

### KEY DATA

#### CCM ARTICLE 4 DEADLINE: 1 AUGUST 2030

Not on track to meet deadline  
(will require multiple extension requests, due to extent of CMR)

#### CMR CONTAMINATION:

Massive but no reliable  
estimate of extent

#### LAND RELEASE OUTPUTS

Release of cluster munition-contaminated area	Release in 2024 (km <sup>2</sup> )	Release in 2023 (km <sup>2</sup> )
Clearance	*71.70	56.67
Technical Survey**	0	0
Non-Technical Survey**	0	0

Destruction of submunitions during clearance, survey, and spot tasks	2024	2023
Submunitions destroyed	71,106 (including 34,485 destroyed during spot tasks and 11,709 during TS)	58,382 (including 20,689 destroyed during spot tasks)

\* Excludes commercial clearance in 2024 where few or no submunitions were found, as Mine Action Review does not deem this to be CMR clearance.

\*\* Non-technical survey (NTS) and technical survey (TS) are conducted in Lao PDR, but are focused on finding evidence of cluster munition contamination as part of a nationwide survey. The output of the Cluster Munition Remnants Survey (CMRS) being undertaken in Lao PDR is the creation of evidence-based confirmed hazardous areas (CHAs).

#### MAIN CMR SURVEY AND CLEARANCE OPERATORS IN 2024:

- Humanitarian teams of the Lao People's Army (Unit 58)
- UXO Lao
- The HALO Trust (HALO)
- Humanity & Inclusion (HI)
- Mines Advisory Group (MAG)
- Norwegian People's Aid (NPA)

### KEY DEVELOPMENTS

In 2024, Lao PDR increased clearance output as well as the extent of area identified through technical survey (TS), largely due to expanded capacity and funding. National ownership was strengthened by the chairing of the National Regulatory Authority (NRA) moving to the Ministry of Foreign Affairs (MoFA), along with further progress on the quality of information management and the revision of national mine action standards (NMAS). However, challenges remain in improving efficiency in land release and securing long-term donor funding for a programme that remains decades from completion.

### RECOMMENDATIONS FOR ACTION

- The NRA should finalise a national planning and prioritisation system to support survey and clearance of cluster munition remnants (CMR).
- Lao PDR should further improve processes for the issuing, amending, or renewal of memoranda of understanding (MoUs). Lao PDR should also consider permitting longer-term MoUs to help attract more investment into the sector.

- The NRA should finalise its review of NMAS to ensure best practices are applied.
- The NRA should continue efforts to ensure the Information Management System for Mine Action (IMSMA) database is accurate and up to date. Historical operational data not already in the database should be available to operators engaged in survey and clearance.
- The NRA should work with operators to explore improvements to the process for releasing cluster munition-contaminated area through survey that maintain safety while improving efficiency.
- The NRA should work with relevant ministries to establish clear, streamlined procedures enabling the safe and authorised use of drones for survey, clearance, and explosive ordnance disposal (EOD) to improve operational efficiency.
- The NRA should develop a long-term EOD response strategy, including planning for a national emergency response and residual risk management capacity, amid likely future funding constraints.

## ASSESSMENT OF NATIONAL PROGRAMME PERFORMANCE

Criterion	Score (2024)	Score (2023)	Performance Commentary
<b>UNDERSTANDING OF CMR CONTAMINATION</b> (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. By the end of 2024, more than 2,351km <sup>2</sup> of confirmed hazardous area (CHA) had been identified through survey.
<b>NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT</b> (10% of overall score)	8	7	There is strong national ownership from the NRA. The transfer of oversight to MoFA has been positive, with operators noting improvements to the complex MoU procedures and strong cooperation and coordination with the NRA at all levels.
<b>GENDER AND DIVERSITY</b> (10% of overall score)	8	7	In 2024, the NRA took significant steps to strengthen gender and diversity mainstreaming in the UXO sector, including updating policy documents, approving a new Gender and Inclusion Code of Conduct, and appointing Gender Focal Points for TWGs, with the Lao Women's Union conducting a sector gender analysis to inform planning. The proportion of women in the workforce remained roughly the same as it was in 2023.
<b>ENVIRONMENTAL POLICIES AND ACTION</b> (10% of overall score)	6	6	Lao PDR's NMAS on Environmental Management is under review. While progress has been made, including by the 2024 launch by MAG of a climate and environment forum for operators, most operators lack formal environmental policies, assessments, or focal points for their country programmes, and stronger, coordinated environmental practices are still needed across the sector.
<b>INFORMATION MANAGEMENT AND REPORTING</b> (10% of overall score)	7	7	Efforts to correct historical data in IMSMA and improve data quality and reporting are ongoing. In 2024, with support from the IM Capacity Development Project, regional authorities were trained and other preparations made for a migration to IMSMA Core. The NMAS on IM has been reviewed and updated and, at the time of writing, was awaiting final approval.
<b>PLANNING AND TASKING</b> (10% of overall score)	6	6	The survey and clearance targets in the 2024 Article 4 extension request work plan for 2025 to 2030 are much more realistic than the national strategy and in line with potential capacity and output. Since 2021, there has been a shift towards increasing clearance capacity and reducing survey capacity. There is not yet a comprehensive national-level prioritisation matrix of clearance tasks, but an Annex to the NMAS on the issue is planned.
<b>LAND RELEASE SYSTEM</b> (10% of overall score)	8	8	Lao PDR's national standards have been under review and were due to be finalised by the end of 2025. NPA and UXO Lao both increased their respective operational capacities in 2024 thanks to additional funding.
<b>LAND RELEASE OUTPUTS AND ARTICLE 4 COMPLIANCE</b> (20% of overall score)	8	8	The area identified through TS under the ongoing nationwide CMRS increased in 2024, as did clearance output, largely due to increased funding. However, challenges persist, including the need to improve land release efficiency.
<b>Average Score</b>	<b>7.3</b>	<b>7.1</b>	<b>Overall Programme Performance: GOOD</b>

# CLUSTER MUNITION SURVEY AND CLEARANCE CAPACITY

## MANAGEMENT CAPACITY

- 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 & Inclusion (HI)
- Mines Advisory Group (MAG)
- Norwegian People's Aid (NPA)
- Commercial operators

## OTHER ACTORS

- ASEAN 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 has the world's highest level of contamination by unexploded submunitions as a result of the Indochina Wars 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, including more than 270 million submunitions (known locally as bombies).<sup>1</sup> The failure rate is not known, but Lao PDR reports it may have been as high as 30%,<sup>2</sup> and an estimated 80 million submunitions are thought to have remained at the end of the war.<sup>3</sup>

Lao PDR does not yet have a reliable estimate of CMR contamination. According to its 2024 Article 4 deadline extension request, 15 of its 18 provinces are contaminated with CMR.<sup>4</sup> The nine provinces most heavily affected by CMR are Attapeu, Champassak, Houaphanh, Khammouane, Luang Prabang, Saravan, Savannakhet, Xekong, and Xiengkhouang.<sup>5</sup>

According to data provided to Mine Action Review by the NRA, as at the end of 2024, a total of more than 2,351km<sup>2</sup> of CHA had been identified through survey (see Table 1);<sup>6</sup> an increase on the almost 1,996km<sup>2</sup> of CMR-contaminated area as at the end of 2023.<sup>7</sup> The amount of CHA will continue to increase as the Cluster Munition Remnants Survey (CMRS) continues to identify CHA. That said, since 2021, a shift towards clearance over survey has released a greater proportion of the CHAs already identified during the CMRS.

Lao PDR's initial estimation of 8,470km<sup>2</sup> of total CMR contamination was based on 70,000 individual US cluster munitions target locations<sup>8</sup> with each cluster munition strike producing an estimated footprint of up to 12

hectares (0.12km<sup>2</sup>). These calculations gave a very broad understanding of the extent of contamination, but were, obviously, based on assumptions.<sup>9</sup>

In 2015, Lao PDR initiated systematic TS using the CMRS methodology to determine the extent of contamination in populated areas.<sup>10</sup> An estimate of the true extent of CMR contamination in populated areas will not be known until the nationwide CMRS is completed, which is still many years away. It is a notable achievement that, to date, the "proactive survey phase" (i.e. the systematic village-by-village CMRS of all villages assigned to clearance operators using the NRA's list of contaminated villages) has been completed in five of the most heavily contaminated provinces in the south. These five provinces are now in a "reactive" phase of survey where CMRS is only conducted in response to *ad hoc* requests when evidence of CMR is found by villagers outside of previously established CHAs.<sup>11</sup>

Considering the high level of CMR contamination in Lao PDR, previously unknown CMR evidence points will continue to be discovered outside of the existing CHA, even after completion of systematic CMRS of villages.<sup>12</sup> The completion of proactive survey in these five southern provinces is also notwithstanding the fact that survey of some villages or parts of villages were not assigned for systematic survey by operators, as they are restricted, often for reasons of national security.

In the most heavily contaminated province of Xiengkhouang, which is in the north of the country, systematic village-to-village CMRS (proactive survey phase) is still

1 2024 CCM Article 4 deadline Extension Request, Part B, Detailed Narrative, p. 3.

2 Ibid.

3 2019 Article 4 deadline Extension Request, Part B, Detailed Narrative, p. 1.

4 2024 CCM Article 4 deadline Extension Request, Part B, Detailed Narrative, p. 4.

5 Ibid.; 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.

6 Email from Viengdalat Somphet, Head of Planning and Cooperation Unit, NRA, 17 June 2025. This differs from the data reported in Lao PDR's Article 7 report (covering 2024), which states a total of almost 1,964km<sup>2</sup> of CHA identified through survey as at the end of 2024. The discrepancy is due to the data being extracted from the NRA Dashboard on different dates and ongoing verification of the data. The Dashboard is regularly updated, and operator data is only finalised by the NRA once verified through completion reports.

7 Email from Chanmy Keodara, International Cooperation and Treaty Officer, NRA, 13 July 2024.

8 "US bombing records in Laos, 1964–73, Congressional Record", 14 May 1975; and 2024 Article 4 deadline Extension Request, Part A, Executive Summary.

9 2024 Article 4 deadline Extension Request, Part A, Executive Summary; and Part B, Detailed Narrative, p. 7; and email from Chanmy Keodara, NRA, 25 May 2024.

10 CCM Article 7 Report (covering 2023), Form F; and email from Olivier Bauduin, UXO Program Advisor, US Embassy Vientiane, 21 July 2023.

11 2024 Article 4 deadline Extension Request, Part B, Detailed Narrative, pp. 8 and 18.

12 Emails from Olivier Bauduin, US Embassy Vientiane, 21 July 2023; and Katherine Harrison, NPA, 9 May 2023.

underway.<sup>13</sup> Completion of proactive CMRS in Xiengkhouang has yet to be achieved due to the extent of contamination and the frequent overlapping of cluster munition strikes, which has meant that operators often have to arbitrarily end CHAs and start new ones, due to the massive size of the CHAs being identified.<sup>14</sup> An alternative approach to CMRS was planned to be considered in the second half of 2025, with the testing of the LEAP (Layered Evidential Assessment and Prioritisation) tool in Xiengkhouang province. For more information on the LEAP tool, see the subsection below, "Operators and Operational Tools".<sup>15</sup>

CMRS is also being undertaken in five other CMR-contaminated provinces (Bolikhambai, Houaphanh, Khammouane, Luang Prabang, and Vientiane province), although not systematically, as funding for TS/CMRS has been sporadic in these provinces and undertaken according to operator budget availability, rather than targeted for the completion of CMRS of all villages.<sup>16</sup> Of Lao PDR's remaining seven affected provinces, four (Oudomxay, Phongsaly, Vientiane Capital, and Xaisomboun) are known to have CMR but do not have funding for systematic TS/CMRS.<sup>17</sup> The remaining three provinces (Bokeo, Luang Namtha, and Xayabouli) have low levels of CMR contamination and have been deprioritised.<sup>18</sup>

**Table 1: Cluster munition-contaminated area confirmed through survey (at end 2024)<sup>19</sup>**

Province	Villages	CHAs	Total area (km <sup>2</sup> )
Attapeu	128	1,693	157.62
Bolikhambai	99	62	5.82
Champassak	147	584	32.49
Houaphanh	121	515	50.76
Khammouane	126	869	191.02
Luang Prabang	61	330	30.87
Phongsaly	5	6	0.52
Saravan	369	2,692	139.43
Savannakhet	434	5,251	233.80
Vientiane	39	12	1.03
Xiengkhouang	292	2,335	1,405.49
Xekong	154	1,423	102.40
<b>Totals</b>	<b>1,975</b>	<b>15,772</b>	<b>2,351.25</b>

## 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 ordnance, though the extent of contamination is not known. An online reference manual compiled by Humanity & Inclusion (HI), documenting all types of explosive ordnance found in Lao PDR, has reported the presence of at least 214 types of munition.<sup>20</sup> These range from 20lb fragmentation bombs to 3,000lb general-purpose bombs, as well as artillery shells, grenades, mortars, rockets,<sup>21</sup> cluster munitions, air-dropped mines (such as the BLU 42, 43, and 45), and other ordnance.<sup>22</sup> In steep

mountainous areas, items of unexploded ordnance (UXO) can easily roll downhill during clearance and detonation. Items of explosive ordnance with cocked strikers and time-delay or anti-withdrawal fuzes present a particular hazard and cannot be moved, so must be destroyed in situ.<sup>23</sup>

Lao PDR is also contaminated, but to a much lesser extent, by anti-personnel and anti-vehicle mines (See Mine Action Review's *Clearing the Mines* report on Lao PDR for more information).

<sup>13</sup> Article 7 Report (covering 2024), Form F.

<sup>14</sup> 2024 Article 4 deadline Extension Request, Part B, Detailed Narrative, p. 9.

<sup>15</sup> Email from Olivier Bauduin, UXO Program Advisor, US Embassy Vientiane, 4 August 2025.

<sup>16</sup> Article 7 Report (covering 2023), Form F.

<sup>17</sup> Article 7 Report (covering 2024), Form F.

<sup>18</sup> Ibid.

<sup>19</sup> Email from Viengdalat Somphet, NRA, 17 June 2025.

<sup>20</sup> Email from Yvon Le Chevanton, Technical Survey/Clearance Operations Manager, HI, 24 July 2024.

<sup>21</sup> 2024 Article 4 deadline Extension Request, Part B, Detailed Narrative, p. 4.

<sup>22</sup> Email from Yvon Le Chevanton, HI, 13 July 2024.

<sup>23</sup> Emails from Alexandra Letcher, HI, 6 April and 28 June 2023; and Yvon Le Chevanton, HI, 13 and 24 July 2024.

## 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. Since September 2023, the NRA has been chaired by MoFA, having previously been chaired by the Ministry of Labour and Social Welfare (MoLSW).<sup>24</sup> The move to bring the NRA under MoFA was part of measures taken by the Lao government in 2023 to strengthen coordination systems among various agencies including government and operators.<sup>25</sup> In June 2024, the Deputy Prime Minister/Foreign Minister, who chairs the NRA, led a special session of the UXO Sector Working Group, demonstrating the high-level commitment of the Lao government.<sup>26</sup>

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.<sup>27</sup> A further national decree on UXO management was endorsed by the government in 2022.<sup>28</sup> 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, accreditation, quality management (QM), and coordination of the implementation of the national strategy nationwide, as well as NRA planning and coordination functions at the provincial and district levels.<sup>29</sup>

During the Association of Southeast Asian Nations (ASEAN) summit in 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 National Socio-Economic Development Plan (NSED) for 2021–2025, and inclusion in the forthcoming NSED for 2026–30 demonstrates Lao PDR's commitment to removing UXO as a barrier to development.<sup>30</sup>

UNDP provides programmatic and technical support to the NRA focusing on areas such as QM, policy, and support with national standards and treaty compliance. UNDP also supports UXO Lao as well as the Lao People's Army demining teams (Unit 58) with funding and capacity building support.<sup>31</sup>

Further capacity development in information management (IM), QM, operations support and EOD training is provided, primarily to UXO Lao, and to a lesser extent the NRA, through a US-funded contractor, Tetra Tech.<sup>32</sup> Additional support is provided by UNDP, funded by the Korea International Cooperation Agency (KOICA), for national capacity building of the NRA and Army Unit 58, including for survey and clearance. Japan, through the Japan International Cooperation System (JICS), is also supporting survey and clearance as well the administration of training in EOD to UXO Lao.<sup>33</sup>

Norwegian People's Aid (NPA) and the NRA, funded by the US Department of State's Office of Weapons Removal and Abatement (PM/WRA), are jointly implementing the IM Capacity Development Project in 14 provinces (see section below on Information Management).<sup>34</sup> Mines Advisory Group (MAG), in collaboration with the NRA and the provincial Department of Foreign Affairs (DoFA), and with UK Government (FCDO) support, implemented a capacity-building project to strengthen national mine action management. Activities focused on IM, planning, and prioritisation. Quarterly coordination meetings facilitated continued exchange between MAG, UXO Lao, DoFA, and DoLSW, covering operational capacity, donor funding, and use of Differential Global Positioning System (DGPS) technology.<sup>35</sup>

## COOPERATION AND COORDINATION

The move of the NRA's line ministry from the MoLSW to the MoFA has already seen positive developments. In 2024, HI, NPA, HALO, and MAG all reported strong cooperation and coordination with the NRA at both national and sub-national levels. HI highlighted smooth collaboration through regular

joint planning, monitoring, and review meetings with local authorities, and consistent participation in NRA-led technical working groups.<sup>36</sup> NPA and HALO both noted strong support from the NRA and relevant provincial and district authorities.<sup>37</sup> MAG also described close coordination and

24 Article 7 Report (covering 2023), Form J.

25 Ibid.

26 Email from Olivier Bauduin, US Embassy Vientiane, 24 July 2024.

27 Government Decree No. 67, dated 12 February 2018; 2019 Article 4 deadline Extension Request, 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.

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

29 2019 Article 4 deadline Extension Request, Part B, Detailed Narrative, pp. 14, 15, and 18.

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

31 Emails from Rupert Leighton, Chief Technical Advisor, UNDP, 14 August 2023; and Viengdalat Somphet, NRA, 17 June 2025.

32 Email from Viengdalat Somphet, NRA, 17 June 2025; 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>.

33 Email from Viengdalat Somphet, NRA, 17 June 2025.

34 Email from Per Håkon Breivik, Country Director, NPA, 23 May 2025.

35 Email from Eli Mechanic, MAG, 12 June 2025.

36 Email from Reinier Carabain, Country Manager, HI, 22 May 2025.

37 Emails from Per Håkon Breivik, NPA, 23 May 2025; and William Hunter, HALO, 22 June 2025.

improved support from government at all levels, including a smoother MoU process and effective problem-solving during operational challenges, such as the US government Stop Work Order in 2025 and the subsequent US funding for HALO and MAG for shorter periods of performance.<sup>38</sup> The NRA Director played an active role in securing the necessary authorisations for the May to October 2025 funding period, with stakeholders noting the director's direct engagement as a key factor in achieving these outcomes.<sup>39</sup>

In 2022, Lao PDR established a Country Coalition under the existing "UXO Sector Working Group" (SWG), chaired by the Minister or Vice Minister of Foreign Affairs and co-chaired by UNDP and rotating donor countries. Meeting twice a year, the SWG aims to improve the efficiency, transparency, and funding of mine action in Lao PDR.<sup>40</sup> In 2024, it focused on reviewing progress, identifying challenges and opportunities, and presenting work plans.<sup>41</sup>

The SWG consists of five Technical Working Groups (TWGs) covering survey and clearance, victim assistance, risk education, information management, and policy coordination and funding strategy.<sup>42</sup> TWGs are tasked with specific issues and report regularly to the SWG, sharing challenges, good

practices, standard operating procedures (SOPs), and operational concerns.<sup>43</sup> In 2025, the NRA improved the TWGs by ensuring that there were tangible outcomes from the meetings.<sup>44</sup>

Historically, MoU procedures have been lengthy, complex, and labour-intensive, posing a major challenge at all levels and causing significant delays to survey, clearance, and procurement and importation of equipment.<sup>45</sup> In the 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.<sup>46</sup> Indeed, with the shift of the NRA's line ministry from MoLSW to MoFA operators have noted a reduction in bureaucracy, and in 2024 and in the first half of 2025, HALO, MAG, and NPA reported a quicker and more manageable MoU process than in previous years, with no operational delays due to the practice of requesting interim approval and good support from DoFA staff to secure district approvals.<sup>47</sup>

## FUNDING FOR CMR SURVEY AND CLEARANCE

The Lao PDR government makes in-kind contributions to mine action including the salaries of the NRA staff (at provincial and district level) and the clearance teams of Army Unit 58, administrative support, and infrastructure in collaboration with funding from KOICA and coordination by UNDP.<sup>48</sup> Salaries of NRA personnel in Vientiane are paid by international donors, with funding channelled through UNDP.<sup>49</sup> In addition, the government provides in-kind contributions such as for UXO Lao facilities, and through tax exemptions for equipment for humanitarian operators.<sup>50</sup> Clearance operators are, however, required to pay visa fees for expatriates and the previous tax exemption for international experts was removed from all MoUs after 2018.<sup>51</sup> In addition, changes to the law mean that international NGO staff have paid income tax since 2021.<sup>52</sup>

Lao PDR's Article 7 report said that it requires US\$50 million annually for clearance and risk education,<sup>53</sup> and its 2024 Article 4 extension request puts the amount of international

funding required at US\$45 million per year. The NRA planned to produce a resource mobilisation strategy by the end of 2025, which will detail activities to maintain donor interest and explore alternative funding avenues. These include exploring diversified sources of funding, such as working to attract smaller donors.<sup>54</sup>

In 2024, Canada, Germany, Ireland, Japan, Luxembourg, New Zealand, Norway, the Republic of Korea, the United Kingdom, the United States, and several other smaller donors continued to provide support for CMR survey and clearance in Lao PDR. In 2025, the Philippines joined as a donor, while existing donors maintained their funding commitments.<sup>55</sup>

MAG's operations in Lao PDR in 2024 and 2025 were funded by PM/WRA, FCDO, the Norwegian government (Norad), and several foundations and private donors. A new private donor began funding a team in Khammouane in November 2024, although the funding was due to end in July 2025.<sup>56</sup>

38 Emails from Eli Mechanic, MAG, 12 June 2025; and Olivier Bauduin, US Embassy Vientiane, 4 August 2025.

39 Email from Olivier Bauduin, US Embassy Vientiane, 4 August 2025.

40 Article 7 Report (covering 2023), Form J; and email from Viengdalat Somphet, NRA, 17 June 2025.

41 Email from Per Håkon Breivik, NPA, 23 May 2025.

42 Convention on Certain Conventional Weapons (CCW) Protocol V Article 10 Report (covering 2023), Form D.

43 Article 7 Report (covering 2023), Form J; and email from Reinier Carabain, HI, 22 May 2025.

44 Email from Viengdalat Somphet, NRA, 17 June 2025.

45 Emails from Aubrey Sutherland, NPA, 18 May 2024; William Hunter, HALO, 30 May 2024; and Katherine Harrison, MAG, 8 May 2024.

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

47 Emails from Eli Mechanic, MAG, 12 June 2025; Per Håkon Breivik, NPA, 23 May 2025; and William Hunter, HALO, 22 June 2025.

48 2024 Article 4 deadline Extension Request, Part B, Detailed Narrative, p. 13; CCW Protocol V Article 10 Report (covering 2023), Form I; and email from Channy Keodara, NRA, 13 July 2024.

49 Email from Olivier Bauduin, US Embassy Vientiane, 24 July 2024.

50 2024 Article 4 deadline Extension Request, Part B, Detailed Narrative, p. 13; CCW Protocol V Article 10 Report (covering 2023), Form I; and email from Channy Keodara, NRA, 13 July 2024.

51 Emails from Katherine Harrison, NPA, 9 September 2020; Cameron Imber, Programme Manager, HALO, 11 June 2021; Julien Kempeneers, HI, 16 June 2021; and Rebecca Letven, MAG, 19 June 2021.

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

53 Article 7 Report (covering 2023), Form I.

54 2024 Article 4 deadline Extension Request, Part B, Detailed Narrative, pp. 14, 24, and 25; and email from Viengdalat Somphet, NRA, 17 June 2025.

55 Email from Viengdalat Somphet, NRA, 17 June 2025.

56 Email from Eli Mechanic, MAG, 12 June 2025.

In 2024 and 2025, UXO Lao received funding support from Japan, Luxembourg, New Zealand, and the United States.<sup>57</sup> US support to UXO Lao was at its highest level in 2025, with 54 US-funded clearance teams, and the deployment of new vegetation cutting teams and multi-tasks teams in the course of the year.<sup>58</sup> The German Federal Foreign Office (GFFO) has been funding HI's UXO Clearance Project from 2024 through

to the end of 2025. As of now, no new donors have expressed interest in supporting UXO clearance activities beyond this.<sup>59</sup> In 2024 and 2025, NPA Lao received funding support from US Department of State's Office of Weapons Removal and Abatement (PM/WRA) and Norad.<sup>60</sup> In 2024 and 2025, HALO's donors were PM/WRA, the FCDO, and Ireland.<sup>61</sup>

## GENDER AND DIVERSITY

The NRA has integrated gender into all core UXO documents including work plans and the national strategy, and relevant mine action data are disaggregated by sex and age. Women, men, boys, and girls are consulted in group discussions as part of survey and clearance activities, but their differing needs and vulnerabilities have yet to be fully considered in prioritisation and planning. Accident data suggest that boys and men are particularly vulnerable, underscoring the need for tailored approaches and potentially increased participation from these groups.<sup>62</sup> In 2024, MoFA approved a Gender and Inclusion Code of Conduct for the NRA and UXO Lao, establishing overall standards of professional behaviour with core principles such as respect, safeguarding, and gender equality. A supporting Human Resources Policy Supplement was also approved, providing practical guidance for integrating gender and inclusion into HR systems, including recruitment, team composition, and staff development.<sup>63</sup>

In its Safe Path Forward III strategy, the NRA states that gender mainstreaming is important for the national programme and that women must be involved in both work planning and project implementation.<sup>64</sup> The NRA has pledged to continuing mainstreaming gender in the national programme by increasing cooperation with concerned stakeholders to make progress towards gender equality

a more visible part of the UXO Sector. In 2024, the NRA took several steps to strengthen gender and diversity mainstreaming in the UXO sector. These included a Training of Trainers Workshop on Gender Mainstreaming, the appointment of a Gender Coordination Committee for the UXO Sector by MoFA, and the appointments of Gender Focal Points for TWGs. The Focal Points, drawn from the NRA, HALO, HI, MAG, and UXO Lao, provide updates on gender mainstreaming during TWG meetings.<sup>65</sup> The NRA also updated its gender action plan, training materials, and HR policies. Additionally, the Lao Women's Union conducted a sector gender analysis to inform the 2024–26 Gender Action Plan.<sup>66</sup>

HALO, HI, MAG, and NPA all reported having gender and diversity policies in place.<sup>67</sup> In 2024, HI was appointed to be focal point of gender mainstreaming in Houaphanh province.<sup>68</sup> MAG appointed its first female national staff member as Technical Field Manager, one of its most senior operational roles. After completion of a six-week Senior EOD course as one of the top three students, she began the role on 1 December 2024.<sup>69</sup> The overall number of women staff increased in 2024 from the previous year in MAG, NPA, HALO and UXO Lao, although the proportion of women employed stayed largely the same, HALO has achieved gender parity in its programme (see Table 2).

Table 2: Gender composition of operators in 2024<sup>70</sup>

Operator	Total staff	Women staff	Total managerial or supervisory staff	Women managerial or supervisory staff	Total operational staff	Women operational staff
NRA	65	19 (29%)	12	2 (17%)	28	3 (11%)
HALO	1,468	749 (51%)	133	68 (51%)	1,367	709 (52%)
HI	35	13 (37%)	6	2 (33%)	3	0 (0%)
MAG	1,276	465 (36%)	150	57 (38%)	1,126	408 (36%)

57 Email from Vilaivanh Thongmanivong, Chief of Programme Office and Public Information (PO-PI) Unit, UXO Lao, 27 May 2025.

58 Email from Olivier Bauduin, US Embassy Vientiane, 4 August 2025.

59 Email from Reinier Carabain, HI, 22 May 2025.

60 Email from Per Håkon Breivik, NPA, 23 May 2025.

61 Email from William Hunter, HALO, 22 June 2025.

62 Email from Eli Mechanic, MAG, 10 July 2025.

63 Emails from Eli Mechanic, MAG, 10 July 2025; and Viengdalat Somphet, NRA, 17 June 2025.

64 Lao PDR, "Safe Path Forward III", p. 17.

65 Email from Chanmy Keodara, NRA, 13 July 2024.

66 Email from Viengdalat Somphet, NRA, 17 June 2025.

67 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.

68 Email from Reinier Carabain, HI, 22 May 2025.

69 Email from Eli Mechanic, MAG, 12 June 2025.

70 Emails from Viengdalat Somphet, NRA, 17 June 2025; William Hunter, HALO, 22 June 2025; Reinier Carabain, HI, 22 May 2025; Eli Mechanic, MAG, 12 June 2025; Per Håkon Breivik, NPA, 23 May 2025; and Vilaivanh Thongmanivong, UXO Lao, 27 May 2025.



Table 2 continued

Operator	Total staff	Women staff	Total managerial or supervisory staff	Women managerial or supervisory staff	Total operational staff	Women operational staff
NPA*	1,016	325 (32%)	81	12 (15%)	943	301 (32%)
UXO Lao	1,540	436 (28%)	384	142 (37%)	1,156	294 (25%)
<b>Totals</b>	<b>5,400</b>	<b>2,007 (37%)</b>	<b>766</b>	<b>283 (37%)</b>	<b>4,623</b>	<b>1,715 (37%)</b>

\* Staff from the IM Capacity Development Project are not included. Data correct as of 31 April 2025.

## ENVIRONMENTAL POLICIES AND ACTION

Lao PDR has an NMAS on environmental management (Chapter 21), but this needs to be revised, to review both its compatibility with the second edition of International Mine Action Standard (IMAS) 07.13 on Environmental Management in Mine Action and with national environmental norms. As at June 2025, the NMAS was being reviewed as part of a review of all NMAS that was due to be complete by the end of the year.<sup>71</sup> The Safe Path Forward III strategy says that climate change is a challenge to addressing UXO and reiterates that mine action activities have to comply with national standards and environmental protection laws.<sup>72</sup>

The existing NMAS requires environmental screening and assessment to support the planning and delivery of survey and clearance, evaluation of local environmental sensitivities, and identification of key risks and impact through systematic assessment. The NRA requires measures to prevent or at

least minimise environmental harm during demining, as well as at camps and during travel. Vehicle maintenance must occur in designated areas with soak pits to prevent water pollution; oil dumping is prohibited; and waste must be properly contained. Disposal sites are selected to avoid harm to property, infrastructure, or cultural areas, must consider shocks and noise, and are to be refurbished according to community needs. Camp sites are chosen with environmental and community input to avoid disrupting economic activities or social and cultural values, and to ensure compliance with national and local regulations. To cut greenhouse-gas emissions, organisations are encouraged to review energy use, transport, procurement, and supply chains. Waste is managed according to the waste hierarchy, with efforts to avoid single-use plastics.<sup>73</sup>

Table 3: Environmental policies, assessments and focal points<sup>74</sup>

Operator	Environmental policy in place for country programme	Environmental assessments conducted to support survey and clearance	Environmental focal point at country-programme level
HALO	No	No	Yes
HI	No – SOP	No	No
MAG	No – SOP	Yes, but limited	Yes, since September 2024
NPA	No – SOP	Yes	Yes
UXO Lao	No	No	No

In 2024, MAG launched the “UXO Climate and Environment Forum” for operators, initially involving HALO, HI, and NPA. The forum aims to facilitate knowledge sharing on environmental and climate change issues, identify best practices, and address field challenges, such as waste management and disposal of hazardous materials.

MAG also partnered with the World Wildlife Fund (WWF) Vientiane office to map US bombing data against protected areas and piloted a waste separation and recycling system in its Vientiane office. These efforts have since expanded to include connections with informal recycling collectors in its field offices.

<sup>71</sup> Email from Viengdalat Somphet, NRA, 17 June 2025.

<sup>72</sup> Lao PDR, “Safe Path Forward III”, pp. 12 and 17.

<sup>73</sup> Email from Viengdalat Somphet, NRA, 17 June 2025.

<sup>74</sup> Emails from William Hunter, HALO, 22 June 2025; Reinier Carabain, HI, 22 May 2025; Eli Mechanic, MAG, 12 June 2025; Per Håkon Breivik, NPA, 23 May 2025; and Vilaivanh Thongmanivong, UXO Lao, 27 May 2025.



MAG also conducted carbon baseline assessments in 2024 and 2025 in collaboration with its Vietnam programme, using 2023 emission factors to inform future evaluations. As a result, in June 2025, MAG launched a three-month trial in Khammouane Province, equipping five MATs with electric cookers to explore alternatives to charcoal, which is the cooking fuel most used by field teams. Charcoal was identified during data collection as a major source of emissions, producing nearly half as much greenhouse gas as the combined fuel consumption of vehicles and machinery across the programme. As the trial is ongoing, its effectiveness remains uncertain, particularly given the uncertain reliability of electricity supply in the area. It is still unclear how much charcoal use can realistically be replaced and whether electric cookers will prove to be a viable long-term alternative.<sup>75</sup>

HALO launched a pilot project in 2024 to replace plastic sandbags with biodegradable hessian alternatives. The trial involved 100 hessian sandbags and aimed to assess their

feasibility in field operations. However, the project found that the environmental benefits did not justify the significantly higher cost—ten times that of standard sandbags—and the associated logistical challenges, including the need to prevent rotting.<sup>76</sup>

All clearance operators plan annual survey and clearance operations with consideration of seasonal weather patterns and accessibility – prioritising flood-prone areas during the dry season.<sup>77</sup> According to Lao PDR's 2024 Article 4 deadline extension request, movement of ordnance as a result of flooding or landslides is increasingly common due to climate change. Local coordinators at province and district levels enable the government to respond to localised challenges and humanitarian needs.<sup>78</sup> MAG has worked with the authorities in Khammouane to clear task sites for villages that often get flooded so they can safely move to pre-cleared safer ground or build new villages in less-flood prone areas.<sup>79</sup> HALO has conducted emergency clearance for villages displaced by major flooding.<sup>80</sup>

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## INFORMATION MANAGEMENT AND REPORTING

Lao PDR has faced long-standing information management challenges, primarily due to inaccurate and incomplete historical data, particularly from UXO Lao between 2004 and 2010. Errors included incorrect coordinates, use of wrong GPS formats or map datums, and misfiled reports. Many records were stored only as hard copies and were never fully digitised, and the migration to the IMSMA database left further data gaps.<sup>81</sup> These issues have led to some clearance records being inaccurate and hindered effective planning and prioritisation. The NRA has identified the need for better quality control of data in the IMSMA database.<sup>82</sup>

In the past few years, the NRA and operators have made considerable progress in addressing these problems. The NRA improved quality control through systematic reviews of completion reports and streamlined reporting processes. A standardised methodology and tracking system was put in place, within the framework of the IM Capacity Development Project, to correct historical data.<sup>83</sup> The IMSMA database has been made accessible to all operators via a dedicated virtual private network (VPN), which has enhanced data entry and verification, and operators have reported more timely and

better coordinated updates.<sup>84</sup> The TWG on IM meets quarterly and is widely seen as having improved coordination and helped operators to align their own IM systems.<sup>85</sup>

The IM Capacity Development Project, funded by US PM/ WRA and jointly implemented by the NRA and NPA, aims to enhance IM capabilities across all NRA levels improving data quality and reporting. A sector-wide capacity needs assessment identified priorities in project management, QM, IM, risk education, and victim assistance. In 2023, NPA led support to the NRA in a review of the NMAS on IM (Chapter 24). This Standard was reviewed through an inclusive process, with all stakeholders invited to participate in three dedicated workshops.<sup>86</sup> It has been updated and, at the time of writing, was awaiting final approval.<sup>87</sup> NPA also initially supported IM capacity development in 9 provinces and 55 districts, later expanded to 14 provinces and 89 districts. The remaining five provinces and 27 districts are supported by UNDP.<sup>88</sup> The project adapted to new UXO Sector leadership, with 2024 support extended to MoFA. Expansion to five additional provinces has been discussed.<sup>89</sup>

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75 Email from Eli Mechanic, MAG, 12 June and 10 July 2025.

76 Email from William Hunter, HALO, 22 June 2025.

77 Emails from William Hunter, HALO, 30 May 2024; Katherine Harrison, MAG, 8 May 2024; Aubrey Sutherland, NPA, 18 May 2024; and Vilaivanh Thongmanivong, UXO Lao, 8 June 2024.

78 2024 Article 4 deadline Extension Request, Part B, Detailed Narrative, p. 27.

79 Email from Katherine Harrison, MAG, 8 May 2024.

80 Email from William Hunter, HALO, 30 May 2024.

81 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, Sterling International, Vientiane, 2 May 2018; and "Data errors on IMSMA", Nigel Orr, Technical Adviser, Sterling International, 26 April 2017.

82 2019 Article 4 deadline Extension Request, Part B, Detailed Narrative, p. 4.

83 Email from Aubrey Sutherland, NPA, 18 May 2024.

84 Emails from Yvon Le Chevanton, HI, 8 May 2024; Katherine Harrison, MAG, 8 May 2024; and Aubrey Sutherland, NPA, 18 May 2024.

85 Emails from Reinier Carabain, HI, 22 May 2025; Eli Mechanic, MAG, 12 June 2025; and Per Håkon Breivik, NPA, 23 May 2025.

86 Email from Olivier Bauduin, US Embassy Vientiane, 4 August 2025.

87 Email from Viengdalat Somphet, NRA, 17 June 2025.

88 Email from Per Håkon Breivik, NPA, 18 July 2025.

89 Email from Olivier Bauduin, US Embassy Vientiane, 24 July 2024.

In June 2025, with the support of the United States, the NRA led a review workshop for all operators and other stakeholders to develop the Information Management Strategic Plan for 2026 to 2030. It builds on training sessions provided to the NRA and the provincial regional authorities (PRAs) across 14 provinces.<sup>90</sup>

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

The National Strategy for the UXO Sector (2021–30), “Safe Path Forward III”, was developed under the leadership of the NRA and adopted in January 2023.<sup>91</sup> The target, by 2030, is to have identified 2,500km<sup>2</sup> of CHA and cleared 1,000km<sup>2</sup> of land for agricultural and development purposes.<sup>92</sup> This was an ambitious and aspirational target for the sector, but is

more than double existing clearance output. Accordingly, the predicted clearance outputs in the 2024 Article 4 deadline extension request (see below) were revised to reflect still ambitious, but more achievable clearance predictions. These amended clearance targets were presented by MoFA at the UXO SWG meeting in July 2025.<sup>93</sup>

### WORK PLAN FOR ARTICLE 4 IMPLEMENTATION IN 2025–30

The 2024 CCM Article 4 deadline extension request includes a five-year work plan for survey and clearance (see Table 4), with progress dependent on maintaining current funding levels. Clearance is taking place simultaneously with survey to identify CHAs that contain CMR.<sup>94</sup> Lao PDR plans to clear a total of 325km<sup>2</sup> of cluster munition-contaminated area between 1 August 2025 and 31 July 2030 (i.e. 65km<sup>2</sup> per annum), with predicted destruction of a total of 375,000 submunitions (75,000 per annum). Lao PDR also plans to conduct CMRS over a total of area of 1,000km<sup>2</sup>. These outputs are based on a total cost of US\$225 million (US\$45 million per annum) from international funding, in addition to in-kind national support.<sup>95</sup>

**Table 4: Planned survey and clearance in August 2025–August 2030 (2024 Article 4 extension request data)<sup>96</sup>**

Year	Clearance (km <sup>2</sup> )	Submunitions to be destroyed	Total area to be surveyed through CMRS (km <sup>2</sup> )	NTS (no. of villages)	External funding (US\$)
2025 (Aug to Dec)	27.08	31,250	83	62.5	18.75
2026	65	75,000	200	150	45
2027	65	75,000	200	150	45
2028	65	75,000	200	150	45
2029	65	75,000	200	150	45
2030 (Jan to end July)	37.92	43,750	117	87.5	26.25
<b>Totals</b>	<b>325</b>	<b>375,000</b>	<b>1,000</b>	<b>750</b>	<b>225</b>

Planned 2025–2030 clearance and survey output in Lao PDR’s 2024 extension request is realistic and in line with current output, based on existing capacity. The Safe Path Forward III

(2021–2030) strategy and the Ninth National Socio-Economic Development Plan 2021–2025, set intentionally aspirational targets for survey and clearance (which have not been met),

<sup>90</sup> Email from Olivier Bauduin, US Embassy Vientiane, 4 August 2025.

<sup>91</sup> 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; 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.

<sup>92</sup> Lao PDR, “Safe Path Forward III”, p. 14.

<sup>93</sup> Email from Olivier Bauduin, US Embassy Vientiane, 4 August 2025.

<sup>94</sup> 2019 Article 4 deadline Extension Request, Executive Summary.

<sup>95</sup> 2024 Article 4 deadline Extension Request, Part A, Executive Summary; and Part B, Detailed Narrative, Annex 1.

<sup>96</sup> Ibid.

which were revised in 2025.<sup>97</sup> At the time of writing, the NRA was conducting a mid-term evaluation of the Safe Path Forward III (2021–2030) strategy to assess its effectiveness, efficiency, sustainability, impact, and relevance and coherence within the current context and national planning for the next five years.<sup>98</sup>

Lao PDR is in the process of drafting its Tenth National Socio-Economic Development Plan (NSED) for 2026–2030, which was due to be adopted by the end of 2025. The key UXO/mine action priorities are to enhance prioritisation by standardising and clearly communicating the prioritisation system to local authorities; build the long-term capacity of national operators; integrate UXO/mine action across government sectors; adopt new technologies, such as drones and artificial intelligence (AI); invest in research and development to improve operational efficiency; broaden and secure funding sources; and strengthen regional and international engagement through knowledge sharing and advocacy.<sup>99</sup>

## PRIORITISATION

Prioritisation of clearance is a critical step in the land release process, but Lao PDR currently lacks comprehensive national-level guidance on the prioritisation of clearance tasks. Operators use their own systems, with priorities discussed annually with provincial and district authorities.<sup>104</sup> The NRA, under the Safe Path Forward III strategy (2021–2030), has committed to developing a policy for determining national priorities, emphasising survey and clearance of agricultural land and other areas key to socio-economic development.<sup>105</sup>

Tetra Tech began supporting the NRA in 2022 to develop a nationwide prioritisation matrix, but a national process was not launched in 2023 as planned.<sup>106</sup> A meeting was held with

In its 2024 Article 4 deadline extension request, Lao PDR expects to increase productivity in UXO clearance year on year through the application of good practice, the adjustment of national standards to respond to evidence and best practice in-country, and better use of data.<sup>100</sup> If achieved, this may result in increased clearance output compared to the extension request work plan.

There was a sector-wide annual work plan for Lao PDR in 2024, developed with input from all operators. In November 2024, it was discussed at the UXO Sector Working Group meeting where MoFA presented updates on progress in the programme and resource mobilisation. At the time of writing, the work plan for 2025 had not been shared with operators.<sup>101</sup> The NRA sets operators yearly targets and they in turn develop their own work plans that they submit to the NRA, although tasks sometimes overlap.<sup>102</sup> In January 2024, the NRA provided a centralised format for operators to use to prepare and submit their annual work plans.<sup>103</sup>

operators and UNDP in 2024, and, since then, operators have been consulted on the development of the matrix and kept informed of progress updates through the TWG and SWG meetings. The prioritisation matrix will be published as an Annex to the revised NMAS.<sup>107</sup> In its 2024 Article 4 deadline extension request, Lao PDR confirmed plans for an NMAS on prioritisation to identify high-impact clearance within each individual village and for rural development projects.<sup>108</sup> Seasonal factors also influence priorities, with paddy fields cleared in the dry season and other areas tackled during the wet season.<sup>109</sup>

# LAND RELEASE SYSTEM

## STANDARDS AND LAND RELEASE EFFICIENCY

The “Lao PDR UXO Survey Standards” (UXO Survey Standard No. 21/NRA) which specify the minimum requirements for the survey of all CMR-contaminated areas in Lao PDR, were

approved by the NRA in 2018 and are said to align with IMAS.<sup>110</sup> While operators confirm their relevance to the local threat and context, there is scope for improvement based

97 Email from Olivier Bauduin, US Embassy Vientiane, 4 August 2025.

98 Email from Viengdalat Somphet, NRA, 29 July 2025.

99 Email from Viengdalat Somphet, NRA, 17 June 2025.

100 2024 Article 4 deadline Extension Request, Part B, Detailed Narrative, pp. 24 and 25.

101 Email from Per Håkon Breivik, NPA, 23 May 2025.

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

103 Emails from Yvon Le Chevanton, HI, 8 May 2024; and Katherine Harrison, MAG, 8 May 2024.

104 Comments by Rupert Leighton, UNDP, minutes of the UXO Sector Working Group meeting, 16 September 2022; and Lao PDR, “Safe Path Forward III” (2021–2030), p. 5; and emails from Olivier Bauduin, US Embassy Vientiane, 21 July 2023; Aubrey Sutherland, NPA, 18 May 2024; and William Hunter, HALO, 30 May 2024.

105 Lao PDR, “Safe Path Forward III” (2021–2030), p. 5.

106 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.

107 Email from Viengdalat Somphet, NRA, 29 July 2025.

108 2024 Article 4 deadline Extension Request, Part B, Detailed Narrative, p. 27.

109 Interviews with international and national operators, Lao, 1–12 May 2018.

110 NRA, draft “Lao PDR UXO Survey Procedures”, 20 September 2017; and 2019 Article 4 deadline Extension Request, Executive Summary, p. 3; 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; 2019 Article 4 deadline Extension Request, Executive Summary, p. 2; and Part B, Detailed Narrative, pp. 9 and 17; and CCW Protocol V Article 10 Report (covering 2023), Forms B and G.

on best practice, such as clarifying target definitions and required depths in the absence of BLU-26 submunitions, strengthening the criteria for CHA creation based on survey evidence, and updating CMRS methodologies.<sup>111</sup>

According to its 2019 Article 4 deadline extension request, the NRA had planned to formally review the national standards at least every three years.<sup>112</sup> Operators were invited by the NRA to submit recommendations to update the national standards in 2021.<sup>113</sup> UNDP urged a fast-tracked revision in 2022, noting that the standards as drafted were out of date and were limiting operational productivity.<sup>114</sup> The NRA contracted a specialist to undertake a review of the standards in 2024, with support from UNDP and input from operators and stakeholders. The Geneva International Centre for Humanitarian Demining (GICHD) conducted a one-week training course on national standards.<sup>115</sup> At the time of writing, the revised standards were under review by operators, with feedback due in July 2025. Following this, the NRA and MoFA will conduct a final review, with approval of the English version of the standards expected in August. The standards will then be translated into Lao for final approval and shared with operators in late 2025.<sup>116</sup>

Before 2014, UXO survey in Lao PDR was largely reactive and unstructured. The introduction of the CMRS methodology has resulted in clearance being directed to confirmed cluster munition strikes, across land boundaries where necessary, and away from areas with little or no CMR. The number of submunitions destroyed per hectare cleared has significantly increased since the introduction of CMRS.<sup>117</sup> Over the last few years, the approach has been strengthened to include greater use of historical data, comprehensive NTS, and evidence-based TS.<sup>118</sup> HALO, MAG, and NPA all conduct comprehensive village-wide TS, whereas UXO Lao does not “complete” CMRS of the whole village in the same way, reportedly due to capacity limitations.<sup>119</sup> UXO Lao is focusing its TS on its annual clearance work plan, which is based on the needs of local authorities and communities.<sup>120</sup> For development projects, clearance is conducted without TS having first taken place.<sup>121</sup>

CMRS methodology works outwards from the initial evidence point, searching each 50 by 50 metre box with a detector, with emphasis on finding a submunition. As soon as a submunition

is found, the searcher moves to the adjacent boxes.<sup>122</sup> Operators continue to refine their CMRS methodology in a bid to accelerate operations, including using the technique of “skipping boxes” when teams finding a submunition in one survey box skip one or more of the immediate neighbouring boxes and then survey the one after. Skipping boxes is permitted under national procedures, and, where appropriate, has become standard practice for TS teams, where the focus is on identifying the boundaries of CHAs.<sup>123</sup>

In TS tasks in areas of extreme and overlapping contamination, typical fade-out approaches may not be possible or appropriate, as confirmed hazardous areas can extend far beyond initial evidence points, making continued TS impractical.<sup>124</sup>

Clearance is limited to CHAs unless special agreements, commercial clearance, or donor-funded development projects require otherwise.<sup>125</sup> Prime Ministerial Order No. 43 (2016) mandates survey and clearance for all development projects in UXO-affected areas.<sup>126</sup>

According to the national mine action standards, the minimum clearance depth in Lao PDR is 25cm, which is intended to capture all surface and shallow CMR contamination.<sup>127</sup> A study on ordnance depth distribution in Lao PDR, commissioned by the NRA with UNDP support and conducted by FENIX Insight, found that the current default clearance depth of 25cm captures 97% of UXO finds.<sup>128</sup> Discussions between the NRA and operators are ongoing on whether clearance depths should be adapted in certain contexts, in order to balance increased productivity with appropriate levels of risk.

The NRA is exploring better use of existing data, including analysis of US bomb data, to maximise clearance outputs. This is especially pertinent in Xiengkhouang province where levels of contamination have meant that identifying individual CHAs has been challenging and where massive contamination has led to the identification of “never-ending” CHAs. Close examination of data may mean that resources dedicated to CMRS could go straight to clearance, potentially hastening clearance outputs and reducing costs. The NRA, together with Tetra Tech, was considering this concept at the time of writing.<sup>129</sup>

111 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; Per Håkon Breivik, NPA, 18 July 2025; and William Hunter, HALO, 16 July 2025.

112 2019 Article 4 deadline Extension Request, Part B, Detailed Narrative, p. 18.

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

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

115 Email from Viengdalat Somphet, NRA, 29 July 2025.

116 Email from Viengdalat Somphet, NRA, 17 June 2025.

117 2019 Article 4 deadline Extension Request, Executive Summary, p. 2; and Part B, Detailed Narrative, p. 9.

118 NRA, draft “Lao PDR UXO Survey Procedures”, 20 September 2017; and emails from Cameron Imber, HALO, 11 June 2017; Rebecca Letven, MAG, 18 June 2017; and Katherine Harrison, NPA, 18 June 2017.

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

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

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

122 Email from Viengdalat Somphet, NRA, 29 July 2025.

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

124 Interview with Neil Arnold, MAG, Phonsavan, 6 May 2018; and email from Eli Mechanic, MAG, 10 July 2025.

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

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

127 2019 Article 4 deadline Extension Request, Part B, Detailed Narrative, p. 17.

128 FENIX Insight, “A study on ordnance depth distribution in Lao PDR”, July 2023, pp. 8 and 12.

129 2024 Article 4 deadline Extension Request, Part B, Detailed Narrative, pp. 10 and 11; and meeting between the CCM Article 4 Analysis Group and the MoFA and NRA, Geneva, 30 April 2024.

HALO did not prioritise CMRS in 2024, as a province-wide CMRS project had already been completed in Savannakhet in 2022. However, 2024 marked HALO's highest annual clearance output to date, enabling the most robust assessment yet of CMRS effectiveness. Analysis of these clearance data, combined with HALO's ongoing work using complementary methods such as bombing data analysis and desk-based reviews of wartime records, indicates that while CMRS is a valuable tool, it is insufficient on its own to identify all areas of heavy contamination in Lao PDR. Based on these findings, HALO believes the NRA's current policy to only allow CHAs to be created through CMRS is a significant limitation. This approach prevents operators from prioritising clearance based on other credible evidence and potentially leaves hazardous areas unaddressed.<sup>130</sup>

In response to the discovery of landmines during CMRS, HI developed a "clearance while surveying" (CWS) approach, to allow for safe release of cluster munition-contaminated areas in areas where random mines are reported and there is no evidence of systematic mine-laying or the presence of minefields. CWS involves the commencement of full

clearance from the evidence point.<sup>131</sup> While recognising the value of systematic CMRS for long-term planning and resource mobilisation, HI argues that CWS is faster and requires less paperwork, particularly where contamination is confirmed and clearance would ultimately cover the entire CHA, including a 50 metre buffer zone until green boxes are reached.<sup>132</sup> In remote, high-risk areas like Houaphanh, where mines and anti-handling fuzes (M83 submunitions) have been found, HI uses a CWS approach and focuses on the highest priority areas over village-wide CMRS, citing safety and efficiency as the reasons.<sup>133</sup>

HI raised concerns that during TS, when items are excavated and left behind, visible submunitions may pose risks to children and local populations. This issue was brought up during the TWG on the Technical Note for CMRS.<sup>134</sup> HALO reports destroying all items found during TS on the same day where possible, or posts staff to guard them overnight until disposal.<sup>135</sup> Other operators noted that items found are clearly marked and disposed of as soon as operationally possible, depending on the availability of explosives, typically within a few days.<sup>136</sup>

### OPERATORS AND OPERATIONAL TOOLS

Land release operations in Lao PDR are conducted by a range of implementing partners, which includes the national operator UXO Lao; international NGOs HALO, HI, MAG, and NPA; and Army Unit 58. In addition, 24 accredited clearance companies support commercial activities, such as infrastructure development and extractive industries.

In the last couple of years, survey capacity in Lao PDR has been reduced (see Table 5), and clearance capacity increased, to address a higher proportion of the CHAs already identified. NPA's survey teams are multi-skilled teams, combining NTS and TS, and are referred to as CMRS teams.<sup>137</sup>

**Table 5: Operational NTS and TS capacities deployed in 2024<sup>138</sup>**

Operator	NTS teams	Total NTS personnel	TS teams	Total TS personnel
Lao People's Army (Unit 58)	5	25	5	35
HALO*	0	0	5	55
NPA*	0	0	8	40
UXO Lao	9	36	15	105
MAG	1	5	17	136
HI	1	2	0	0
<b>Totals</b>	<b>16</b>	<b>68</b>	<b>50</b>	<b>371</b>

\* TS personnel also conduct NTS

According to Lao PDR's 2024 extension request, the average daily clearance rate is 811m<sup>2</sup> per team per day, based on an average of 13 people per team (equating to roughly 62m<sup>2</sup> per deminer) and with an average 22 working days per month.<sup>139</sup>

130 Email from William Hunter, HALO, 22 June 2025.

131 Emails from Julien Kempeneers, HI, 25 March 2020; and Yvon Le Chevanton, HI, 13 July 2024.

132 Email from Yvon Le Chevanton, HI, 8 May 2024.

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

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

135 Email from William Hunter, HALO, 19 July 2024.

136 Online interview with Aubrey Sutherland, Sasa Jelacic, and Nguyen Thi Dieu Linh, NPA, 10 July 2024; and email from Eli Mechanic, MAG, 12 July 2024.

137 Email from Per Håkon Breivik, NPA, 23 May 2025.

138 Emails from Viengdalat Somphet, NRA, 17 June 2025; Reinier Carabain, HI, 22 May 2025; Eli Mechanic, MAG, 12 June 2025; Per Håkon Breivik, NPA, 23 May 2025; and Vilaivanh Thongmanivong, UXO Lao, 27 May 2025.

139 2024 Article 4 deadline Extension Request, Annex 2.

Table 6: Operational clearance capacities deployed in 2024<sup>140</sup>

Operator	Manual teams	Total clearance personnel	Machines
Lao People's Army (Unit 58)	N/R	216	0
HALO	89	944	0
HI	1	14	0
MAG	46	368	2
NPA	42	628	1
UXO Lao	82	492	*9
<b>Totals</b>	<b>260</b>	<b>2,662</b>	<b>12</b>

\* Two cluster munition demolition machines and seven brush-cutters that support area clearance by preparing access roads and vegetation cutting where this cannot be done by hand.

HALO's survey and clearance efforts are focused on Savannakhet province. There was no notable change in the number of CMR survey or clearance personnel it deployed in 2024. HALO has reduced personnel numbers in 2025 as the US Department of State's funding stop order in early 2025 forced a complete halt to operations in February and March and necessitated the lay-off of all national staff. Although operations resumed at the end of March, HALO has not been able to rehire approximately 400 personnel. As a result, HALO anticipates maintaining a reduced capacity for the remainder of the year.<sup>141</sup>

HI is conducting survey and clearance in Phongsaly province. As of 2024–25, HI was deploying multi-task teams (MTTs) capable of conducting TS and clearance and undertaking roving tasks. In 2024, HI's clearance and survey capacity dropped due to limited/insecure funding, leading to early termination of some EOD Level 1 staff contracts. For 2025, HI planned to deploy an NTS team, a TS team, a clearance team, a roving team, and a risk education team.<sup>142</sup>

MAG is operational in Xiengkhouang province in the north and Khammouane province in the south. There was no significant change in the number of CMR survey or clearance personnel it deployed in 2024. In 2025, MAG planned to discontinue NTS in Xiengkhouang due to limited strategic value and low yield. Resources will be reallocated to strengthen clearance and risk education, which more directly support land release and community safety. Depending on the outcome of the LEAP trial, MAG may reduce the number of TS teams and focus more on clearance. The LEAP (Layered Evidential Assessment and Prioritisation) tool is a pilot initiative led by Tetra Tech, with MAG supporting implementation by providing teams for the trial. It is designed as a predictive survey approach, correlating US bombing data with evidence-point polygons to identify the likely sites of contamination. The trial will focus on Kham district in Xiengkhouang Province and aims to shift from a proactive TS methodology to a more reactive approach that enables direct clearance when appropriate. The

concept was approved by MoFA in June 2025, though further approvals will be required for use by all operators, with implementation targeted for the first quarter of 2026.<sup>143</sup>

NPA is operational in the four southern and heavily contaminated provinces of Attapeu, Champassak, Saravan, and Xekong. In 2023–24, NPA received significantly increased funding from PM/WRA to double its clearance capacity (from 20 to 40 teams). NPA is now deploying 42 BAC teams (two funded by the NMFA and the remainder by PM/WRA) with no major change to capacity expected in 2025.<sup>144</sup>

UXO Lao is fully operational in six provinces (Attapeu, Houaphanh, Khammouane, Luang Prabang, Savannakhet, and Xiengkhouang) with partial operations in Champassak, Saravan, and Xekong. Field operations in Houaphanh and Luang Prabang resumed in March 2024 following renewed PM/WRA funding. In 2024, UXO Lao increased its survey and clearance personnel compared to 2023, thanks to additional funding from the US, Japan, New Zealand, and Luxembourg. No changes were expected to the number of NTS, TS, or clearance personnel in 2025. However, overall staffing will increase with the establishment of seven EOD multi-task teams and 16 vegetation cutting teams in the six US-funded provinces, bringing total personnel to more than 1,600.<sup>145</sup> These deployments aim to boost productivity by enabling EOD teams to focus on clearance, while dedicated vegetation-cutting teams handle site preparation.<sup>146</sup>

The Lao armed forces' Unit 58 humanitarian demining capacity has expanded significantly since 2023, with a total of 227 personnel as at June 2025, including 18 women, operating across various mine action tasks. The capacity includes 10 clearance teams totalling 130 deminers; 5 TS teams totalling 35 deminers; and 5 risk education/NTS teams totalling 25 deminers.<sup>147</sup> This is directly in line with the plans set out in the 2024 extension request to expand Unit 58 to a total of 20 clearance, survey, and risk education teams.<sup>148</sup> The NRA considers Unit 58 a valuable asset, operating in line with

140 Emails from Viengdalat Somphet, NRA, 17 June 2025; William Hunter, HALO, 30 May 2024; Reinier Carabain, HI, 22 May 2025; Eli Mechanic, MAG, 12 June 2025; Per Håkon Breivik, NPA, 23 May 2025; and Vilaivanh Thongmanivong, UXO Lao, 27 May 2025.

141 Email from William Hunter, HALO, 22 June 2025.

142 Email from Reinier Carabain, HI, 22 May 2025.

143 Emails from Eli Mechanic, MAG, 12 June and 10 July 2025.

144 Email from Per Håkon Breivik, NPA, 23 May 2025.

145 Email from Vilaivanh Thongmanivong, UXO Lao, 27 May 2025.

146 Email from Olivier Bauduin, US Embassy Vientiane, 4 August 2025.

147 Email from Viengdalat Somphet, NRA, 17 June 2025.

148 2024 Article 4 deadline Extension Request, Part B, Detailed Narrative, p. 22.



national and international standards, with good coordination between the army and the NRA. The army is also being trained in the use of IMSMA.

Lao Army teams (completely separate to the humanitarian “Army 58” teams) and not coordinated by the NRA, started UXO clearance in 2017 to enable construction work on the US\$6 billion Lao-China high-speed railway to proceed safely.<sup>149</sup> According to an online media source, since 2018, specialists from the International Mine Action Center (IMAC) of the Russian Armed Forces have been clearing UXO in Lao PDR, and have surveyed 0.17km<sup>2</sup> and cleared 2,300 items of explosive ordnance. From November 2024 to February 2025, Lao and Russian military personnel cleared nearly 0.16km<sup>2</sup> of land and destroyed 285 items of UXO in Viengxay district of Houaphanh Province.<sup>150</sup>

Operators have consistently been refused permission to use drones in their survey, clearance, and EOD operations.<sup>151</sup> The lack of permission, which reportedly originates from

high levels within the Government of Lao PDR, is due to a cross-ministerial process and is beyond the control of the NRA.<sup>152</sup> Under the Lao Civil Aviation Regulation issued by the Department of Civil Aviation, Ministry of Public Works and Transportation (MoPWT), there is a specific regulation for drones operated for recreation, leisure, or sport. In addition, the relevant party must have clearance from other relevant ministries for aerial photography, overflights of security-sensitive areas, use of radio frequencies, and other related activities, including permission from local authorities, among others. For any other purpose, such as mine action, operators must follow the approval process according to the intended use, specific requirements, and applicable laws and regulations.<sup>153</sup> In 2024, HALO collaborated with owners of private drones in Savannakhet province, which proved valuable for preparing complex EOD tasks. HALO is also exploring a drone pilot project in partnership with the NRA, although sufficient funding has not yet been secured.<sup>154</sup>

DEMINER SAFETY

On 21 February 2024, a UXO (BLU-24)-related accident occurred during a team break at one of the NPA clearance tasks, resulting in one amputation and one serious injury. A joint investigation by NPA and NRA was conducted. A follow-up internal investigation was also conducted by NPA Head of Global Operations and an NPA Global Special Advisor. The findings and recommendations by the NPA Head Office team were shared and discussed with all NPA programmes and with the donors.<sup>155</sup>

LAND RELEASE OUTPUTS AND ARTICLE 4 COMPLIANCE

LAND RELEASE OUTPUTS IN 2024

Table 7: Land release outputs in 2024 (based on NRA data)

Release of cluster munition-contaminated area	Release in 2024 (km <sup>2</sup> )	Comments
Clearance	*71.70	NRA data (excluding commercial clearance not deemed to be CMR clearance)
Technical survey	0	NTS and TS focus on creation of CHAs as part of CMRS.
Non-technical survey	0	
Destruction of submunitions during clearance, survey, and spot tasks	2024	Comments
Submunitions destroyed	71,106	NRA data. Includes 34,485 destroyed during spot tasks and 11,709 destroyed during TS.

\* Excludes commercial clearance in 2024 in which few or no submunitions were found, as Mine Action Review does not deem this to be CMR clearance. For commercial clearance by LXML in 2024, Mine Action Review has estimated the size of cluster munition-contaminated area cleared by LXML based on the number of submunitions it destroyed and the average area cleared per submunition calculated based on humanitarian operator clearance data for 2024.

149 S. 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.  
150 “Russia, Laos Clear Over 285 Unexploded Ordnance in Past Three Months”, The Laotian Times, 20 February 2025, at: <http://bit.ly/4np5wv8>.  
151 Emails from William Hunter, HALO, 30 May 2024; Yvon Le Chevanton, HI, 8 May 2024; Aubrey Sutherland, NPA, 18 May 2024; and Email from Reinier Carabain, HI, 22 May 2025.  
152 Email from Katherine Harrison, MAG, 8 May 2024.  
153 Email from Viengdalat Somphet, NRA, 8 August 2025.  
154 Email from William Hunter, HALO, 22 June 2025.  
155 Email from Per Håkon Breivik, NPA, 23 May 2025.



## SURVEY IN 2024

According to the NRA data reported to Mine Action Review, a total of more than 331km<sup>2</sup> of CHA containing CMR was identified in 2024 (see Table 8).<sup>156</sup> This is up from the 238km<sup>2</sup> identified in 2023.<sup>157</sup>

**Table 8: Technical survey of cluster munition-contaminated area in 2024 (based on NRA data)<sup>158</sup>**

Operator	Area surveyed (m <sup>2</sup> )	Area identified (m <sup>2</sup> )	Submunitions destroyed	Other UXO destroyed	Mines destroyed
Army Unit 58	13,365,100	4,002,000	316	22	0
HALO	5,047,500	1,335,484	324	258	0
MAG	261,014,404	260,628,515	4,241	30	0
NPA	9,969,500	2,494,501	421	19	0
UXO Lao	86,958,908	62,931,323	6,407	1,267	1
<b>Totals</b>	<b>376,355,412</b>	<b>331,391,823</b>	<b>11,709</b>	<b>1,596</b>	<b>1</b>

According to Lao PDR's Convention on Certain Conventional Weapons (CCW) Protocol V transparency report, a total of more than 328km<sup>2</sup> of CHA containing CMR was identified in 2024 across 12 provinces.<sup>159</sup> This is an increase from 2023 when 206.68km<sup>2</sup> of CHA was identified in 2023 across 11 provinces.<sup>160</sup> According to the data reported to Mine Action Review by humanitarian clearance operators (except for Unit 58), nearly 332km<sup>2</sup> of CHA containing CMR was identified in 2024.<sup>161</sup>

## CLEARANCE IN 2024

According to the data reported to Mine Action Review by the NRA, a total of more than 75.2km<sup>2</sup> of cluster munition-contaminated area was cleared in 2024, of which nearly 70.1km<sup>2</sup> was agricultural land and the remainder was cleared for other development projects (see Table 9).

However, the 75.2km<sup>2</sup> includes commercial clearance. Commercial clearance, unlike humanitarian clearance, tends to involve clearance of land in which no or very few submunitions are destroyed. It 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. Of the almost 4km<sup>2</sup> of commercial clearance in 2024, 1,133,287m<sup>2</sup> was cleared by Milsearch during which 63 items of UXO but no submunitions were discovered, and 608,523m<sup>2</sup> was cleared by OUMMA during which only 2 items of UXO were discovered, one of which was a submunition. Mine Action Review does not deem the clearance conducted by Milsearch and OUMMA in 2024, to

have been of cluster munition-contaminated area. The 4km<sup>2</sup> of commercial clearance also included 2,235,888m<sup>2</sup> cleared by LXML, during which 673 items of UXO were discovered, of which 292 items were submunitions. Based on the number of submunitions it destroyed and the average area cleared per submunition calculated based on humanitarian operator clearance data in 2024, Mine Action Review has estimated that 482,676m<sup>2</sup> of the total area cleared by LXML in 2024, was of CMR-contaminated area. This brings the annual total of clearance of all cluster munition-contaminated area in 2024 to 71,704,052m<sup>2</sup> (71.7km<sup>2</sup>), which is the 2024 clearance total Mine Action Review has used.

During the year, a total of 71,106 submunitions were destroyed, of which 34,485 were destroyed during spot tasks, together with a large number of items of UXO and a small number of anti-personnel mines.<sup>162</sup> This is an increase from the more than 56.67km<sup>2</sup> cleared in 2023 with 58,382 submunitions found and destroyed.<sup>163</sup>

**Table 9: CMR clearance by province in 2024 (NRA data, including commercial clearance)<sup>164</sup>**

Province	Area cleared (m <sup>2</sup> )	Submunitions destroyed during clearance, TS and spot tasks	UXO destroyed	AP mines destroyed
Attapeu	6,894,022	5,227	207	1
Bolikhamxai	1,237,349	830	253	5
Champassak	2,407,578	3,682	1,154	3
Houaphanh	894,119	1,907	970	3

<sup>156</sup> Email from Viengdalat Somphet, NRA, 17 June 2025.

<sup>157</sup> Email from Chanmy Keodara, NRA, 13 July 2024.

<sup>158</sup> Email from Viengdalat Somphet, NRA, 17 June 2025.

<sup>159</sup> CCW Protocol V Article 10 Report (covering 2024), Form A.

<sup>160</sup> CCW Protocol V Article 10 Report (covering 2023), Form A.

<sup>161</sup> Emails from Reinier Carabain, HI, 22 May 2025; Eli Mechanic, MAG, 12 June 2025; Per Håkon Breivik, NPA, 23 May 2025; Vilaivanh Thongmanivong, UXO Lao, 27 May 2025; and William Hunter, HALO, 22 June 2025.

<sup>162</sup> Email from Viengdalat Somphet, NRA, 1 July 2025.

<sup>163</sup> Email from Chanmy Keodara, NRA, 13 July 2024.

<sup>164</sup> Email from Viengdalat Somphet, NRA, 1 July 2025.

Table 9 continued

Province	Area cleared (m <sup>2</sup> )	Submunitions destroyed during clearance, TS and spot tasks	UXO destroyed	AP mines destroyed
Khammouane	3,674,051	6,776	2,089	5
Luang Prabang	1,379,259	2,734	785	1
Oudomxay	249,667	1	1	0
Phongsaly	161,528	308	174	0
Saravan	7,799,180	7,795	1,070	2
Savannakhet	21,538,610	15,047	9,842	24
Vientiane	457,187	126	661	0
Vientiane Capital	0	0	16	0
Xaisomboun	1,094,957	273	241	0
Xekong	5,268,229	7,917	745	4
Xiengkhouang	22,143,338	18,483	7,764	9
Totals	75,199,074	71,106	25,972	57

According to Lao PDR's Article 7 report and CCW Protocol V report, in 2024 a total of more than almost 75.20km<sup>2</sup> of cluster munition-contaminated area was cleared across 15 provinces (see Table 10). Of the total, 93% was for agricultural use and 7% for development projects. A total of 71,106 submunitions were destroyed during clearance, TS and spot tasks, along with 26,972 items of other UXO and 57 mines.<sup>165</sup> This is a significant increase from the 61.9km<sup>2</sup> of area cleared in 2023 with 58,735 submunitions found and destroyed.<sup>166</sup>

A total of 71.93km<sup>2</sup> of cluster munition-contaminated area was reported as cleared by operators in 2024 (except for Army Unit 58), with 43,527 submunitions found and destroyed and 24,275 destroyed during spot tasks (see Table 11).<sup>167</sup>

Table 10: CMR clearance by province in 2024 (Article 7 data)<sup>168</sup>

Province	Area cleared (m <sup>2</sup> )
Attapeu	6,894,022
Bolikhambai	1,237,349
Champasak	2,407,578
Houaphanh	894,119
Khammouane	3,674,051
Luang Prabang	1,379,259
Oudomxay	249,667
Phongsaly	161,528
Salavah	7,799,180
Savannakhet	21,438,013
Vientiane	457,187
Xaisomboun	1,094,957
Sekong	5,268,229
Xiengkhouang	22,075,924
Total	75,031,063

165 Article 7 Report (covering 2024), Form F; CCW Protocol V Article 10 Report (covering 2024), Form A; and email from Viengdalat Somphet, NRA, 4 August 2025.

166 Article 7 Report (covering 2023), Form F. The total of the clearance table in that Article 7 report is 62,096,837m<sup>2</sup>, but the sum of the individual lines comes to 61,904,288m<sup>2</sup>.

167 Emails from Reinier Carabain, HI, 22 May 2025; Eli Mechanic, MAG, 12 June 2025; Per Håkon Breivik, NPA, 23 May 2025; Vilaivanh Thongmanivong, UXO Lao, 27 May 2025; and William Hunter, HALO, 22 June 2025.

168 Article 7 Report (covering 2024), Form F.

Table 11: CMR clearance reported by operator in 2024 (operator data)<sup>169</sup>

Operator	Areas cleared	Area cleared (m <sup>2</sup> )	Submunitions destroyed	Submunitions destroyed in spot tasks	UXO destroyed	AP mines destroyed
HALO	374	16,827,278	8,871	1,820	8,257	0
HI	63	177,496	294	14	0	142
MAG	415	16,919,119	3,988	8,430	0	889
NPA	123	11,200,542	9,860	2,306	406	1
UXO Lao	950	26,809,459	20,514	11,705	2	7,104
<b>Totals</b>	<b>1,925</b>	<b>71,933,894</b>	<b>43,527</b>	<b>24,275</b>	<b>8,665</b>	<b>8,136</b>

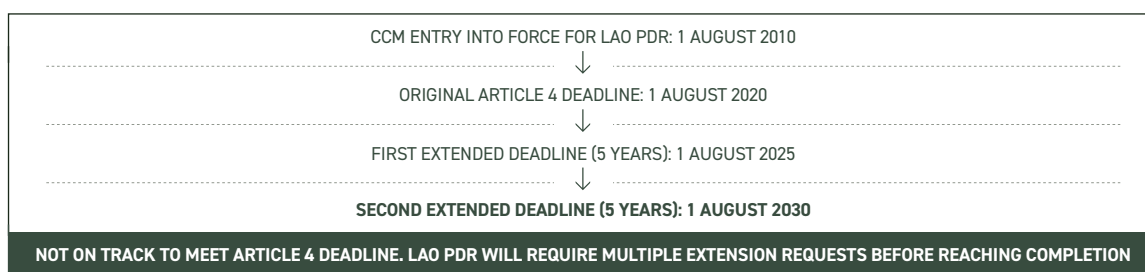
Of the CMR clearance recorded for 2024, 6.6km<sup>2</sup>—almost 10% of the total—was of land where no submunitions were found (see Table 12).

Table 12: Area cleared in 2024 in which no submunitions were found (operator data)

Operator	Area cleared (m <sup>2</sup> )	Comments
NPA	411,972	Poor survey and/or task planning.
MAG	4,211,459	113,104m <sup>2</sup> was for development projects; Historically, TS was conducted very intensively before full clearance. Over the last two years, MAG has revised its methodology, introducing skip-boxing to identify CHAs more efficiently and use resources better. Much of the recent clearance without submunitions relates to TS conducted in 2019–20 before these improvements were adopted. MAG believes that the LEAP tool will further reduce the need for intensive TS.
HI	23,006	
HALO	1,956,762	As HALO typically create CHAs after TS, it sometimes includes areas where all CMR have already been found and destroyed, especially in the less contaminated western parts of Savannakhet province. In some cases, CHAs sit in the database for years before clearance, during which time land use can change. Locals may plough fields and remove items themselves, as suspected in some areas following extensive cassava planting in 2024. Development sites also often have minimal contamination.
<b>Total</b>	<b>6,603,199</b>	

NPA, UXO Lao, and HALO both increased clearance output from 2023 to 2024 due to increased operational capacity.<sup>170</sup> There was no significant difference from 2023 to 2024 for MAG, while for HI clearance output dropped due to a reduction in capacity.<sup>171</sup>

## ARTICLE 4 DEADLINE AND COMPLIANCE



<sup>169</sup> Emails from Reinier Carabain, HI, 22 May 2025; Eli Mechanic, MAG, 12 June 2025; Per Håkon Breivik, NPA, 23 May 2025; Vilaivanh Thongmanivong, UXO Lao, 27 May 2025; and William Hunter, HALO, 22 June 2025.

<sup>170</sup> Emails from Per Håkon Breivik, NPA, 23 May 2025; Vilaivanh Thongmanivong, UXO Lao, 27 May 2025; and William Hunter, HALO, 22 June 2025.

<sup>171</sup> Emails from Eli Mechanic, MAG, 12 June 2025; and Reinier Carabain, HI, 22 May 2025.

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 2030. Due to the massive extent of CMR contamination, and based on current capacity and output, Lao PDR will require multiple extensions to fulfil its Article 4 obligations.

There was a 39% increase in the amount of area identified through TS from 2023 to 2024 and a 12% increase in clearance output due to greater capacities in Army Unit 58, UXO Lao, and NPA. This was largely due to increased US funding to support the Lao government's strategic plan to clear more high-priority CHAs.<sup>172</sup> In Lao PDR's 2024 Article 4 deadline extension request, an annual clearance target of 65km<sup>2</sup> has been set, which should be achievable if the upward trajectory of clearance output can be maintained (see Table 13). However, as the rate in which land is currently being confirmed as contaminated through CMRS is far quicker than the rate of clearance of the CHA identified, and the baseline will continue to increase. The NRA has said that it will take decades of clearance, based on current clearance capacity output.<sup>173</sup>

While the introduction of CMRS has significantly improved the efficiency of land release, challenges remain. A more flexible, evidence-based approach could help accelerate progress. For example, nearly 4.65km<sup>2</sup> of land was cleared in 2024 with no contamination found, raising questions about the efficiency of current land release methods. MAG has proposed revising the land release process to allow for NTS-Clearance without requiring TS intervention where there is strong evidence of cluster munition contamination. The LEAP tool, developed by Tetra Tech, could be an important step forward in supporting this approach in Lao.<sup>174</sup> However, while acknowledging the potential for a more flexible approach, the NRA maintains that the full NTS-TS-Clearance process is necessary to protect against liability, questioning who would be accountable if an accident occurred on land released after NTS without TS. Nonetheless, the NRA has indicated willingness to engage with UXO operators in the coming year to explore ways to make the land release process more efficient.<sup>175</sup>

PLANNING FOR MANAGEMENT OF RESIDUAL CONTAMINATION

Lao PDR is still determining the extent of its baseline of CMR contamination and is many decades from fulfilling its Article 4 obligations. The GICHD believes the NRA would benefit from a strategic approach to preparing for transition to a more reactive phase, and ultimately for completion. The GICHD organised a regional workshop in south-east Asia in 2023 on risk management and liability in land release and the management of residual contamination.<sup>179</sup> In its 2024 Article 4 deadline extension request, Lao PDR said the government is committed to working with national capacities

An estimate of CMR contamination will not be known until the nationwide CMRS is completed,<sup>176</sup> which is still many years away and which focuses only on populated areas. In addition, much of the contamination is in remote and mountainous areas. This makes comprehensive survey efforts difficult and time-consuming, as determining the total size and location of all CMR-contaminated land in each province remains a major task.<sup>177</sup> It is a notable achievement that systematic CMRS of assigned villages has already been completed in five of the most heavily contaminated provinces in the south and good progress is also being made in Xiengkhouang. In addition, some CMRS is also being conducted to a varying, but far lesser, extent in five additional contaminated provinces, but in the four other contaminated provinces, no survey has yet been undertaken.

Lao PDR will need to continue strengthening its survey and clearance capacity in the coming years. However, the donor funding landscape remains unpredictable and, at times, insufficient to sustain the scale of operations required. Lao PDR's Article 4 deadline extension work plan to 2030 continues to depend heavily on external support, with an estimated US\$45 million needed annually, totalling approximately US\$225 million, for activities such as risk education, survey, and clearance.<sup>178</sup>

Table 13: Five-year summary of CMR clearance\*

Year	Area cleared (km <sup>2</sup> )
2024	71.70
2023	56.67
2022	50.72
2021	46.68
2020	42.90
Total	268.67

\* Excluding commercial clearance

to develop long-term solutions to residual contamination, most notably deployment of the clearance capacity of Army Unit 58.<sup>180</sup> In 2025, the NRA reported to Mine Action Review that the government has prioritised investment in Army Unit 58 and that its capacity has expanded with UNDP providing capacity building support to ensure long-term sustainability.<sup>181</sup>

172 Email from Olivier Bauduin, US Embassy Vientiane, 13 July 2022.  
173 2024 Article 4 deadline Extension Request 2024, Part B, Detailed Narrative, p. 22.  
174 Email from Eli Mechanic, MAG, 17 July 2025.  
175 Email from Viengdalat Somphet, NRA, 8 August 2025.  
176 Interview with Phoukhieo Chanthasomboune, NRA, Vientiane, 2 May 2018.  
177 Email from Viengdalat Somphet, NRA, 17 June 2025.  
178 Ibid.  
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