It provided a useful and transparent forum to discuss progress and challenges in addressing CMR contamination and to strengthen coordination and resource mobilisation.

A roundtable meeting took place on 29 November, during which a UNDP review of the SWG was discussed. Other meetings and consultations were also convened in 2022 regarding the elaboration of "Safe Path Forward III" Strategy.⁵¹

International clearance operators continued to have good cooperation and coordination with the NRA at the national, provincial, and district levels,⁵² but the multiple layers of bureaucracy in Lao PDR remained a challenge. Humanitarian clearance operators are involved in key decision-making processes by the NRA, including through participation in sector meetings and Technical Working Groups (TWG) meetings, and through discussions during other formal and informal meetings and field visits.⁵³ There are four TWGs: for survey and clearance, IM, explosive ordnance risk education (EORE), and victim assistance (VA), each of which meets quarterly.⁵⁴ In addition, it might be useful for the NRA to assign a focal point for each organisation, to enable smooth communication.⁵⁵ Lack of resources and capacity of

36 Article 7 Report (covering 2022), Form F.

37 Article 7 Report (covering 2021), Form I.

38 Ibid.; and email from Khammoungkhoun Southivong, NRA, 8 June 2023.

39 Emails from Katherine Harrison, NPA, 9 September 2020; Cameron Imber, Programme Manager, HALO, 11 June 2021; Julien Kempeneers, Regional Armed Violence Reduction and Humanitarian Mine Action Specialist, HI, 16 June 2021; and Rebecca Letven, Country Director, MAG, 19 June 2021.

40 Emails from Cameron Imber, HALO, 11 June 2021; and Katherine Harrison, NPA, 19 June 2021.

41 Article 7 Report (covering 2022), Form I.

42 CCM Extension Request 2019, Part B, Detailed Narrative, p. 7.

43 Email from Olivier Bauduin, US Embassy Vientiane, 6 July 2021.

44 Interview with Olivier Bauduin, UNDP, Vientiane, 2 May 2018; and email, 10 July 2018.

45 Email from Nigel Orr, Technical Advisor Survey and Clearance, Tetra Tech, 14 June 2019; and "US Renews Partnership with Lao PDR to Build Capacity in UXO Sector", US Embassy in Lao PDR, 31 January 2020, at: <http://bit.ly/2LzmG8J>.

46 Email from Vilaivanh Thongmanivong, Chief of Programme Office and Public Information Unit, UXO Lao, 25 May 2023.

47 Email from Alexandra Letcher, HI, 6 April 2023.

48 Statement of Lao PDR on International Cooperation and Assistance, Second CCM Review Conference (Part 1, virtual meeting), 25–27 November 2020.

49 Statements of Lao PDR on International Cooperation and Assistance, CCM Intersessional meetings, Geneva, 16–17 May 2022; and CCM Tenth Meeting of States Parties, 30 August–2 September 2022.

50 Emails from William Hunter, Programme Manager, HALO, 8 May 2023; and Katherine Harrison, NPA, 9 May 2023; and comments by Padeumphone Sonthany, Deputy Minister of Labour and Social Welfare and Deputy Chairperson of the NRA Board, minutes of the UXO Sector Working Group meeting, 16 September 2022.

51 Email from Katherine Harrison, NPA, 9 May 2023.

52 Emails from Alexandra Letcher, HI, 6 April 2023; William Hunter, HALO, 8 May 2023; Katherine Harrison, NPA, 9 May 2023; and Portia Stratton, MAG, 15 May 2023.

53 Emails from Simon Rea, Regional Director, South and South East Asia, MAG, 17 June 2020; Katherine Harrison, NPA, 6 May 2020 and 31 March 2021; Rebecca Letven, MAG, 30 March 2022; Cameron Imber, HALO, 31 March 2022; and Alexandra Letcher, HI, 6 April 2023.

54 CCM Extension Request 2019, Part B, Detailed Narrative, p. 25; and emails from Alexandra Letcher, HI, 6 April 2023; and Rupert Leighton, UNDP, 18 July 2023.

55 Email from Julien Kempeneers, HI, 30 March 2022.

some of the provincial NRAs can impact their ability to fulfil their roles.⁵⁶

One of the biggest challenges encountered by operators in Lao PDR continues to be the procedure for MoUs, which remains lengthy, complex, and labour-intensive. Complications at each level (district, provincial, and central) continue to cause significant delay and impede the implementation and expansion of survey and clearance, including by preventing the procurement and import of equipment. Operators are required to report and secure approval for completed projects before an MoU for a new project can be approved.⁵⁷ Delays to MoUs continued to impact on operators in 2022, both in terms of deployment of teams,⁵⁸ as well as import or procurement of equipment, and the issuing of multiple-entry visas for key international staff.⁵⁹ Typically it takes a minimum of six months for an MoU to be approved, but it may even take years, sometimes resulting in donor funding not being spent and being returned.⁶⁰ That said, UXO Sector MOUs are regularly approved quicker than most of the other sectors of Development Cooperation in Lao PDR.⁶¹

The current procedure does not favour integrated approaches or partnerships, as according to Ministry of Foreign Affairs (MoFA) rules, it is not possible to present a consortium of international organisations in the same MoU.⁶² Furthermore, even after formal approval of an MoU, operators may still experience challenges importing necessary equipment⁶³ or small items of additional equipment, which require time-intensive MoU amendments.⁶⁴

In the new Safe Path Forward III strategy, the NRA says that it has made progress in simplifying the MoU procedures in the UXO sector, but acknowledged that they remain slow and this that impacts operational efficiency and may impact

sector funding. It said that alternative MoU modalities that simplify management, both by NRA and the operators, may increase operational efficiency and funding.⁶⁵ At the SWG meeting in September 2022, the Deputy Minister of Labour and Social Welfare who serves as Deputy Chairperson of the NRA Board said Lao PDR will discuss further how to facilitate the procedure for renewing MoUs, especially regarding time management.⁶⁶ The NRA listed inconsistent MoU compliance of the UXO operators, as a challenge faced in 2022.⁶⁷ UNDP suggested improving the MoU process to enable longer-term MoUs to be concluded with broader objectives linked to Safe Path Forward III outcomes and timeframe. UNDP believes improving the MoU process would invite more investment to the sector while maximising impact.⁶⁸ In November 2022, the NRA Director organised and led a workshop with the four INGOs in order to share lessons learned and improve compliance to MOFA requirements, and the MOFA Vientiane and several provinces were represented.⁶⁹

Operators' experiences regarding the MoU process varied. HI reported that MoU processes remain slow and the obligation to split MoUs by province (even if under the same project/grant), and length of the MoU process, continued to present issues.⁷⁰ Mines Advisory Group (MAG) said that the signing of MoUs remained a challenge, but that the granting of interim permission to operate meant it did not have a negative impact on MAG's operations and there was no gap between MoUs.⁷¹ In contrast, NPA reported that continued delays in the MoU process resulted in lost operational days and outputs in 2022.⁷²

56 Emails from Julien Kempeneers, HI, 30 March 2022; Rebecca Letven, MAG, 30 March 2022; Cameron Imber, HALO, 31 March 2022; and Katherine Harrison, NPA, 6 May 2020 and 31 March 2021.

57 Interviews with international operators, Lao PDR, 1–12 May 2018; and emails from Fiona Kilpatrick, HALO, 29 March 2019; Blossum Gilmour, MAG, 21 March 2019; Rebecca Letven, MAG, 26 March 2021; Katherine Harrison, NPA, 6 May 2020 and 31 March 2021; and Julien Kempeneers, HI, 16 March 2021.

58 Email from Katherine Harrison, NPA, 9 May 2023.

59 Interviews with international operators, Lao PDR, 1–12 May 2018; and emails from Fiona Kilpatrick, HALO, 29 March 2019; Blossum Gilmour, MAG, 21 March 2019; Rebecca Letven, MAG, 30 March 2022; Katherine Harrison, NPA, 6 May 2020 and 31 March 2021; and Julien Kempeneers, HI, 16 March 2021 and 30 March 2022.

60 Email from Katherine Harrison, NPA, 9 September 2020.

61 Email from Olivier Bauduin, US Embassy Vientiane, 21 July 2023.

62 Emails from Julien Kempeneers, HI, 16 June 2021 and 30 March 2022.

63 Interviews with international operators, Lao PDR, 1–12 May 2018.

64 Email from Julien Kempeneers, on behalf of Yvon Le Chevanton, Technical Survey/Clearance Operations Manager, HI, 25 March 2020.

65 Lao PDR, "Safe Path Forward III", p. 12.

66 Comments by Padeumphone Sonthany, Ministry of Labour and Social Welfare (MoLSW), minutes of the UXO Sector Working Group meeting, 16 September 2022.

67 Presentation by Chomyaeng Phengthongsawat, NRA, minutes of the UXO Sector Working Group meeting, 16 September 2022.

68 Presentation by Catherine Phuong, UNDP OIC Deputy Resident Representative to Lao PDR, minutes of the UXO Sector Working Group meeting, 16 September 2022.

69 Email from Olivier Bauduin, US Embassy Vientiane, 21 July 2023.

70 Email from Alexandra Letcher, HI, 6 April 2023.

71 Emails from Portia Stratton, MAG, 15 May 2023; and Olivier Bauduin, US Embassy Vientiane, 21 July 2023.

72 Email from Katherine Harrison, NPA, 9 May 2023. At the start of 2022, NPA encountered unexpected delays in authorisation from the NRA in Vientiane to allow for interim permission for team deployment in the first quarter of the year, pending the signature of an amended MoU to implement activities in 2022. This was despite NPA having secured approvals from each provincial authority for interim permission. The US State Department Bureau of Political-Military Affairs (PM/WRA) intervened to support NPA's case with the NRA and the teams were able to deploy on 25 January 2022, having lost seven working days. As the MoU had still not been signed by the end of March 2022, NPA was forced to seek renewed interim permission to continue operations after teams returned from the Pii Mai stand down in April. A last-minute discontinuation of permission for interim operations in Champassak and Saravane delayed the deployment of 14 PM/WRA-funded NPA teams which were planned to have been deployed on tasks, which in turn affected NPA's seasonal deployment and operational work plan. This meant it was not possible to deploy on tasks favourable to the weather conditions at the time as planned.

ENVIRONMENTAL POLICIES AND ACTION

Lao PDR has a NMAS on Environmental Management (chapter 21), but it is in need of revision. The NMAS refers to outdated 1999 national laws on environmental protection, rather than the current national environmental legal framework with which UXO sector activities should comply.⁷³

In the new Safe Path Forward III strategy, the NRA says that climate change is a challenge to addressing UXO issues in the Lao PDR.⁷⁴ It also reiterates that mine action activities have to be “compliant with national standard and Environmental Protection Law (EPL) of Lao PDR”.⁷⁵

Informal discussions on the existing NMAS on Environmental Management were held during an ASEAN Regional Mine Action Centre (ARMAC)/International Committee of the Red Cross (ICRC)-hosted regional workshop on environment and mine action in Cambodia, in October 2022, between HALO, MAG, NPA, UXO Lao, and Zero Waste Laos (ZWL). NPA and ZWL shared preliminary analysis on areas where the national chapter can and should be revised. NPA intends to discuss revising the national standard with the NRA and other relevant stakeholders, while also closely following discussions on revisions to International Mine Action Standards (IMAS) 7.13.⁷⁶

HALO Laos currently does not have an environmental management system in place.⁷⁷ HALO’s global environmental/sustainability committee has explored options for mitigating the impact of cluster munition clearance operations in Lao PDR, but has been unable to implement any meaningful plan due to the strict budgetary constraints imposed by HALO’s current MoUs. HALO’s Laos programme, did, however, implement a plan to install solar panels at its Sepon headquarters (HQ) that will power the entire HQ during daylight hours. The panels were installed in January of 2023.⁷⁸ As at May 2023, HALO was still seeking a supplier of biodegradable sandbags to use for demolitions, instead of plastic sandbags, that contribute to the tremendous amount of plastic waste that pollutes Laos.⁷⁹

HI has a generic “Environmental Management” SOP available for all its country programmes, and in June 2023, completed the development of a dedicated environment SOP for its operations in Lao PDR. HI believes the extent of explosive ordnance and the daily EOD operations conducted in Lao PDR cause land degradation through access denial, loss of biodiversity, presence of toxic explosives, and damage to soil stability, increasing its susceptibility to erosion.⁸⁰

MAG does not currently have a specific environmental SOP but this is being included as part of the ongoing SOP revision currently ongoing to incorporate International Mine Action Standard (IMAS) 7.13. During the process MAG Laos will adapt MAG’s Global Technical Standard on Environmental Management to suit the Laos standard.⁸¹ During ground preparation, MAG ensures the protection of trees above a certain size. It is also starting to implement some changes to reduce the environmental impact of its work, such as installing solar power and it is investigating the possibility of introducing hessian sandbags to reduce plastic use.⁸²

NPA has an annex on environmental management in its SOP on UXO clearance operations, which reflects the obligations of the current IMAS 7.13, and which is followed during survey and clearance operations as part of its environmental protection and “do no harm” policy.⁸³ In addition, NPA Lao PDR has developed “Green Office” and “Green Operations” tools to assess and monitor NPA’s environmental footprint. The tools cover eight key areas: green office policy and management; communications and engagement; energy use; solid waste management; air quality; travel emissions; green activities; and water and wastewater management.

NPA has been working with the national youth volunteer organisation, ZWL. In 2022, annual environmental training was conducted for over 430 NPA staff on resource and energy efficiency, climate change awareness, and reinforcing waste management and recycling activities. Two advanced trainings were conducted for Vientiane and

73 Email from Katherine Harrison, NPA, 9 May 2023.

74 Lao PDR, “Safe Path Forward III”, p. 12.

75 Ibid., p. 17.

76 Email from Katherine Harrison, NPA, 9 May 2023.

77 Email from Cameron Imber, HALO, 31 March 2022.

78 Email from William Hunter, HALO, 8 May 2023

79 Ibid.

80 Emails from Julien Kempeneers, HI, 30 March 2022; and Alexandra Letcher, HI, 28 June 2023.

81 Email from Portia Stratton, MAG, 15 May 2023.

82 Email from Rebecca Letven, MAG, 30 March 2022.

83 Email from Katherine Harrison, NPA, 9 May 2023.

Pakse office staff introducing concepts of system thinking and sustainability mindsets related to climate change and environmental protection.⁸⁴

In July 2022, NPA and ZWL held a series of “Youth Climate Action in Southern Laos” events in each of NPA’s four provinces of operations. More than 320 participants, including representatives from the Department of Education and Sports, principals from 100 schools, teachers, and students from elementary to university-levels attended. During the events, ZWL and NPA monitored the use of recycling collection points and composting facilities set up in three high schools in 2021, planted trees, and held environment and climate change awareness activities and games.⁸⁵

In addition, NPA supported ZWL to plant and distribute 3,000 fruit trees in 100 schools across the four provinces where it operates, as part of a countrywide “tree and seedling planting initiative” implemented by ZWL, with primary support from the European Union (EU).⁸⁶

In December, NPA, together with the EU, British Embassy, World Vision, and Nam Theun 2 Power Company, supported ZWL to organise a large “Youth 4 Sustainable Development Goals (SDGs) 2022” event in Vientiane, which was attended by over 300 elementary to university-level students. More than 20 youth-led organisations, civil society organisations, and international NGOs hosted interactive booths on each SDG. NPA organised a booth on SDG 18 “Lives Safe from UXO”, together with local students assigned to lead informative games/information quests about UXO.⁸⁷

UXO Lao said that the environment is taken into consideration during demining, in particular with respect to mine contamination.⁸⁸ The operations team is not allowed to burn forest or cut down trees with a diameter of over 60 cm. If the vegetation cutting team needs to conduct any demolition or dig holes, they are required to return soil to the area after clearance.⁸⁹ UXO Lao began a revision of its SOP in 2021, which included revision of the Environmental Management SOP (chapter 13). As at May 2023, the SOP was being translated prior to submission to the NRA.⁹⁰

GENDER AND DIVERSITY

While the NRA has yet to develop a gender and diversity policy, gender is integrated into all core UXO documents including work plans and the national strategy, and relevant mine action data are disaggregated by sex and age. Women are consulted in group discussions as part of survey and clearance activities, but the needs of women and children have yet to be fully taken into account in prioritisation and planning. The NRA said that it conducted gender mainstreaming analysis in 2022. Of the 63 employees at the NRA (including the national training centre), 21 (33%) were women, including 20% (3) of the 15 managerial or supervisory positions and 38% (18) of the 48 operational positions.⁹¹

In its new Safe Path Forward III strategy, the NRA states that gender mainstreaming is important for the national strategic plan and work plans, and that data needs to be disaggregated by sex and age, and women must be engaged in work planning and the implementation of projects.⁹² Gender mainstreaming in the UXO sector is led by the NRA, together with the Lao Women’s Union.⁹³ Following the establishment of a partnership in 2018 between UN Women, the NRA, and the Lao Women’s Union on how to promote gender rights in the UXO sector, a “Manual for Trainers on Gender Mainstreaming in the UXO Sector, Lao PDR” was piloted during a workshop in December 2018 and published in 2019.⁹⁴

84 Ibid.

85 Email from Katherine Harrison, NPA, 9 May 2023.

86 Ibid.

87 Ibid.

88 Email from Noupin Phimmasy, UXO Lao, 4 June 2022.

89 Email from Vilaivanh Thongmanivong, UXO Lao, 25 May 2023.

90 Ibid.

91 Email from Khammoungkhoun Southivong, NRA, 8 June 2023.

92 Lao PDR, “Safe Path Forward III”, p. 17.

93 Statement of Lao PDR on National Implementation Measures, Second CCM Review Conference (Part 1, virtual meeting), 25–27 November 2020.

94 UN Lao PDR, “Training of Trainer’s Workshop Promotes Gender Equality in UXO Sector”, 13 December 2018, available at: <http://bit.ly/3haKMnB>.

Table 2: Gender composition of operators in 2022⁹⁵

Operator	Total staff	Women employed	Total staff in managerial or supervisory positions	Women in managerial or supervisory positions	Total staff in operational positions	Women in operational positions
HALO	1,039	565	38	17	787	439
HI	72	26	12	4	44	19 (including EORE and VA positions)
MAG	1,234	454	1,148	415	88	51
NPA	446	151	52	7	394	138
UXO Lao	1,396	381	252	33	1,113	270

HALO, HI, MAG, and NPA all reported having gender and diversity policies in place, and that they disaggregate mine action data by gender and age, and consult with women and girls during survey and clearance operations.⁹⁶

HALO continued to prioritise the hiring of women into operational roles. As per Table 2, of the humanitarian clearance operators in Lao PDR, HALO had by far the highest proportion of female staff (54%). This was achieved by setting quotas during recruitment drives. The programme also ensured representation from across the province and, in particular, individuals from minority ethnic groups.⁹⁷ HALO has also continued its relationship with ARMI (Association for Rural Mobilisation and Improvement) in Savannakhet to provide employment opportunities to people with disabilities. Currently HALO employs eight staff with disabilities, two of whom are UXO victims.⁹⁸

HI provides equal opportunities to employment for qualified women and men in its survey and clearance teams in Lao PDR, and trains and promotes women to managerial positions. HI has mixed NTS teams, with employees of different ethnic origins and persons with disability, including UXO survivors. It has developed marker tools to support the mainstreaming of gender and diversity into projects.⁹⁹ HI encourages women and persons with disabilities to apply to all positions. In 2022–23, HI, together with the Ministry of Labour and Social Welfare (MoLSW), organised an Annual Disability Policy Dialogue in which 60% of the panellists were women from government ministries, UN agencies, donor agencies, and NGOs. The focus of the discussion was on how the 9th NSEDP can be inclusive for persons with disabilities, including those impacted by UXO.¹⁰⁰ HI considers older persons with disabilities as one of the underrepresented groups and efforts are made to collaborate with local partners to ensure the rights of older persons with disabilities are appropriately addressed.¹⁰¹

In 2021, MAG secured funding from the Canada Fund for Local Initiatives to run gender and disability mainstreaming workshops. The delivery of these workshops was postponed to early 2022 due to COVID-19. MAG ran two workshops, one with senior managers from Vientiane and the other with all MAG's Xiengkhouang-based community liaison staff. MAG Laos has worked closely with its Global Gender and Inclusion Advisor throughout this project and has started to develop an action plan for Gender, Diversity, and Inclusion for the programme moving forward.¹⁰²

NPA has had a programme-specific gender strategy in place since 2018. In 2022, it continued its efforts to broaden inclusivity with the support of "Proud To Be Us Laos", a national organisation campaigning for the rights and non-discrimination of all persons regardless of sexual orientation, gender, identity, and expression (SOGIE). Over the past three years, NPA has gradually expanded SOGIE trainings from small focus groups of Vientiane and Pakse office staff and senior management in 2020, to team leaders and deputy team leaders in 2021, and for the first time, to all field staff in 2022. Over 430 national field staff members received gender and diversity trainings in 2022, which were conducted in half-day interactive sessions.¹⁰³

UXO Lao ensures that all groups affected by CMR contamination, including women and children, are consulted during its survey and community liaison activities. This requirement is included in its SOPs. UXO Lao also ensures its survey and community liaison teams are inclusive and gender balanced, to facilitate access and participation from all groups.¹⁰⁴ UXO Lao advocates for equality in the workplace and its human resource policies encourage female applicants at all levels.¹⁰⁵

95 Emails from William Hunter, HALO, 8 May 2023; Alexandra Letcher, HI, 6 April 2023; Portia Stratton, MAG, 15 May 2023; Katherine Harrison, NPA, 9 May 2023; Vilaivanh Thongmanivong, UXO Lao, 25 May 2023; and Llewelyn Jones, MAG, 5 July 2023.

96 Emails from Fiona Kilpatrick, HALO, 29 March 2019; Blossum Gilmour, MAG, 21 March 2019; Aubrey Sutherland, NPA, 25 March 2019; Julien Kempeneers, HI, 22 March 2019; and Saomany Manivong, Chief of Programme Office and Public Information, UXO Lao, 10 May 2019.

97 Email from William Hunter, HALO, 8 May 2023.

98 Ibid.

99 Emails from Julien Kempeneers, HI, 25 March 2020 and 30 March 2022; and on behalf of Minla Nanthavong, HI, 16 March 2021.

100 Emails from Julien Kempeneers, HI, on behalf of Pradeep Bagival, HI Inclusive Governance Specialist, 30 March 2022; and Alexandra Letcher, HI, 6 April 2023.

101 Email from Alexandra Letcher, HI, 6 April 2023.

102 Email from Rebecca Letven, MAG, 30 March 2022.

103 Email from Katherine Harrison, NPA, 9 May 2023.

104 Email from Saomany Manivong, UXO Lao, 10 May 2019.

105 Email from Vilaivanh Thongmanivong, UXO Lao, 25 May 2023.

INFORMATION MANAGEMENT AND REPORTING

The national IMSMA database has several problems, including incorrect or incomplete historical data (mainly that of UXO Lao data stored as hard-copy documents in provincial UXO Lao offices); missing data resulting from the migration to IMSMA; and delays in entering corrected data into the database.¹⁰⁶ A TWG on IM meets quarterly.¹⁰⁷ The NRA has identified the need for better quality control of data in the IMSMA database,¹⁰⁸ and in 2022 continued to improve data quality, focusing again on the quality of reporting forms.¹⁰⁹ The NRA has also stressed that upgrading IM systems will be crucial given the greatly increased volume of data resulting from the ongoing nationwide CMRS.¹¹⁰

A 2017 report by Sterling International, the former US contractor before Janus and Tetra Tech, said analysis of data in the NRA IMSMA database found errors affecting up to 9,300 entries, or 14% of the 67,000 entries on the database. Sterling believed that the errors could affect 22% of the area recorded in the database as cleared or technically surveyed. The errors included operators' misreporting of coordinates and mistaken entry of reports into IMSMA. Other errors included use of the wrong GPS format or the wrong map datum. The result was to put many tasks in the wrong location. Sterling found that the errors occurred mostly with UXO Lao's work, and mostly between 2004 and 2010, but that it affected "many" organisations.¹¹¹

Efforts to correct historical data within IMSMA (including incorporation of correct current data) are ongoing, although delays remain in the uploading of operator data by the NRA. During the IM TWG meeting in 2020, the NRA tasked the operators to correct their own historical data and resubmit to the NRA for approval.¹¹² It is also important that village-level data corrections made by operators during the nationwide CMRS are updated in IMSMA in a timely manner.¹¹³ NPA is supporting the NRA with IM within the framework of a new IM Capacity Development Project supported by the PM/WRA, which was launched in November 2022 following a lengthy MoU process.¹¹⁴

UXO Lao is also engaging with the NRA and other operators in the sector on a project to conduct historical data correction and improve incomplete datasets. In 2022, UXO Lao continued to improve the quality of data by creating a software application system to assist in data monitoring and checks before entering information into IMSMA. Moreover, UXO Lao has provided training and follow up at the provincial level, regarding data recording and collecting.¹¹⁵ In 2023, UXO Lao was planning to provide electronic tablets to field operation teams using Survey123 for data capture and analysis.¹¹⁶

When the organisation conducting the CMRS is different to the one holding historical records, there is an obvious need for timely sharing of relevant data.¹¹⁷ Communication between international operators and UXO Lao is continuing to improve.

In 2022, NPA aimed to enhance the IM capacity of the provincial authorities in nine provinces and fifty-five districts within the framework of its new three-year capacity development project funded by the US PM/WRA.¹¹⁸ Full implementation of the planned activities started in January 2023.¹¹⁹

NPA had previously supported the NRA in its revision of the IM NMAS, based on the IMAS, and in the development of an IM SOP, including IM process maps and guidelines. The revised IM NMAS better defines the minimum requirements, and roles and responsibilities of different organisations in IM.¹²⁰ As at May 2023, however, the IM SOP had still to be officially approved. Despite this, some of the IM requirements on reporting are communicated and enforced via IM TWG and other meetings.¹²¹ The PM/WRA project will further revise the national standards based on the additional requirements defined as per the most recent amendment to IMAS 10.05.¹²²

In 2022, HI continued to provide regular training to help strengthen the capacity of provincial NRA personnel. It trained a total of seven provincial and district-level staff in Phongsaly and Houaphanh provinces on data management, QM, and operations planning.¹²³

106 Emails from Bouala Thongsavanh, NRA, on behalf of Phoukhieo Chanthasomboune, NRA, 30 April 2018; and Aubrey Sutherland, NPA, 25 March 2019; NRA, draft "Lao PDR UXO Survey Procedures", 20 September 2017; interview with Phoukhieo Chanthasomboune, NRA, Vientiane, 2 May 2018; and interview with Hugh Hosman and Marco Heuscher, (then with) Sterling International, Vientiane, 2 May 2018.

107 Emails from Julien Kempeneers, HI, 30 March 2022; Rebecca Letven, MAG, 30 March 2022; and Katherine Harrison, NPA, 11 May 2022.

108 CCM Extension Request 2019, Part B, Detailed Narrative, p. 4.

109 Statement of Lao PDR on clearance, CCM Tenth Meeting of States Parties, Geneva, 30 August-2 September 2022; and email from Khammoungkhoun Southivong, NRA, 8 June 2023.

110 CCM Extension Request 2019, Executive Summary, p. 1, and Part B, Detailed Narrative, p. 6; and Article 7 Report (covering 2019), Form F.

111 "Data errors on IMSMA", Nigel Orr, Technical Adviser, (then with) Sterling International, 26 April 2017.

112 Emails from Douangsy Thammavong, NRA, 20 June 2022; and Katherine Harrison, NPA, 11 May 2022.

113 Presentation by HALO, Sepon, 10 May 2018.

114 Email from Olivier Bauduin, US Embassy Vientiane, 4 August 2023.

115 Email from Vilaivanh Thongmanivong, UXO Lao, 25 May 2023.

116 Ibid.

117 NRA, draft "Lao PDR UXO Survey Procedures", 20 September 2017, p. 26; and Statement of Lao PDR on International Cooperation and Assistance, CCM Seventh Meeting of States Parties, Geneva, 4-5 September 2017; interview with Phoukhieo Chanthasomboune, NRA, Vientiane, 2 May 2018; and interviews with national and international clearance operators, Laos, 1-12 May 2018.

118 Email from Katherine Harrison, NPA, 11 May 2022.

119 Email from Katherine Harrison, NPA, 9 May 2023.

120 Emails from Katherine Harrison, NPA, 6 May and 9 September 2020.

121 Email from Katherine Harrison, NPA, 9 May 2023.

122 Ibid.

123 Email from Alexandra Letcher, HI, 6 April 2023.

Operators reported that data submitted to the NRA were typically updated in a timely manner and accurately.¹²⁴ An IMSMA virtual private network (VPN) has been successfully rolled out, with all operators, except for UXO Lao, using the network.¹²⁵ This has improved the accessibility of data, the speed and quality of data entry, and the reporting process, with cross-checks raising discrepancies for correction.¹²⁶ However, IMSMA is still not fully accessible to operators, who can only see dashboard level and who can only access their own data in the system and have to formally request other data.¹²⁷

Expanding the use of IMSMA to support survey planning and the review of all historical operational data (both electronic and paper), will help ensure that NTS is followed up by robust

TS operations.¹²⁸ In addition, the IM system in Lao PDR must also be equipped to record operator conclusion reports, in order to know how many villages have been surveyed.¹²⁹ This topic had been discussed at the IM TWG and bilaterally between operators and the NRA, but as at May 2023 no measurable progress had been made.¹³⁰ Another challenge encountered is that villages surveyed do not match the village boundaries in the NRA system. The NRA was reported to be planning to use Survey123 to help address this.¹³¹

Lao PDR provides regular updates on its progress in Article 4 implementation, both in its annual Article 7 transparency reporting and in statements at the CCM meetings of States Parties.

PLANNING AND TASKING

A new 10-year National Strategy for the UXO Sector (2021–30), "Safe Path Forward III", was developed under the leadership of the NRA with support from UNDP and in consultation with relevant stakeholders, civil society organisations, donors, and clearance operators, including a joint online consultation on the draft strategy in October 2021.¹³² The new strategy, which was endorsed by the government in July 2022 and adopted in January 2023, was developed based on the results of the evaluation of the implementation of the previous ten-year strategy, "Safe Path Forward II" and in line with SDG 18 under the 2030 SDG agenda.¹³³ The target by 2030, is to have identified 250,000 hectares (2,500km²) of CHA and conducted clearance of 100,000 hectares (1,000km²) of land for agricultural and development purposes.¹³⁴ This is an ambitious target, which is more than double the current clearance output.

In a positive development, a first-ever sector-wide annual work plan for Lao PDR for 2018 was developed in an

inclusive manner and approved by the NRA Board.¹³⁵ Consultative workshops to support the development of annual sector-wide work plans have taken place to varying degrees in subsequent years. While there were sector-wide work plans in 2022 and 2023,¹³⁶ the NRA had not shared these with international NGOs.¹³⁷ The NRA sets operators yearly targets and they in turn develop their own work plans, but tasks sometimes overlap.¹³⁸ HALO shares its work plan with UXO Lao to avoid any overlap of CHAs.¹³⁹ HI developed its 2023 work plan in close collaboration with the provincial NRA and with the district authorities in HI's areas of operations.¹⁴⁰ In Xiangkhouang province, there has been an increase in the collaboration between MAG and the provincial regional authorities to ensure that tasking between MAG and UXO Lao is deconflicted and to avoid overlapping.¹⁴¹ Lao PDR's new Safe Path Forward III strategy makes clear that action plans are needed for implementation and should be developed as soon as possible.¹⁴²

124 Emails from Cameron Imber, HALO, 7 April 2020; Julien Kempeneers, HI, 25 March 2020; and Katherine Harrison, NPA, 9 May 2023.

125 Emails from Mark Frankish, UNDP, 26 August 2020; and Saomany Manivong, UXO Lao, 11 May 2021.

126 Emails from Julien Kempeneers, HI, 25 March 2020; Cameron Imber, HALO, 7 April 2020; Katherine Harrison, NPA, 6 May 2020; and Simon Rea, MAG, 17 June 2020.

127 Emails from Julien Kempeneers, HI, 25 March 2020; William Hunter, HALO, 8 May 2023; Katherine Harrison, NPA, 9 May 2023; and Portia Stratton, MAG, 15 May 2023.

128 CCM Extension Request 2019, Part B, Detailed Narrative, p. 3.

129 Interview with Phil Bean, US PM/WRA, in Geneva, 6 February 2018.

130 Emails from Chomyaeng Phengthongsawat, NRA, 21 June 2021; Katherine Harrison, NPA, 11 May 2022; William Hunter, HALO, 8 May 2023; and Portia Stratton, MAG, 15 May 2023.

131 Email from Portia Stratton, MAG, 15 May 2023.

132 Statement of Lao PDR on National Implementation Measures, Second CCM Review Conference (Part 1, virtual meeting), 25–27 November 2020; email from Chomyaeng Phengthongsawat, NRA, 21 June 2021; and Lao PDR, "Safe Path Forward III", p. 2.

133 Statement of Lao PDR on victim assistance, CCM Tenth Meeting of States Parties, Geneva, 30 August–2 September 2022; and Lao PDR, "Safe Path Forward III", p. 2.

134 Lao PDR, "Safe Path Forward III", p. 14.

135 Email from Bouala Thongsavanh, NRA, on behalf of Phoukhio Chanthasomboune, NRA, 30 April 2018; and interview with Phoukhio Chanthasomboune, NRA, Vientiane, 2 May 2018.

136 Email from Khammoungkhoun Southivong, NRA, 8 June 2023.

137 Email from Amanda Shiel, UXO Unit Programme and Partnership Support Officer, UNDP, 4 September 2020; Olivier Bauduin, US Embassy Vientiane, 29 September 2020; Rebecca Letven, MAG, 26 March 2021 and 30 March 2022; Katherine Harrison, NPA, 22 March 2021 and 9 May 2023; Julien Kempeneers, HI, 16 March 2021; and Cameron Imber, HALO, 31 March 2022.

138 Emails from Katherine Harrison, NPA, 9 May 2023; and from Portia Stratton, MAG, 15 May 2023.

139 Email from William Hunter, HALO, 8 May 2023.

140 Email from Alexandra Letcher, HI, 6 April 2023.

141 Email from Portia Stratton, MAG, 15 May 2023.

142 Lao PDR, "Safe Path Forward III", p. 5.

Lao PDR has a total of 18 provinces, all contaminated with UXO (including CMR), to varying extents. In 2018, Lao PDR began a national CMRS baseline survey of populated areas, with funding from the United States. The first phase of the survey involves six province-wide surveys (in Attapeu, Champassak, Saravan, Savannakhet, Xekong, and Xiengkhouang) by HALO, MAG, and NPA of all villages suspected or confirmed as CMR-contaminated, according to the NRA's village list.¹⁴³ In September 2018, Lao PDR announced that three additional contaminated provinces would be added to the national survey plan in 2019 and another five provinces in 2020–21, with the aim to have 14 provinces fully surveyed by end of 2021.¹⁴⁴ Despite notable progress in many provinces, Lao PDR fell well short of this ambitious target.

As at May 2023, systematic CMRS of villages in five provinces in the south (Attapeu, Champassak, Saravan, Savannakhet, and Xekong) had been concluded, with the exception of 9 villages subsequently assigned to Norwegian People's Aid (NPA) in Attapeu and 8 villages in Champassak;¹⁴⁵ and CMRS was still underway in the most contaminated province of Xiengkhouang, in the north.¹⁴⁶ In 2023, discussions are planned to consider testing new predictive tools and other possible adjustments to survey methodology to accelerate the completion of the survey in Xiengkhouang province.¹⁴⁷ CMRS is also being undertaken in five other provinces (Bolikhamsai, Houaphanh, Khammouane, Luang Prabang, and Vientiane province), although not systematically, as funding

for TS/CMRS has been sporadic in these provinces, rather than targeted for full completion as in other provinces. Of the remaining seven provinces, three (Oudomxay, Vientiane Capital, and Xaisomboun) are known to have significant contamination but do not currently have funding for TS/CMRS. In the fourth remaining province of Phongsaly, HI began CMRS in two districts from the start of 2023.¹⁴⁸ The remaining three provinces (Bokeo, Luangnamtha, and Sainyabuli) have low levels of contamination and are deprioritised.¹⁴⁹

The CMRS results have enabled better targeted clearance. Since 2021, there has been a shift towards increasing clearance capacity and reducing survey capacity, in order to clear the CHAs identified during CMRS. The US has increasingly focused its resources on clearance of CHAs prioritised under Lao PDR's development plan and it was continuing to do so in 2023. Survey teams have been converted to clearance teams, and additional clearance teams recruited and trained.¹⁵⁰ The UXO sector in Lao PDR accepts that additional evidence points, outside of the CHAs already identified, will continue to require investigation through TS after completion of proactive survey. HALO, MAG, and NPA will therefore keep a residual survey capacity after the end of their survey projects. This survey capacity will be more reactive in nature, and during the periods when there are no evidence points to investigate and survey in these provinces, the multi-skills teams will instead conduct area clearance.¹⁵¹

WORK PLAN FOR ARTICLE 4 IMPLEMENTATION IN 2020–25

The 2019 CCM Article 4 extension request includes a five-year work plan for survey and clearance, with progress dependent on the level of funding it secures. There is a strong concentration on survey during the extension period, with a focus on the six most contaminated provinces to be concluded as soon as possible, followed by the others. Clearance is taking place simultaneously with survey activities.¹⁵² Operators were consulted during the elaboration of the 2019 Article 4 deadline extension request.¹⁵³

As at the end of 2022, a total of 1,745km² of CHA had already been identified through the survey and entered into IMSMA, representing several years of clearance efforts based on current clearance capacity.¹⁵⁴ In its 2019 Article 4 deadline

extension request, the NRA predicted that the number of CHAs containing CMR would significantly increase during the five-year period of the extension request, at a rate far faster than the CMR-contaminated areas can be cleared.¹⁵⁵

In its 2019 Article 4 extension request, Lao PDR outlines three different estimates for CMR clearance, based on three different scenarios for available resources. The first outlines predicted clearance output based on existing resources during 2020–25; namely 108 teams, with a total clearance output of 50km² per annum, at a cost of US\$12.5 million per year. This would result in clearance of 250km² at a cost of US\$62.5 million, during the five-year extension request period.¹⁵⁶ Even this first scenario was ambitious and Lao PDR

143 Statement of Lao PDR on International Cooperation and Assistance, CCM Seventh Meeting of States Parties, Geneva, 4–5 September 2017; and interview with Phil Bean, US PM/WRA, and Machut Shishak, Political/Economic Counselor, US Embassy, Vientiane, 3 May 2018.

144 Statement of Lao PDR on National Implementation Efforts, CCM Eighth Meeting of States Parties, Geneva, 3 September 2018.

145 Article 7 Report (covering 2022), Form F; email from Katherine Harrison, NPA, 9 May 2023; and additional information from Sasa Jelacic, NPA, 4 July 2023.

146 Article 7 Report (covering 2022), Form F; and presentation by Amb. Peter Haymond, US Embassy Vientiane, minutes of the UXO Sector Working Group meeting, 16 September 2022.

147 Email from Olivier Bauduin, US Embassy Vientiane, 4 August 2023.

148 Email from Alexandra Letcher, HI, 6 April 2023.

149 Article 7 Report (covering 2022), Form F.

150 Presentation of US Amb. Peter Haymond, minutes of the UXO Sector Working Group meeting, 16 September 2022.

151 Ibid.; and email from Olivier Bauduin, US Embassy Vientiane, 13 July 2022.

152 CCM Extension Request 2019, Executive Summary.

153 Email from Fiona Kilpatrick, HALO, 29 March 2019.

154 Email from Khammoungkhoun Southivong, NRA, 8 June 2023.

155 CCM Extension Request 2019, Executive Summary, pp. 1, 4, and 6, and Part B, Detailed Narrative, pp. 22 and 25.

156 CCM Extension Request 2019, Executive Summary, p. 4; and Part B, Detailed Narrative, pp. 7 and 22.

only achieved the annual CMR clearance target of 50km² envisaged in the request, for the first time in 2022, when it cleared 50.72km² of cluster munition-contaminated area (excluding commercial clearance).¹⁵⁷

The second, even more ambitious estimate predicts clearance output based on the additional resources needed to address the 800km² of CHA already recorded in IMSMA as at end of 2018. This would see annual clearance output incrementally increased from 60km² per annum in 2020 to 280km² per annum in 2024, with total clearance output of 800km² during the five-year extension request period, at a total cost of US\$200 million.¹⁵⁸ The third estimate predicts clearance based on the additional resources needed to address 1,600km² of CHA, which includes the further 800km² of CHA predicted to result from CMRS during the five-year extension request period, at a total cost of US\$400 million.¹⁵⁹

Lao PDR will "for the foreseeable future" integrate the Article 4 deadline Extension Plan into the indicators of the 9th NSEDP 2021–2025, where the five-year plan sets targets to conduct NTS in 2,776 villages; conduct TS to confirm

hazardous area of 2,500km² (an average of 500km² per year); and conduct UXO clearance of 500km² (at an average of 100km² per year).¹⁶⁰ These are extremely ambitious targets, which almost double the 2022 clearance achievement and the survey target is especially ambitious in light of the increased focus on clearance and a reduction in the amount of hazardous area confirmed in 2022 compared to the previous year. As things stand, the targets are a long way from being achieved.

To the extent possible, the United States will continue to support the Lao government's strategic plan to increase clearance capacity to clear more high-priority CHAs in 2022–25. US funding support to the UXO Sector in the Lao PDR continues to increase and in June 2022 Deputy Secretary of State Wendy Sherman visited Vientiane and announced an additional US\$45 million for survey and clearance.¹⁶¹ At the SWG meeting in September 2022, the US government said that it expected that US-funded programmes in Lao PDR would clear 50km² of CHA in 2023 and 60km² of CHA in 2024.¹⁶²

PRIORITISATION

Prioritisation of clearance is a critical step in the land release cycle. However, at present no comprehensive national-level guidance on the prioritisation of clearance tasks yet exists and prioritisation systems and criteria vary markedly between the operators.¹⁶³ Currently, each operator has its own prioritisation system,¹⁶⁴ but considerable time is allocated to discussing the annual work plan for humanitarian operators with provincial and district authorities.¹⁶⁵

In the new Safe Path Forward III strategy (2021–2030), the NRA has committed to develop a policy for determining national priorities, and said it considers UXO clearance on agricultural land a top priority, and that UXO clearance is especially crucial for the development of educational, community and government facilities, public infrastructure and tourism sites.¹⁶⁶ At the SWG meeting in September 2022, the Deputy Chairperson of the NRA Board said Lao PDR will create a national prioritisation system to help ensure that UXO sector activities contribute to the socio-economic development plan.¹⁶⁷ The co-chairs of the UXO SWG, the United States and UNDP, believe a prioritisation plan will be needed for the entire UXO Sector.¹⁶⁸ UNDP called

for the completion of the national prioritisation system to be expedited so that UXO operations always support development efforts.¹⁶⁹

Tetra Tech is supporting the NRA in the development of the nationwide prioritisation matrix.¹⁷⁰ Work on the national prioritisation system (district training, consultation workshop with line ministries) was initiated in the first half of 2022.¹⁷¹ The NRA aimed to launch a national prioritisation process in 2023.¹⁷²

UXO Lao has developed and applied its own clearance prioritisation process since 2020 throughout nine provinces supported by JICA. Recently, UXO Lao has collaborated with JICA to revise some unsuitable criteria. The new guideline was expected to be presented in the TWG meeting in Q2 2023.¹⁷³

At the micro level, prioritisation of clearance tasks in Lao PDR is in part dictated by the wet and dry seasons. During the dry season, operators are able to access and clear paddy fields, while in the wet season, they focus on clearing grazing and community land, or on higher elevations.¹⁷⁴

157 Email from Khammoungkhoun Southivong, NRA, 8 June 2023.

158 CCM Extension Request 2019, Executive Summary, p. 4; and Part B, Detailed Narrative, pp. 7 and 22.

159 Ibid.; and Article 7 Report (covering 2021), Form J.

160 9th Five-year National Socio-Economic Development Plan (2021–2025), draft report; and Lao PDR, "Safe Path Forward III", p. 7.

161 Email from Olivier Bauduin, US Embassy Vientiane, 13 July 2022.

162 Presentation of Amb. Peter Haymond, minutes of the UXO Sector Working Group meeting, 16 September 2022.

163 Interviews with national and international clearance operators, Lao PDR, 1–12 May 2018; and Lao PDR, "Safe Path Forward III" (2021–2030), p. 5.

164 Comments by Rupert Leighton, UNDP, minutes of the UXO Sector Working Group meeting, 16 September 2022.

165 Email from Olivier Bauduin, US Embassy Vientiane, 21 July 2023.

166 Lao PDR, "Safe Path Forward III" (2021–2030), p. 5.

167 Comments by Padeumphone Sonthany, MoLSW, minutes of the UXO Sector Working Group meeting, 16 September 2022.

168 2019 UXO Sector Annual Report, NRA, undated, Foreword by US Ambassador and UNDP Resident Representative, Co-Chairpersons of the UXO Sector Working Group, p. iv.

169 Presentation by Catherine Phuong, UNDP, minutes of the UXO Sector Working Group meeting, 16 September 2022.

170 Emails from Alexandra Letcher, HI, 6 April 2023; Katherine Harrison, NPA, 9 May 2023; and Portia Stratton, MAG, 15 May 2023.

171 Presentation by Chomyaeng Phengthongsawat, NRA, minutes of the UXO Sector Working Group meeting, 16 September 2022.

172 Statement of Lao PDR on clearance, CCM Tenth Meeting of States Parties, Geneva, 30 August–2 September 2022; and email from Khammoungkhoun Southivong, NRA, 8 June 2023.

173 Email from Vilaivanh Thongmanivong, UXO Lao, 25 May 2023.

174 Interviews with international and national operators, Laos, 1–12 May 2018.

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

The "Lao PDR UXO Survey Standards" (UXO Survey Standard No. 21/NRA) specify the minimum requirements for the survey of all cluster munition-contaminated areas in Lao PDR.¹⁷⁵ The standards were officially approved by the NRA in 2018.¹⁷⁶ They are said to conform to IMAS¹⁷⁷ and are fully reflected in the SOPs of clearance operators, who confirm their relevance to the local threat and context.¹⁷⁸ There is, however, scope to further strengthen the standards, based on best practice.

The NRA plans to formally review the national standards at least every three years, in collaboration with stakeholders, to ensure they evolve to meet changing circumstances and the introduction of new technologies and methodologies.¹⁷⁹ In 2021, operators were invited by the NRA to submit recommendations to update the national standards,¹⁸⁰ but no changes to the standards were made in 2022.¹⁸¹

An assessment of the existing national standards has been conducted and was partially complete as at March 2023, when translation into English was still ongoing.¹⁸² The NMAS revision might be completed before the end of 2023.¹⁸³ At the SWG meeting in September 2022, UNDP called for the revision of national standards to be "fast-tracked", highlighting that the updated standards would improve the effectiveness and efficiency of UXO operations by having the best practices effectively disseminated across all operators. According to UNDP, the current standards are out of date and as a result the productivity of the operators has been compromised.¹⁸⁴

Prior to 2014, UXO operators in Lao PDR primarily conducted general survey on areas intended for clearance and roving clearance tasks, based on requests and reports from villagers.¹⁸⁵ CMRS has resulted in clearance being directed to confirmed cluster munition strikes, across land boundaries where necessary, and away from the clearance of areas with low or no CMR contamination. There has been a significant improvement in the number of CMR destroyed per hectare cleared since 2015.¹⁸⁶ As part of the new CMRS procedure,

and the corresponding national standard, NTS is to be conducted on whole villages (i.e. all land within a village boundary), not just individual areas of land, with the aim to identify evidence points for follow-on TS. An additional aim during survey is to correct errors or omissions in historical data in IMSMA or in operator files.¹⁸⁷

The survey approach has been strengthened over the last couple of years, with more emphasis on desk assessment of historical data and comprehensive NTS. TS is only conducted based on CMR evidence points.¹⁸⁸ HALO, MAG, and NPA all conduct TS on whole villages, whereas in mid 2018, UXO Lao stated it does not conduct TS of whole villages, due to their limited TS capacity. Typically UXO Lao will, over the years, go to the same villages on multiple occasions, but they do not "complete" CMRS of the whole village in the same way that HALO, MAG, and NPA do. Rather, UXO Lao's TS teams identify CHAs for their area clearance teams.¹⁸⁹

TS works outwards from the initial evidence point, searching no less than 50% of each 50 metre by 50 metre box with a detector, with emphasis on finding a submunition. As soon as a submunition is found, TS moves to the adjacent boxes. If cluster munition fragments are found, searching must continue until a submunition is found or at least 50% of the box is covered.¹⁹⁰

Operators continue to refine their CMRS methodology in a bid to accelerate operations, including using the technique of "skipping boxes", in which teams finding CMR in one survey box skip one or more of the immediate neighbouring boxes and then survey the next box. Skipping boxes is permitted in the national survey procedure, and, where appropriate, has become standard practice for TS teams, where the focus is on identifying the boundaries of CHAs.¹⁹¹ CHAs are established based on red boxes and include a 50-metre fade-out from the place submunitions are found during TS, unless fade-out extends into inaccessible or commercial concession areas (responsibility for survey and clearance in commercial concession areas is then that of the concession holder).¹⁹²

175 NRA, draft "Lao PDR UXO Survey Procedures", 20 September 2017; and CCM Extension Request 2019, Executive Summary, p. 3.

176 Emails from Olivier Bauduin, UNDP, 10 July 2018; and Nigel Orr, (then with) Janus Global Operations, 13 July 2018; interviews with international operators, Lao PDR, 1–12 May 2018; and Phoukhieo Chanthasomboune, NRA, Vientiane, 2 May 2018; and Statement of Lao PDR on National Implementation Efforts, CCM Eighth Meeting of States Parties, Geneva, 3 September 2018.

177 CCM Extension Request 2019, Executive Summary, p. 2; CCM Extension Request 2019, Part B, Detailed Narrative, pp. 9 and 17.

178 Emails from Saomany Manivong, UXO Lao, 10 May 2019; Cameron Imber, HALO, 7 April 2020; Katherine Harrison, NPA, 6 May 2020; and Simon Rea, MAG, 17 June 2020.

179 CCM Extension Request 2019, Part B, Detailed Narrative, p. 18.

180 Emails from Julien Kempeneers, HI, 30 March 2022; Rebecca Letven, MAG, 30 March 2022; and Cameron Imber, HALO, 31 March 2022.

181 Emails from Khammoungkhoun Southivong, NRA, 8 June 2023; William Hunter, HALO, 8 May 2023; Katherine Harrison, NPA, 9 May 2023; and Portia Stratton, MAG, 15 May 2023.

182 Emails from Alexandra Letcher, HI, 6 April 2023; and Portia Stratton, MAG, 15 May 2023.

183 Email from Vilaivanh Thongmanivong, UXO Lao, 25 May 2023.

184 Presentation by Catherine Phuong, UNDP, minutes of the UXO Sector Working Group meeting, 16 September 2022.

185 Interview with Phoukhieo Chanthasomboune, NRA, Vientiane, 2 May 2018.

186 CCM Extension Request 2019, Executive Summary, p. 2; and Part B, Detailed Narrative, p. 9.

187 NRA, draft "Lao PDR UXO Survey Procedures", 20 September 2017.

188 *Ibid.*; and emails from Cameron Imber, HALO, 11 June 2017; Rebecca Letven, MAG, 18 June 2017; and Katherine Harrison, NPA, 18 June 2017.

189 Email from Olivier Bauduin, US Embassy Vientiane, 21 July 2023.

190 NRA, draft "Lao PDR UXO Survey Procedures", 20 September 2017.

191 *Ibid.*, p. 17; interviews with Neil Arnold, MAG, Phonsavanh, 6 May 2018, and Robby Dehondt, Sterling International, Sepon, 11 May 2018; and email from Ulric Eriksson, NPA, 1 May 2018.

192 NRA, draft "Lao PDR UXO Survey Procedures", 20 September 2017.

According to the national survey standards, 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”.¹⁹³ The NRA maintained the need to retain some flexibility 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.¹⁹⁴ In 2016, Prime Ministerial Order No. 43 stipulated that development projects in provinces and districts affected by UXO must benefit from survey and clearance before project implementation, and further these development projects must allocate funding for survey and clearance.¹⁹⁵

Except in the case of permanently inaccessible land or commercial concession areas, CHAs that are incomplete or have not been created using the TS process are not to be entered into IMSMA.¹⁹⁶ Interpretation and understanding as to what constitutes “inaccessible” is not clearly defined and can vary between clearance operators,¹⁹⁷ but according to the national survey standards, dense vegetation and seasonal flooding are not valid reasons for the NTS.¹⁹⁸ Clearance teams deployed to CHAs are required to have the knowledge and necessary equipment to operate in difficult areas such as steep hillsides and dense jungle terrain, which requires strong monitoring mechanisms to ensure that the physical obstacles do not reduce the quality of the survey and clearance work.¹⁹⁹ The minimum clearance depth in Lao PDR is 25cm, which is intended to capture all surface and shallow CMR contamination.²⁰⁰ Operators have been collecting data on the depth at which CMR are found.²⁰¹ HI Laos continued to generate interesting results from using the Minelab F3 (with large coil and yellow end cap) detectors, successfully demonstrating that operators are able to work swiftly and still pick up full BLU-26 submunitions buried 35cm deep in rice fields. HI believes that the 25cm default clearance depth is not safe for land users as modern tractors can reach items buried deeper and displace them to the surface.²⁰²

With regard to completion of CHAs/cluster munition footprints, international clearance operators reported difficulty conducting CMRS in certain areas, due to national security or restrictions to access land due to cultural

sensitivities and beliefs.²⁰³ Furthermore, in TS tasks in areas of massive contamination, with overlapping strikes, it is not always possible to continue to fade-out, as the confirmed areas extend too far.²⁰⁴

With regards to the discovery of landmines during CMRS, HI developed a “clearance while surveying” (CWS) procedure, to allow for safe release of CMR contamination in areas where there is a potential risk of landmines. CWS involves the commencement of full clearance from the evidence point.²⁰⁵ HI revised its clearance SOP to integrate CWS. As at April 2023, the SOP had yet to be formally approved, but the NRA had deemed the procedure as being adequate, including during quality assurance (QA) and QC inspections and during a TWG presentation. HI has also proposed to the NRA that a modification is made to the national standards.²⁰⁶

HI has suggested that as CMRS can be time consuming, clearance could replace CMRS earlier where it is well established that there is CMR contamination, as clearance would cover the entire CHA anyhow, including a 50m buffer zone. In locations where operators are called back year-on-year to destroy submunitions found by farmers, HI believes evidence-based clearance could be commenced directly, rather than needing to first conduct CMRS. HI believes that the remoteness of target villages in Houaphanh and the presence of landmines and anti-handling fuses (M83 submunitions) discovered in 2021, justifies that it continues to conduct a CWS approach when there is a risk for its teams. In Houaphanh province, HI does not conduct CMRS strictly village by village, but instead focuses on highest priority areas first, as it is working in very remote forested areas, with steep terrain.²⁰⁷

HI conducted further CMRS in 2022. The tasks were in rice fields where TS was efficient to assess the extent of the CHA quickly and allowed HI to develop the HI annual work plan. CWS was conducted as a way to survey and find cluster munitions, and proved to be a very good option to clear a limited area contaminated by CMR. HI twice entered areas where it found 4lb M83 fragmentation bomb with M131 anti-disturbance fuzes while conducting CMRS. HI also completed a CHA in a village to discover later during the clearance that there was a M7 anti-vehicle mine in the CHA.

193 Ibid.

194 Interviews with Phoukhieo Chanthasomboune, NRA, Vientiane, 2 May 2018 and 7 February 2019, Geneva.

195 Statement of Lao PDR on National Implementation Efforts, CCM Seventh Meeting of States Parties, Geneva, 4–5 September 2017.

196 NRA, draft “Lao PDR UXO Survey Procedures”, 20 September 2017.

197 Interviews with international operators, Laos, 1–12 May 2018.

198 NRA, draft “Lao PDR UXO Survey Procedures”, 20 September 2017.

199 CCM Extension Request 2019, Executive Summary, p. 5; and Part B, Detailed Narrative, pp. 24–25.

200 CCM Extension Request 2019, Part B, Detailed Narrative, p. 17.

201 Email from Katherine Harrison, NPA, 9 September 2020.

202 Email from Alexandra Letcher, HI, 6 April 2023.

203 Interviews with Ulric Eriksson, NPA Laos, Saravan, 4 May 2018; and Olivia Meader, HALO, Sepon, 11 May 2018.

204 Interview with Neil Arnold, MAG, Phonsavanh, 6 May 2018.

205 Email from Julien Kempeneers, HI, 25 March 2020.

206 Emails from Julien Kempeneers, HI, 30 March 2022; and Alexandra Letcher, HI, 6 April 2023.

207 Ibid.

HI believes such instances justify having a CWS process that allows the operator to search and extend the CHA slowly as more evidence points are found, until reaching the limit of the contaminated area. HI believes this method controls the risky incursion inside large areas that may be very hazardous for the TS team at work.²⁰⁸ Furthermore, HI is concerned when TS occurs and items are excavated and left behind, causing CMR to become visible for children and the local population, exposing them to risk. This has been raised during the TWG on the Technical Note for CMRS.²⁰⁹

MAG uses Evidence Point Polygon (EPP) mapping methodology to support CMRS planning. The technique, pioneered by MAG, uses historical and ongoing operational data from GPS-recorded EOD spot tasks involving submunitions to plot what are termed Initial CHAs (iCHAs). Within the boundaries of iCHAs, including fade-out, no TS is required, resulting in time and resources efficiencies. However, in order to be effective, this technique relies on accurate and reliable EOD spot-task data, which is not always available. In areas where MAG is applying EPP mapping, it uses its own EOD data.²¹⁰

Based on the areas in which it is operational, NPA reported that typically CHAs cover the strike area and submunitions are not being found outside of CHA polygons during clearance,²¹¹ an indication of the effectiveness of evidence-based CMRS. According to the NRA, understanding of the CMRS process, especially at the local and field levels, is sometimes limited.²¹² Stakeholders across the mine action sector in Lao PDR agreed on the importance of strengthening coordination with village authorities as an integral component of the survey process, ensuring that communities understand and accept the results of survey. 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.²¹³

UXO Lao is focusing its TS on its annual clearance work plan, which is based on the needs of local authorities and communities.²¹⁴ For development projects, clearance is conducted without TS having first taken place.²¹⁵

OPERATORS AND OPERATIONAL TOOLS

Land release operations in Lao PDR are conducted by a range of implementing partners, which includes humanitarian operators such as the national operator UXO Lao; international NGOs, HALO, HI, MAG, and NPA; commercial clearance operators; and humanitarian teams of the Lao People's Army (Unit 58). Survey capacity in Lao PDR is being reduced, and clearance capacity increased, in order to address a higher proportion of the CHAs already identified. The NRA expected clearance capacity to continue to grow in 2023.²¹⁶

With regard to **survey capacity** in 2022, the Lao People's Army (Unit 58) deployed three TS teams totalling twenty-one personnel, and two NTS teams totalling four personnel.²¹⁷ HALO deployed 6 technical teams, totalling 48 personnel.²¹⁸ HI had 1 NTS team in Houmeuang province, and will also require an NTS team for Phongsaly. The HI teams reinforce the clearance teams, when there is no requirement for NTS.²¹⁹ MAG had two NTS (community liaison) teams totalling 8 personnel and 16 TS teams, totalling 128 personnel.²²⁰ NPA had 11 CMRS (NTS and TS) teams totalling 61 survey personnel.²²¹ UXO Lao had 8 NTS teams totalling 24 personnel and 15 TS teams totalling 105 personnel (excluding personnel from Luang Prabang, but including personnel from Champassak, Houaphanh, and Xekong, which halted operations in April/May 2022).²²²

Table 3: Operational clearance capacities deployed in 2022²²³

Operator	Manual teams	Total clearance personnel	Machines	Comments
Lao People's Army (Unit 58)	7	65	0	
HALO	69	701	0	This is a continued increase in capacity on the previous year. Medics are included as HALO has technician medics.

208 Email from Alexandra Letcher, HI, 6 April 2023.

209 Ibid.

210 Interview with Neil Arnold, MAG, Phonsavanh, 6 May 2018.

211 Email from Katherine Harrison, NPA, 6 May 2020.

212 Email from Bouala Thongsavanh, on behalf of Phoukhieo Chanthasomboune, NRA, 30 April 2018.

213 Response to Mine Action Review questionnaire from Olivia Meader, HALO, 11 May 2018; and interview with Olivier Bauduin, UNDP, Vientiane, 2 May 2018.

214 Email from Saomany Manivong, UXO Lao, 11 May 2021.

215 Email from Noupin Phimmasy, UXO Lao, 4 June 2022.

216 Email from Khammoungkhoun Southivong, NRA, 8 June 2023.

217 Ibid.

218 Email from William Hunter, HALO, 8 May 2023.

219 Email from Alexandra Letcher, HI, 6 April 2023.

220 Email from Portia Stratton, MAG, 15 May 2023.

221 Email from Katherine Harrison, NPA, 9 May 2023.

222 Email from Vilaivanh Thongmanivong, UXO Lao, 25 May 2023.

223 Emails from Khammoungkhoun Southivong, NRA, 8 June 2023; Alexandra Letcher, HI, 6 April 2023; William Hunter, HALO, 8 May 2023; Katherine Harrison, NPA, 9 May 2023; Portia Stratton, MAG, 15 May 2023; and Vilaivanh Thongmanivong, UXO Lao, 25 May 2023.

Operator	Manual teams	Total clearance personnel	Machines	Comments
HI	3	24	0	HI's three multi-task teams are used to conduct TS, clearance, or roving tasks, as required.
MAG	52	416	5	MAG has 8 deminers per team. It does not have any mechanical assets for clearance, but does have five machines for ground preparation.
NPA	20	279	0	
UXO Lao	78	468	*9	Numbers exclude personnel from Luang Prabang, but include personnel from Champassak, Houaphanh, and Xekong, in which operations were halted in April/May 2022. *Two cluster munition demolition machines in Xiengkhouang province. The seven brush cutter machines operating across Saravan, Xekong, and Champassak provinces only provide support to area clearance operations, by preparing access roads and vegetation cutting where this cannot be done by hand.
Totals	229	Approximately 1,953	14	

UXO Lao is a government organisation working under the Ministry of Labour and Social Welfare.²²⁴ In 2022, UXO Lao was fully operational in 4 provinces (Attapeu, Khammouane, Savannakhet, and Xiengkhouang) and partially operational in 5 provinces (Champassak, Houaphanh, Luang Prabang, Saravan, and Xekong). In Champassak and Xekong provinces, operations were halted in April 2022, due to the end of a project funded by Japan. In Houaphanh, operations were halted at end of May 2022,²²⁵ pending authorisation to deploy a technical advisor for field operations to cover/support UXO Lao in Northern provinces.²²⁶ In Luang Prabang, operations halted in January 2022, also due to lack of funding, but emergency tasks were carried out from October to December 2022 with funding support from Ireland through the NRA. In Saravane, three area clearance teams funded by Government of Japan ended operations in April 2022, when the project ended, while US funded teams continued to operate in Saravane throughout 2022.²²⁷ A new Director of UXO Lao was appointed in February 2023. UXO Lao's capacity in 2022 decreased in 2021, due to a fall in funding. In 2023, UXO Lao expected funding to increase, due to the resumption of Japanese funding support in Champassak, Saravane, and

Xekong. UXO Lao said there was also potential for other funding to be sourced to restart operations in Houaphanh and Luang Prabang.²²⁸

HALO's survey and clearance efforts are focused on Savannakhet province. Clearance capacity continued to increase significantly in 2022 as part of the \$24.2 million PM/WRA clearance project in Savannakhet province. HALO expects clearance capacity to have increased to 89 teams by the end of 2023. There was a reduction in the number of survey personnel, from 168 to 40, as they were retrained for clearance. The number of CMRS personnel in 2023 was expected to remain the same with six teams in total.²²⁹ HALO has hosted five meetings with central-level NRA representatives to discuss how to improve clearance rates and the potential cessation of the use of personal protective equipment (PPE) aprons.²³⁰

HI is conducting survey and clearance in Houaphanh province, where it also provides capacity building support to the provincial NRA, through training on IM, QM, and first aid²³¹ and in Phongsaly province, where it became operational in 2022 and where it has been conducting CMRS in two districts

224 Presentation by Saomany Manivong, UXO Lao, Vientiane, 2 May 2018.

225 Email from Vilaivanh Thongmanivong, UXO Lao, 25 May 2023.

226 Email from Olivier Bauduin, US Embassy Vientiane, 4 August 2023.

227 Email from Vilaivanh Thongmanivong, UXO Lao, 25 May 2023.

228 Ibid.

229 Email from William Hunter, HALO, 8 May 2023.

230 Ibid.

231 Email from Julien Kempeneers, HI, 16 March 2021.

(Khoa and May) from the start of 2023.²³² HI is deploying multi-task teams which can conduct TS, area clearance, or roving tasks.²³³ HI also implements projects in Champassak, Savannakhet, and Vientiane provinces, relating to other fields (such as disability inclusion and health and rehabilitation).²³⁴ HI noted that it operates three MTT (multi-task teams) of 8 operators, and that 3 of these operators were on maternity leave in 2022.²³⁵ Prior to going on maternity leave the women were put on office duties to avoid any injuries or accidents as the terrain and as the challenging field conditions were of concern. For an operation of HI's size, the reduction in the number of personnel impacts operations and outputs.²³⁶ Due to the end of a grant and challenges in sourcing sufficient funding, and despite having secured some additional funds, HI was having to reduce its survey/clearance personnel in September/October 2023.²³⁷

MAG is the largest international survey and clearance operator in Lao PDR, and is operational in Xiengkhouang province, in the north and Khammouane province in the south. MAG's overall clearance capacity expanded from 30 to 47 clearance teams in total, with the deployment of 17 additional clearance teams in Xiengkhouang province between July and September 2021 thanks to US funding.²³⁸ MAG's capacity in 2022 remained broadly constant.²³⁹

NPA is operational in the four southern and heavily contaminated provinces of Attapeu, Champassak, Saravan, and Xekong. In 2021, NPA shifted its focus from CMRS to clearance of CHAs identified through survey. NPA reported that its operations will double in size by the end of 2023 with the planned recruitment, training, and deployment of 10 additional battle area clearance (BAC) teams in June 2023 and another 10 additional BAC teams from December. This will bring the total number of BAC teams to 42 teams (40 PM/WRA-funded and 2 NMFA-funded) and 8 survey teams by the end of 2023, with over 800 field staff. NPA will recruit 376 new staff in 2023.²⁴⁰

The Lao armed forces humanitarian demining teams (Unit 58) had seven clearance teams in 2022, totalling 65 personnel.²⁴¹ According to the NRA, the Unit 58 humanitarian clearance teams of the Lao Army are a valuable asset, conducting

survey and clearance in the same way as national and international clearance operators, and with good coordination between the NRA and the army.

In September 2022, the US said it welcomed the opportunity to discuss further potential support to Unit 58 for training, equipment, and facilities improvement. The US Ambassador in Vientiane also called for the training of more Lao staff at the highest level (EOD Level 4) to further increase clearance capacity and safety.²⁴² In April 2023, this SEOD training was formally authorised by the Ministry of Foreign Affairs.²⁴³

In addition, the army was being trained to use IMSMA. Lao Army teams (completely separate to the humanitarian "Army 58" teams) and not coordinated by the NRA started clearance of UXO to enable construction work on the US\$6 billion Laos-China high-speed railway to proceed in safety.²⁴⁴ According to an online media source, in March 2023, military engineers of the Russian Armed Forces carried out clearance in the Nakai district of Khammouane province. The engineers have cleared a total area of 24 hectares (0.24km²) in four and a half months from November 2022. This included rural roads, infrastructure, and administrative buildings. In total, 124 items of UXO were destroyed, including an unreported number submunitions, as well as artillery and mortar shells.²⁴⁵

With respect to the use of drones, while MAG had previously secured a drone permit in late 2019, and used drones in 2020 to assess the ground situation,²⁴⁶ it had not received approval from the NRA to deploy drones in 2022 or 2023 to-date.²⁴⁷ HI has consistently been refused permission to use drones and said that Houaphanh authorities do not support the use of drones, despite there being no sensitive sites in Houmeuang district. In 2022, HI again unsuccessfully requested to use drones to ensure the safety radius when disposing large items of explosive ordnance, such as aircraft bombs in the Nassarm demolition site (used by both HI and UXO Lao).²⁴⁸ HI has raised this issue in its feedback on recommended changes to the national standards.²⁴⁹ At the time of writing, use of drones in HALO's programme had also not been permitted by the NRA.²⁵⁰ NPA had lengthy discussions with the NRA throughout 2021 regarding the use of drones for

232 Email from Alexandra Letcher, HI, 6 April 2023.

233 Email from Julien Kempeneers, HI, 30 March 2022.

234 Emails from Julien Kempeneers, HI, 25 March 2020 and 16 June 2021.

235 Email from Alexandra Letcher, HI, 6 April 2023.

236 Ibid.

237 Emails from Alexandra Letcher, HI, 6 April and 28 June 2023.

238 Emails from Rebecca Letven, MAG, 30 March and 20 June 2022.

239 Email from Portia Stratton, MAG, 15 May 2023.

240 Email from Katherine Harrison, NPA, 9 May 2023.

241 Email from Khammoungkhoun Southivong, NRA, 8 June 2023.

242 Presentation by Amb. Peter Haymond, US Embassy Vientiane, minutes of the UXO Sector Working Group meeting, 16 September 2022.

243 Email from Olivier Bauduin, US Embassy Vientiane, 4 August 2023.

244 Souksakhone Vaenko, "Army deployed to clear UXO for Laos-China railway", Vientiane Times, 6 January 2017; and email from Bouala Thongsavanh, NRA, on behalf of Phoukhieo Chanthasomboune, NRA, 30 April 2018.

245 Ministry of Defence of the Russian Federation, "Russian Armed Forces' International Mine Action Centre completes mine clearance in Laos", 31 March 2023, available at: <https://bit.ly/43uM0T5>.

246 Email from Rebecca Letven, MAG, 26 March 2021.

247 Email from Portia Stratton, MAG, 15 May 2023.

248 Email from Alexandra Letcher, HI, 6 April 2023.

249 Emails from Julien Kempeneers, HI, 16 March 2021 and 30 March 2022.

250 Email from Alexandra Letcher, HI, 6 April 2023.

survey and clearance activities. However, in May 2022, the NRA informed NPA that the use of drones is currently not permitted for survey and clearance of UXO in Lao PDR or under the NMAS,²⁵¹ and NPA has not raised the topic subsequently. The use of drones, including large surveillance drones, is permitted in other contexts and by other government ministries, such as by the company Vientiane Geomatic Services, including to locate bomb craters.²⁵² UXO Lao does not presently use drones, but said that if these assets were available and could be used in the country, they would benefit operations.²⁵³

NPA continues to seek permission to use innovations already approved in Lao PDR's National Standards, such as the use of mine detection dogs (MDDs) as a tool for QM and rapid response, as well as in areas of high metal density, or

around powerlines, where the use of metal detectors can be disrupted.²⁵⁴ However, the NRA did not approve NPA's request to introduce the use of MDDs.²⁵⁵

HALO completed a trial of the Minelab F3 UXO detector in early 2021 which produced favourable results. The widespread use of these detectors on clearance tasks commenced in August 2021, and by the end of the year HALO's clearance rates in areas with high soil mineralisation were significantly improved.²⁵⁶ In 2021, MAG started using Vallon large-loop and handheld detectors in both Xiengkhouang and Khammouane provinces, and it intended to equip all teams with Vallon detectors going forward as budgets allow.²⁵⁷ An additional 99 VMH4 handheld Vallon detectors and 28 VMX10 large-loop detectors were purchased in 2022.²⁵⁸

LAND RELEASE OUTPUTS AND ARTICLE 4 COMPLIANCE

LAND RELEASE OUTPUTS IN 2022

According to data reported by NRA to Mine Action Review, CMR clearance output in Lao PDR in 2022 was almost 50.72km². A total of 65,293 submunitions were destroyed during area clearance, TS, and spot tasks,²⁵⁹ together with a large number of other items of UXO and small number of anti-personnel mines.

Lao PDR's Article 7 report covering 2022 declared more than 54.37km² of CMR clearance, with the destruction of 64,516 submunitions, 89 big bombs, 20,473 other items of UXO, and 55 mines.²⁶⁰

The total number of submunitions reported by the NRA as destroyed in 2022 was less than the total reported by humanitarian operators to Mine Action Review, which came to 77,382 submunitions (11,634 through TS, 46,307 through clearance, and 19,441 through spot tasks).²⁶¹

SURVEY IN 2022

According to the NRA data reported to Mine Action Review, a total of more than 211km² of CHA containing CMR was identified in 2022 (see Table 4). This is a decrease on the more than 228km² of CHA identified in 2021.

251 Email from Katherine Harrison, NPA, 11 May 2022.

252 Vientiane Geomatic Services (VGS) website and Facebook page, accessed 4 July, at <https://bit.ly/3IZSnG4> and <https://bit.ly/3D5eRC5>.

253 Email from Vilaivanh Thongmanivong, UXO Lao, 25 May 2023.

254 Email from Katherine Harrison, NPA, 19 June 2021.

255 Email from Katherine Harrison, NPA, 9 May 2023.

256 Email from Cameron Imber, HALO, 31 March 2022.

257 Email from Rebecca Letven, MAG, 30 March 2022.

258 Email from Portia Stratton, MAG, 15 May 2023.

259 Email from Khammoungkhoun Southivong, NRA, 8 June 2023.

260 Article 7 Report (covering 2021), Form F.

261 Emails from Alexandra Letcher, HI, 6 April 2023; William Hunter, HALO, 8 May 2023; Katherine Harrison, NPA, 9 May 2023; Portia Stratton, MAG, 15 May 2023; and Vilaivanh Thongmanivong, UXO Lao, 25 May 2023.

Table 4: Technical survey of CMR-suspected area in 2022 (based on NRA data)²⁶²

Operator	Area surveyed (m ²)	Area identified (m ²)	Submunitions destroyed	Other UXO destroyed	Mines destroyed
Lao People's Army (Unit 58)	4,744,500	548,449	120	19	0
HALO	20,245,080	5,574,306	1,893	295	0
HI	1,127,500	614,896	116	11	0
MAG	162,599,573	158,379,104	5,221	29	0
NPA	5,670,000	2,128,990	198	12	1
UXO Lao	60,645,000	43,909,758	4,623	1,180	0
Totals	255,031,653	211,155,503	*12,171	*1,546	*1

* Already included in EOD roving task total

According to the data reported to Mine Action Review by clearance operators (excluding the Army Unit 58), a slightly higher total (compared to NRA data) of more than 217km² of CHA containing CMR was identified in 2022 (see Table 5).

Table 5: Technical survey of CMR-suspected area in 2022 (based on operator data)²⁶³

Operator	Area surveyed (m ²)	Area identified (m ²)	Submunitions destroyed	Other UXO destroyed	Mines destroyed
Lao People's Army (Unit 58)	N/R	N/R	N/R	N/R	N/R
HALO	16,078,404	5,874,863	1,023	157	0
HI	1,127,500	614,896	116	12	0
MAG	162,599,573	158,379,104	5,221	30	0
NPA	5,850,000	2,128,990	204	12	0
UXO Lao	67,688,000	50,310,000	5,070	1,384	N/R
Totals	253,343,477	217,307,853	11,634	1,595	0

N/R = Not reported

HALO completed the comprehensive CMRS of Savannakhet province in August 2022, having surveyed 492 villages identified by the NRA as being potentially contaminated by CMR.²⁶⁴

CLEARANCE IN 2022

According to the NRA data reported to Mine Action Review, a total of almost 50.72km² of cluster munition-contaminated area was cleared in 2022. During the year a total of 65,293 submunitions were destroyed during technical survey and clearance, including 20,426 during EOD spot tasks, together with a large number of UXO and a small number of anti-personnel mines.²⁶⁵ The 50.72km² area clearance total used by Mine Action Review excludes 11,843m² of commercial clearance by LXML, during which no submunitions were found. Commercial clearance, unlike humanitarian clearance, involves clearance of land in which no or very few submunitions are destroyed. This confirms that this is not targeted clearance of CHAs, but instead clearance at the request of clients of often uncontaminated land, required for confidence building for construction and development projects. Mine Action Review does not consider this as CMR clearance. Some 99% of all UXO destroyed during area clearance in 2022 were reported as having been destroyed by the six humanitarian clearance operators.²⁶⁶

The 2022 clearance output reported by the NRA to Mine Action Review of 50.72km², was an increase on the 46.68km² of CMR clearance for 2021 used by Mine Action Review in last year's *Clearing the Mines* report on Lao PDR.²⁶⁷ The increase in clearance in 2022 compared to 2021 is largely due to increased funding for humanitarian clearance resulting in additional clearance capacity and output,²⁶⁸ and because COVID-19 had negatively impacted on operations in 2021.²⁶⁹

262 Email from Khammoungkhoun Southivong, NRA, 8 June 2023.

263 Emails from Alexandra Letcher, HI, 6 April 2023; William Hunter, HALO, 8 May 2023; Katherine Harrison, NPA, 9 May 2023; Portia Stratton, MAG, 15 May 2023; and Vilaivanh Thongmanivong, UXO Lao, 25 May 2023.

264 Email from William Hunter, HALO, 8 May 2023.

265 Email from Khammoungkhoun Southivong, NRA, 8 June 2023.

266 Email from Olivier Bauduin, US Embassy Vientiane, 21 July 2023.

267 2019 UXO Sector Annual Report, NRA, undated, pp. 5 and 7.

268 Emails from William Hunter, HALO, 8 May 2023; Katherine Harrison, NPA, 9 May 2023; and Portia Stratton, MAG, 15 May 2023.

269 Email from Khammoungkhoun Southivong, NRA, 8 June 2023.

Table 6: CMR clearance by operator in 2022 (based on NRA data)²⁷⁰

Province	Operator	Area cleared (m ²)	Submunitions destroyed during clearance	Submunitions destroyed during spot tasks	UXO destroyed	Anti-personnel mines destroyed
Attapeu	NPA	2,533,912	2,162	19	2,199	0
	UXO Lao	3,464,727	1,363	836	1,391	0
Bolikhamxai	Lao People's Army (Unit 58)	170,214	233	128	621	0
Champassak	NPA	1,324,715	2,308	203	2,781	1
	UXO Lao	731,995	616	427	702	0
Houaphanh	HI	679,252	4,094	152	4,319	0
	Lao People's Army (Unit 58)	0	0	38	0	0
	UXO Lao	546,939	778	316	909	0
Khammouane	MAG	4,074,209	2,703	1,957	3,489	2
	UXO Lao	2,700,828	1,188	1,549	2,280	0
Luang Prabang	UXO Lao	0	0	8	0	0
Oudomxay	Lao People's Army (Unit 58)	0	0	4	0	0
Phongsaly	HI	0	0	42	0	0
	Lao People's Army (Unit 58)	0	0	22	0	0
Saravan	NPA	2,021,020	3,385	92	3,416	0
	UXO Lao	3,260,244	4,965	914	5,648	0
Savannakhet	HALO	6,040,793	5,343	2,542	8,183	0
	UXO Lao	3,751,613	1,762	1,027	2,300	1
Vientiane Province	Lao People's Army (Unit 58)	58,469	58	39	122	3
Vientiane Capital	Lao People's Army (Unit 58)	0	0	5	0	0
Xaisomboun	Lao People's Army (Unit 58)	0	0	6	0	0
Xekong	NPA	1,008,055	787	134	821	0
	UXO Lao	847,393	716	239	871	0
Xiengkhouang	MAG	11,037,515	3,712	6,675	4,094	2
	Milsearch	0	0	3	0	0
	UXO Lao	6,466,214	8,694	3,049	12,597	0
Totals		50,718,107	*44,867	*20,426	56,743	9

* Believed to include submunitions destroyed during technical survey.

270 Ibid.

Table 7: CMR clearance by operator in 2022 (based on operator data)²⁷¹

Operator	Area cleared (m ²)	Submunitions destroyed	Submunitions destroyed during spot tasks	UXO destroyed	Anti-personnel mines destroyed
Lao People's Army (Unit 58)	N/R	N/R	N/R	N/R	N/R
HALO	7,122,084	6,168	1,519	4,226	11
HI	679,252	4,094	194	228	1
MAG	15,286,974	6,434	8,632	1,152	4
NPA	7,912,950	7,684	193	554	1
UXO Lao	24,044,837	21,927	8,903	7,249	1
Totals	55,046,097	46,307	19,441	13,409	18

According to Lao PDR's Article 7 report, a total of more than 54.37km² was cleared in 2022, across 12 provinces, with the destruction of nearly 64,516 CMR, in addition to 54 mines, 89 big bombs, and 20,473 items of other UXO, during clearance, TS, and roving tasks (see Table 8). Just over 4.53km² of the total clearance was for development areas, and the remainder for agricultural areas.²⁷²

The 54.37km² of total CMR clearance (including humanitarian and commercial clearance) reported in Lao PDR's Article 7 report covering 2022, is an increase compared to the reported 45.54km² of total clearance in 2021 (similarly including humanitarian and commercial clearance), with the destruction of nearly 64,304 submunitions.²⁷³

Table 8: CMR clearance by province in 2022 (Article 7 data)²⁷⁴

Province	Area cleared (m ²)
Attapeu	5,998,639
Bolikhamxai	170,214
Champassak	2,033,150
Houaphanh	1,305,208
Khammouane	7,087,708
Luangnamtha	0
Luang Prabang	152,800
Oudomxay	0
Saravan	5,225,912
Savannakhet	11,338,231
Vientiane Province	25,619
Vientiane Capital	0
Xaisomboun	772,453
Xekong	1,881,758
Xiengkhouang	18,379,272
Total	54,370,964

* Includes 49,837,414m² of agricultural area and 4,533,550m² of development area.

271 Emails from Alexandra Letcher, HI, 6 April 2023; William Hunter, HALO, 8 May 2023; Katherine Harrison, NPA, 9 May 2023; Portia Stratton, MAG, 15 May 2023; and Vilaivanh Thongmanivong, UXO Lao, 25 May 2023.

272 Article 7 Report (covering 2022), Form F.

273 Article 7 Report (covering 2021), Form F.

274 Article 7 Report (covering 2022), Form F.

The NRA said that 110 cluster munition clearance tasks, totalling 1,218,567m², were cleared in 2022 which contained no CMR.²⁷⁵

HALO reported that of the CMR cleared in 2022, 36 tasks totalling 664,998m² proved not to contain CMR, although 11 of the 36 tasks did contain other ERW.²⁷⁶ HI found submunitions in all its clearance tasks in 2022, which were on CHAs. HI also supported some development tasks (bridges, local roads, small scale/subsistence farming plots for livelihood activities for persons with disabilities - part of another HI project), and 11 of these tasks in Hiem district, totalling 1,181m² and 32 of these tasks in Houameuang, totalling 30,539m² were found not to contain CMR, although some contained other items of explosive ordnance.²⁷⁷ MAG reported that 388 tasks, totalling 471,440m², were completed in 2022 in which no further CMR were discovered during clearance. But most of these were outside CHAs and were in support of a development cooperation partnership with LuxDev in Khammouane.²⁷⁸ NPA cleared one task area in 2022 which proved to contain no CMR, with a total size of 16,260m². The task was created in 2020 following national survey procedures, and two submunitions had previously been identified and destroyed during CMRS.²⁷⁹ UXO Lao said it found CMR in all its CHA clearance tasks in 2022.²⁸⁰ UXO Lao also supports development projects, for which the areas requested for clearance by local authorities sometimes do not contain CMR, and clearance is conducted to ensure the areas were free from UXO in order for development projects to take place. At the December 2022 meeting of the TWG on IM, the NRA presented on the report of CHAs where MAG and NPA did not find CMR.²⁸¹

UXO Lao's CMR clearance in 2022 was a decrease on the previous year, due to lack of funding resulting in only partial operations in five of the nine provinces in which it operates.²⁸²

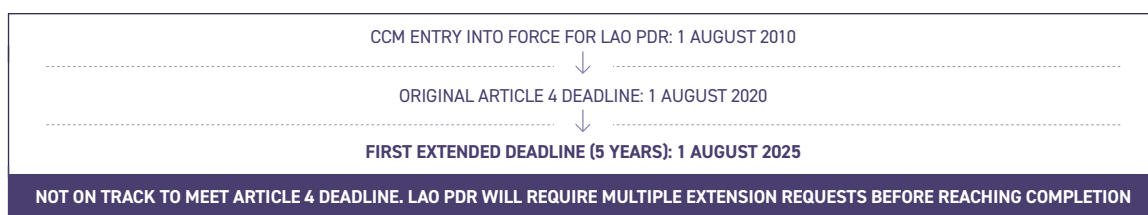
Compared to the previous year, and based on operator data, HALO, HI, MAG, and NPA's clearance output increased in 2022.

HI said that its increased clearance in 2022 compared to the previous year was due to the land topography of task sites, with rice paddies being less time-consuming to clear; cooperation from the villagers in supporting with vegetation cutting; favourable weather conditions; and the use of large coil on the Minelab F3 detector. HI said use of the large coil allowed for deep detection of CMR-sized items when used high above the ground and that using this method cancels out a lot of unwanted small fragmentation located on the surface, reducing the number of excavations that have to be conducted by the team. Clearance output was also an indication of a strong prioritisation process, applied to the 13 CHA in 10 villages in Houameuang district.²⁸³

HALO said the 44% increase in the amount cleared in 2022 was a result of the significant increase in clearance funding from PM/WRA.²⁸⁴ MAG saw a 48% increase in clearance output compared to 2021, primarily due to the types of terrain (rice and cassava fields) the teams were deployed on, resulting in a higher meter squared output per day.²⁸⁵ NPA said that its 11% increase in area cleared, while positive, was less than expected due to unfavourable field/weather conditions, changes to team/task deployment, and delays in the MoU process (including lack of interim permission to operate).²⁸⁶

All clearance organisations in Lao PDR are required to have a documented internal QM system, covering both QA and QC procedures. External QM inspections of clearance organisations are conducted by the NRA.²⁸⁷ In a positive development, the NRA doubled its QM capacity in 2022, from two QM teams to four (with five people per team),²⁸⁸ but capacity is still under-resourced given that these four teams cover sector-wide clearance.

ARTICLE 4 DEADLINE AND COMPLIANCE



275 Email from Khammoungkhoun Southivong, NRA, 8 June 2023.

276 Email from William Hunter, HALO, 8 May 2023.

277 Email from Alexandra Letcher, HI, 6 April 2023.

278 Email from Portia Stratton, MAG, 15 May 2023.

279 Email from Katherine Harrison, NPA, 9 May 2023.

280 Email from Vilaivanh Thongmanivong, UXO Lao, 25 May 2023.

281 Lao PDR, minutes of the Information Management Technical Working Group meeting, Fourth Quarter 2022, 22 December 2022.

282 Email from Vilaivanh Thongmanivong, UXO Lao, 25 May 2023.

283 Email from Alexandra Letcher, HI, 6 April 2023.

284 Email from William Hunter, HALO, 8 May 2023.

285 Email from Portia Stratton, MAG, 15 May 2023.

286 Email from Katherine Harrison, NPA, 9 May 2023.

287 NRA, draft "Lao PDR UXO Survey Procedures", 20 September 2017.

288 Email from Khammoungkhoun Southivong, NRA, 8 June 2023.

Under Article 4 of the CCM, Lao PDR is required to destroy all CMR in areas under its jurisdiction or control as soon as possible, but not later than 1 August 2025, having been granted a five-year extension (the maximum that can be requested per extension request under the CCM) in 2019. Based on current capacity and output, Lao PDR will require multiple extensions to its Article 4 deadline. According to the NRA, based on current resources and land release practices, "progress towards reaching a residual level of contamination as provided for in the CCM is decades away".²⁸⁹

As at end of 2022, a total of more than 1,745km² of CHA had already been identified through the ongoing nationwide survey.²⁹⁰ As the baseline survey continues the area of confirmed contamination/CHA is expected to continue to increase rapidly. An estimate of the true extent of CMR contamination will not be known until the nationwide CMRS is completed.²⁹¹ It is a notable achievement that to-date, the proactive survey phase (i.e. systematic CMRS of assigned villages) has been concluded in five of the most heavily contaminated provinces in the south. Good progress is being made in systematic CMRS of villages in Xiengkhouang, the most heavily contaminated province. Some survey is also being conducted to varying extents in other provinces, and in some, no survey is yet being undertaken. Therefore, there is still significant work to complete survey nationwide. Furthermore, the current nationwide baseline is based on CMRS of assigned villages and excludes CMR-contaminated areas in forested and mountainous areas which are not populated.

Clearance of CMR in Lao PDR will take many years and will require long-term national capacity and funding. According to Lao PDR's 2019 Article 4 extension request, the predicted annual clearance output based on current capacity and resources available averages approximately 50km².²⁹² However, annual humanitarian clearance output over the last five years has been significantly less (see Table 9), although the 50.72km² of clearance of cluster munition-contaminated area achieved in 2022 finally met this target. Furthermore, clearance outputs in 2023 and 2024 were expected to exceed that of 2022.²⁹³

Table 9: Five-year summary of CMR clearance

Year	Area cleared (km ²)
2022	*50.72
2021	*46.68
2020	*42.90
2019	*45.77
2018	36.20
Total	222.27

* Excluding commercial clearance

The NRA has highlighted the challenges in balancing resources for survey and clearance. While nationwide CMRS is essential to quantify the extent of actual contamination in Lao PDR, there is also a need for follow-on clearance in priority areas, which also demands significant resources.²⁹⁴ Commencement of FCDO-funded clearance operations in Lao PDR in 2019 helped increase clearance output of HALO, MAG, and NPA.²⁹⁵ While NPA withdrew from the partnership in April 2020, FCDO funding continued for HALO and MAG, but decreased by more than half from April 2021.²⁹⁶ Since 2021, the United States has, however, shifted its focus to clearance of CHAs generated by CMRS, and has supported increased clearance capacity of both international clearance operators and UXO Lao,²⁹⁷ which resulted in a significant increase in clearance capacity, in particular for HALO, MAG, and NPA.

Lao PDR has identified several challenges in Article 4 implementation. These include insufficient funding (in particular to the NRA and UXO Lao), and the need to strengthen coordination and collaboration among sector stakeholders in order to increase effectiveness and efficiency of the mine action sector in Lao PDR.²⁹⁸ Existing clearance capacity is not sufficient to address the area of CHA identified for clearance through the ongoing nationwide CMRS. Furthermore, because the number of CMR found per hectare during clearance is now much higher, thanks to application of evidence-based land release methodology, more explosives are needed for the destruction of CMR. This increases operational costs as explosives in Lao PDR are reportedly among the most expensive in the region.²⁹⁹

289 CCM Extension Request 2019, Executive Summary, p. 1; Part B, Detailed Narrative, p. 5; and Statement of Lao PDR, CCM Eighth Meeting of States Parties, Geneva, 3–5 September 2018.

290 Email from Khammoungkhoun Southivong, NRA, 8 June 2023.

291 Interview with Phoukhieo Chanthasomboune, NRA, Vientiane, 2 May 2018.

292 CCM Extension Request 2019, Executive Summary, p. 3.

293 Email from Olivier Bauduin, US Embassy Vientiane, 4 August 2023.

294 Statement of Lao PDR, CCM Seventh Meeting of States Parties, Geneva, 4–5 September 2017; email from Bouala Thongsavanh on behalf of Phoukhieo Chanthasomboune, NRA, 30 April 2018; and interview with Phoukhieo Chanthasomboune, NRA, in Geneva, 7 February 2019.

295 Emails from Rebecca Letven, MAG, 26 March 2021; Cameron Imber, HALO, 14 March 2021; and Katherine Harrison, NPA, 22 March 2021.

296 Emails from Rebecca Letven, MAG, 20 June 2022; and Cameron Imber, HALO, 28 June 2022.

297 Interview with Olivier Bauduin, US Embassy Vientiane, in Geneva, 13 February 2020.

298 Statement of Lao PDR on National Implementation Efforts, CCM Eighth Meeting of States Parties, Geneva, 3 September 2018.

299 CCM Extension Request 2019, Executive Summary, p. 5; and Part B, Detailed Narrative, pp. 24–25.

In addition to insufficient clearance capacity, Lao PDR cites as challenges to implementation of its Article 4 extension request work plan mountainous terrain (which can impede comprehensive survey to accurately identify the location and size of CMR-contaminated area and make clearance more complex and time-consuming); inadequate and unpredictable funding (which sometimes results in the halting of operations or reduction in number of employees); and outdated clearance equipment (e.g. in struggling to distinguish between CMR and scrap metal).³⁰⁰ Other operational challenges in clearance tasks also include heavy rains during the wet season; high scrap-metal contamination and fragmentation from other UXO; difficulty accessing tasks due to flooding and vehicles getting stuck in the mud; and the proximity of high-voltage pylons and power lines.³⁰¹

According to the NRA, the limited number of clearance teams, means that for most villages, clearance is required on multiple separate occasions before the entire village is completed.³⁰² The NRA is seeking international assistance in order to comprehensively update its national prioritisation system; expand clearance capacity, especially that of the Humanitarian Demining units of the Army (Unit 58); and upgrade its data and IM systems.³⁰³

In 2022, COVID-19 continued to disrupt survey and clearance operations, but to a much lesser extent and primarily only in the first quarter of the year. In April 2022, Lao PDR lifted its COVID-19 restrictions, reducing the impact of COVID-19 on operations.³⁰⁴ HALO reported that during the first half of 2022, national and provincial COVID-19 restrictions resulted in some clearance and survey teams being quarantined after team members tested positive. However, by June, most restrictions had been removed, and HALO operations continued as normal.³⁰⁵ COVID-19 did not have a significant effect on HI operations in 2022. Houaphanh Province re-opened in mid-February 2022 and HI operations were able to continue unhindered. This was in stark contrast to the previous year.³⁰⁶ MAG reported losing 1,064 working hours for clearance and 504 working hours for TS in January 2022, due to COVID-19 quarantine of staff, but since April 2022 MAG's operational activities have not been negatively affected by COVID.³⁰⁷ NPA reported losing 283 deminer working days in 2022 as a result of COVID-19 infections or COVID-related restrictions.³⁰⁸ COVID-19 did not hinder UXO Lao's work plan in 2022.³⁰⁹

PLANNING FOR MANAGEMENT OF RESIDUAL CONTAMINATION

Lao PDR is still determining the extent of its baseline of CMR contamination and is many years from fulfilling its Article 4 obligations. The Geneva International Centre for Humanitarian Demining (GICHD) believes the NRA would still, however, benefit from taking a strategic view on how to prepare for transition to a more reactive phase, and ultimately for completion within the same framework. In June 2022, the GICHD organised a workshop in conjunction with ARMAC, on risk management and planning for residual contamination. The NRA attended along with three other national authorities from the region and implementing partners.³¹⁰ Based on discussions during the workshop, the GICHD facilitated an experience exchange visit for the NRA staff to Lebanon to better understand how the LMAC approaches various aspects of its mine action programme, such as coordination with INGOs, quality management, and the application of the land release process.³¹¹

300 CCM Article 7 Reports (covering 2021 and 2022), Form F.

301 Presentation by HALO, Sepon, 10 May 2018.

302 Article 7 Report (covering 2022), Form F.

303 CCM Article 7 Report (covering 2021 and 2022), Form F; and Statement of Lao PDR on Clearance, CCM Intersessional meetings, Geneva, 16–17 May 2022.

304 Email from Portia Stratton, MAG, 15 May 2023.

305 Email from William Hunter, HALO, 8 May 2023.

306 Email from Alexandra Letcher, HI, 6 April 2023.

307 Email from Portia Stratton, MAG, 15 May 2023.

308 Email from Katherine Harrison, NPA, 9 May 2023.

309 Email from Vilaivanh Thongmanivong, UXO Lao, 25 May 2023.

310 Emails from GICHD, 21 June 2022 and 5 May 2023.

311 Email from GICHD, 5 May 2023.