Part B. Detailed Narrative for the CCM Article 4 Extension Request

1. Overview of cluster munitions contamination in Lao PDR

Lao PDR has the distinction of being one of the most heavily bombed nations in the world. From 1964 to 1973, during the period known by the Lao people as the Indochina war, Lao PDR suffered the heaviest aerial bombardment in world history. During this period, more than 500,000 bombing missions dropped over two million tons of ordnance, or nearly one ton for every man, woman and child at the time. Among those, more than 270 million cluster submunitions (known locally as bombies) were dropped with the intention to explode on or shortly after impact, but the failure rate may have been as high as 30 percent. The National UXO Socio-Economic Impact Survey conducted in 1996-97 found that 86 of the 133 districts in 15 of the 18 provinces in the country includes Phongsaly, Luangnamtha, Bokeo, Oudomxay, Luangprabang, Xiengkhuang, Houaphan, Xaysombun, Vientiane province, Vientiane Capital, Bolikhamxay, Khammouane, Savannakhet, Salavan, Champasak, Sekong and Attapeu (about 25 percent of all villages of the country) have been contaminated by UXO, with nine provinces heavily affected namely: Attapeu, Champasak, Houaphanh, Khammouane, Luang Prabang, Saravan, Savannakhet, Xekong, and Xiengkhuang. Cluster sub-munitions are said to be the type of explosive remnants of war (ERW) most feared by the people. Extensive contamination from other ERW includes 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 munitions in Lao PDR. These range from 20lb fragmentation bombs to 3,000lb general purpose bombs, as well as artillery shells, grenades, mortars, and rockets. These explosive ordnances have the most sensitive fuses and therefore are most likely to be initiated accidentally. UXO has unique characteristics making it extremely difficult to remove, particularly UXO can be sensitive and prone to detonation when people interfere with UXO either accidentally or deliberately. It may randomly explode and cause death or serious injury. UXO may be clearly visible on the surface, or hidden in undergrowth, and buried beneath the ground. It comes in diverse forms and presents diverse risks that make UXO very unpredictable.

Lao PDR does not yet have a reliable estimate of cluster munitions contamination. However, from 2011 to 2014, UXO/Mine Action sector in the Lao PDR has developed and tested survey and clearance methodology in three provinces namely Saravan, Sekong and Attapue. In 2015, the sector has improved the methodology and proposed to the National Steering Committee. Then the proposal has been adopted into the National Standards and all operators has implemented nationwide. From 2014-2018, UXO/Mine Action operators in Lao PDR, namely UXO Lao, Humanitarian teams of Lao People's Army, NPA, MAG, Halo Trust and HI, have conducted the NTS and TS in 10 UXO contaminated the NTS and TS in 10 UXO contaminated provinces such as Bolikhamxay, Khammouane, Savannakhet, Salavan, Champasak, Sekong and Attapeu provinces. Non-Technical Survey has been conducted in 1,558 villages. TS has been conducted in 1,217 villages which has CHA of 9,284 CHAs in 85,829 Ha. In 2016 it embarked on plans for a nationwide Cluster Munitions Survey that should produce an evidence-based assessment of the extent of Cluster Munitions contamination. UXO remains a challenge for the development progress in Lao PDR. An estimated 80 million cluster sub-munitions remain unexploded at the end of the war. UXO limits safe access to land for agriculture and other development projects. It makes the construction of schools, hospitals,

water supply facilities and other much more costly. For this reason, the Lao PDR adopted its own national Millennium Development Goal 9 (2010-2015) and subsequently Sustainable Development Goal 18 "Lives Safe from UXO" in 2016, to remove the UXO obstacle to national development.



2. Duration of the proposed extension (time requested, risks and assumptions)

- Lao PDR is the second signatory of the Convention on Cluster Munitions which signed the Convention on 3rd December 2008 and ratified on 18th March 2009. Lao PDR hosted the First Meeting of State Parties (1 MSP) in 2010, where the State Parties adopted the Vientiane Declaration and Vientiane Action Place (2011-2015). This has become as the road map for State Parties to implement the CCM.
- According to CCM Article 4 the deadline is 1stAugust 2020.
- Past experience proved that survey and clearance are difficult, complicate tasks and time consuming. With current capacity and resources available, the clearance capacity rate in Lao PDR is about 5.000 hectares per year on average.
- More than 8,000 square kilometers are believed to be cluster munition contaminated area. Practically, when conducting survey and clearance, the team operate in a non-discriminated manner especially before the adoption of the new Survey and Clearance Procedure (before 2014).
- Funding gaps remain prevalent for UXO sector which often disrupt the operation.
- Based on the scale of Cluster munitions contamination and the clearance capacity rate since 2010, to clear all known UXO contamination within the 2020 deadline is unrealistic.
- During the Eighth Meeting of States Parties (CCM8MSP) in September 2018, Lao PDR stated that it would not be able to comply with the 2020 deadline and therefore would need to request an extension.
- Lao PDR submits an Article 4 Extension Request for five years.
- The new Survey Procedures and Clearance require sustainable resources
- Increased sector coordination is essential due to the risk that remaining needs are not addressed. Better identified needs, more effective methodologies, robust information management and increased coordination should enable to increase the international support to address the cluster munitions / UXO issue in the Lao PDR.
- Prior to 2014 all UXO operators in Lao PDR carried out general survey on areas for clearance and UXOs for roving tasks based on requests and reports from villagers. Therefore, the number of UXOs found per hectare cleared was quite low. In 2015 UXO operators in Lao PDR changed to the Cluster Munitions Evidence Based Survey Operations and began with the non-technical and technical surveys in 6 affected provinces. In 2017, the UXO Sector in Lao PDR has reviewed the initial work in non-technical and technical survey in order to determine how to improve the methodology and procedures. The sector has determined that expanding the use of the Information Management System for Mine Action (IMSMA) to support survey planning and the review of all historical operational data, electronic and paper, will ensure that non-technical survey will be followed by a robust technical survey operation. As a result, this process should reduce the number of follow-up visits to villages after survey is concluded and provide a sound and reasonable quantification of the contamination in Lao PDR.

SWOT Analysis for Risk and Assumption

Strengths:

- Strong political will and high level of commitment from the Government of Lao PDR.
- Lao PDR is the second signatory to the Convention on Cluster Munitions (CCM) and is a dedicated member of the CCM. Lao PDR hosted the First Meeting of State Parties (1 MSP) in 2010, where the State Parties adopted the Vientiane Declaration and Vientiane Action Place (2011-2015). This has become as the road map for State Parties to implement the CCM.
- Lao PDR has concreted national policies covering UXO/Mine Action operations such as Prime Minister Decree on the Organization and operations of the National Regulatory Authority for UXO in Lao PDR, No. 67/PM, date 12 February 2018; a robust National Strategic Plan for the UXO Sector 2011-2020 "The Safe Path Forward II"; National Strategy for the UXO sector until 2020. Six of the key objectives for this policy are:
 - 1. Reduce the number of UXO casualties from 300 to less than 75 per year.
 - 2. Ensure that the medical and rehabilitation needs of all UXO Survivors are met in line with Treaty obligations.
 - 3. Release priority land and clear UXO in accordance with National Standards and Treaty obligations.
 - 4. Ensure effective leadership, coordination and implementation of the national programme.
 - 5. Establish a sustainable national capacity fully integrated into the regular set-up of the Government.
 - 6. Meet international Treaty obligations.
- Further commitment was indicated by the adoption of Lao National Millennium Development Goals (MDG 9 from 2010-2015) and the sequential Sustainable Development Goals (SDG 18: Lives Safe from UXO). Moreover, the 8th National Socio-Economic Development Plan also reflects the importance of UXO clearance for realizing the country development targets.
- The Annual Round Table Process composes of UXO Sector Working Group (SWG) where it brings key stakeholders to share information and enhance coordination and resource mobilization.
- Many UXO/Mine Action Operators acquire high experienced personnel especially National Operator (UXO-Lao) where most of them started working since 1996.

Weaknesses:

- The need for regular equipment replacement burdens the operation cost.
- Funding gaps remain prevalent for UXO sector which often disrupt the operation.
- The limit international awareness on UXO contamination in Lao PDR.
- Unsustainable funding (depends heavily on ODA).
- Gaps in distribution of funding among Clearance, Risk Education and Victim Assistant remains high.
- Capacity building on Monitoring System and data management need to be strengthened to prevent data errors on IMSMA and data quality re-check.

Opportunities:

• With advance technology, innovative methods and strategies, the UXO survey and clearance operation would accelerate the progress to meet the CCM obligations.

- Networking opportunities at international fora enhances partnership with wider stakeholders and allows more resource mobilization as gaining global awareness on the impact of UXO.
- Engage UXO/Mine action with private sector will have more chance to implement the CCM article 4 productively.

Official and reliable funding mobilization mechanism could be established in the future to help with campaigning and attract more donors in all sectors.

Threats:

- Recently, the number of donors has been decreasing. International contribution tends to slowdown especially UXO sector funding where most of annual received funding and implementing plan is unbalanced.
- There is possibility to loss UXO/Mine action skilled personnel due to the constant pause of hiring when the UXO survey or clearance project faces unpredictable funding program. Training for these personnel can take approximately 4-8 weeks.
- The sudden shortage of funding for the national operator (UXO Lao)

3. Extent of the contamination with cluster munitions

The National UXO Socio-Economic Impact Survey conducted in 1996-97 found that 86 of the 133 districts in 15 of the 18 provinces in the country (about 25 percent of all villages) have been contaminated by UXO include Phongsaly, Luangnamtha, Bokeo, Oudomxay, Luangprabang, Xiengkhuang, Houaphan, Xaysomboun, Vientiane province, Vientiane Capatital, Bolikhamxay, Khammouane, Savannakhet, Salavan, Champasak, Sekong and Attapeu, with nine provinces heavily affected namely: Attapeu, Champasak, Houaphanh, Khammouane, Luang Prabang, Salavan, Savannakhet, Xekong, and Xiengkhuang. Total areas estimated to be contaminated by cluster munitions is not possible to identified due to the nature of Unexploded Ordnance. The initial estimate of land contaminated by cluster munitions is approximately 847,000 ha (8,470 Km2), **but the ongoing survey efforts will confirm the actual extent of the cluster munitions contamination**.

(SOME OF UXOS TYPES CONTAMINATED IN LAO PDR)

BLU 26

BLU 3B

BLU 61







Big bombs weigh between 100 to 3,000 pounds

Mortars





4. Rationale and resource mobilization.

With the sector's current resources and survey and release practices, the progress towards reaching a residual level of contamination as provided for in the CCM is decades away. Faster survey and area clearance would ensure greater numbers of people living in rural and poor areas would be free from fear of UXO. In this context, most international operators accept that Lao PDR is a special case in respect to the sheer volume and spread of contamination.

UXO clearance in Lao PDR has received technical and financial support from the government of Lao PDR, UNDP and international donors, such as Australia, Belgium, Canada, China, European Union, Ireland, Japan, Korea, Luxembourg, Norway, New Zealand, Switzerland, Thailand, the United States of America and United Kingdom with the total of 260,000,000 US Dollars from 2010-2017. However, funding at present remains relatively limited compared to the identified needs and is often unpredictable and provided on a short-term basis. As the task of survey and clearance is a costly and time-consuming process, it is necessary to receive the concerted efforts from all stakeholders.

In order to fulfill CCM obligations, sufficient human, technical and financial resources are required. The maintenance and upgrading of the Information Management systems is crucial to ensure quality, credibility, and transparency. The volume of data increases in a significant manner with the increased survey efforts.

Since 1994, the government of the Lao PDR in partnership with UNDP and other development partners have set fund-raising mechanism through various channels namely bilateral, multilateral, international non-government organizations, public and private sectors domestically and internationally. This included the establishing of UNDP trust fund program where all contributed fund has been administrated and monitored by UNDP. In the future, the Lao government will continue to work closely with all development partners to raise fund through multi channels and set up "UXO/Mine Action Funding Program."

A key objective of the UXO Sector is to maintain the interest and the financial support from the various development partners, by keeping the existing donors satisfied with the quality of operations and the credibility of the reporting from the various operators. There are efforts to convince previous donors to the UXO Sector to come back and contribute again. The more effective methodology and much better identified needs (Confirmed Hazardous Areas) should support the resource mobilization. Upcoming funding strategies will build on these improvements, and throughout 2019 the UXO Sector will update the strategic planning and better articulate the needs.

We will also explore new approaches: engaging the private sector, the private foundations or to try new tools (for instance crowdfunding). This was expressed at the UXO Sector Working Group in November 2018. Throughout the extension period 2020-2025, we will try to diversify the sources of funding, in order to also engage with non-institutional donors.

The Government of Lao PDR will continue to raise awareness on the UXO issue and on the efforts to address the issue, through the organization of dedicated side events such as the events organized in Geneva in September 2017 and in New York in July 2018. Sustainable Development Goal 18 "Lives Safe from UXO" is a powerful tool to raise the profile and to support the funding mobilization.

The Government of Lao PDR will also approach new potential donors, such as Russia (project proposal is under development to submit to UNDP – Russia Trust Fund), China and India.

Table of funding need plan (fund per year) during extension period.

From 2020 – 2025, according to the existing capacity and equipment, the UXO operators in Lao PDR expect to have resource for conducting Non-Technical Survey in 1,463 Villages and Technical Survey in 2,873 villages, which will require financial support at least 42.5 Million US dollars.

Year	Year 1	Year 2	Year 3	Year 4	Year 5	Total
	(USD)	(USD)	(USD)	(USD)	(USD)	
NTS	0.9 M	4.5 M				
TS	7.6 M	38 M				
Total (USD)	8.5 M	42.5 M				

Cluster Munitions Clearance.

Based on the CHAs of cluster munitions identified during the TS and recorded in IMSMA, there are 9,284 CHAs, equivalent to 85,829 ha. We predict that during the extension period, the number of CHAs of cluster munitions will increase. Based on the current clearance step with an annual figure of 5,000 ha, it appears that the ratio of clearance and survey is unbalanced. Therefore, CHAs of cluster munitions will be increased in the future.

# Estima	tion 1	with e	existing	resour	ces:	

Year	1 August	Total				
	2020-31	2021-31	2022-31	2023-31	2024-31	
	July 2021	July 2022	July 2023	July 2024	July 2025	
CHA	5,000	5,000	5,000	5,000	5,000	25,000
(Ha)						
Cost	12.5 M	62.5 Million				
(USD)						USD

Estimation 2 with additional resources to meet the identified needs as of December 2018 (Identified Confirmed Hazardous Areas):

Year	1 August	1 August	1 August	1	1 August	Total
	2020-31	2021-31	2022-31	August	2024-31	
	July	July	July	2023-31	July	
	2021	2022	2023	July	2025	
				2024		
CHA	6,000	10,000	15,000	21,000	28,000	80,000
(Ha)						
Cost	15 M	25 M	37.5 M	52.5 M	70 M	200 Million USD
(USD)						

Estimation 3 with additional resources to meet the identified needs as of December 2018 and the needs (Confirmed Hazardous Areas) which will be identified in the period 2019 - 2024.

Year	1 August	1 August	1 August	1	1 August	Total
	2020-31	2021-31	2022-31	August	2024-31	
	July	July	July	2023-31	July	
	2021	2022	2023	July	2025	
				2024		
CHA	12,000	20,000	30,000	42,000	56,000	160,000
(Ha)						
Cost	30	50	75	105	140	400 Million USD
(USD)						

<u>Remark:</u> This Option 3 is a projection, the accurate number of hectares of Confirmed Hazardous Areas (to be cleared) will be the result of the upcoming survey efforts in the period from 1 August 2020- 31 July 2025.

5. The status of work conducted in past 9 years period (2010-2018).

Since the 2010 entry-into-force of the Convention on Cluster Munitions, Lao PDR has been working with all stakeholders fulfilling obligations to make progress in the area of UXO clearance and UXO/Mine risk reduction.

The number of hectares of land cleared for productive use between 2010 and 2018 by all operators was a total of 41,088 hectares. This includes all land cleared by humanitarian operators, commercial operators, and the Humanitarian Clearance Teams of the Lao People's Army.

The land cleared by the UXO sector is divided into land cleared for agriculture and land cleared for development. The majority of the area clearance tasks is for agriculture land. In fact, it results from a successful transition to more efficient methodology of UXO clearance across the country. The previous approach to clearance was based on requests, with operators responding to the requests of land users to clear their land. This meant that the focus of clearance did not necessarily reflect the highest contamination, and also meant that, due to the nature of cluster munitions incident, return visits to villages were common. This was an old

and inefficient approach in terms of removing the maximum number of hazards from contaminated areas in the least amount of time – though it did result in the clearance of many thousands of hectares of land for safe use.

The new approach, which has been included in the Lao PDR UXO Survey Procedures, is focused on evidence-based survey and the subsequent clearance of Confirmed Hazardous Areas (CHA). Since 2015, all five humanitarian clearance operators have adopted this approach.

As survey quantifies the extent of contamination in Lao PDR, there will be a need to ensure that there is early follow up clearance in priority areas. This will require a significant increase in clearance resources in order for Lao PDR to meet its obligations under Article 4 of the Convention. Cumulatively, there are 9,284 CHAs established in total by the end of 2018 or equivalent to 85,829 ha of CHAs remaining to be cleared.

The result of this survey and clearance process is that resources are directed away from the clearance of low- or no-contamination land and towards conduct clearance of cluster munitions strikes, across land boundaries where necessary. The last columns in the table below demonstrates the vast improvement in cluster munitions found per hectare cleared (CM/ha) for the period 2015-2017. The evidence-based survey procedures were officially approved early2015.

	Area Clearance and UXO destruction figures per Year, 2010-2018*										
Year	Hectares	Bombies	Bombs	Mines	Other UXO	Total	CM/ha				
2010	3,599 ha	28,744	484	193	27,290	56,711	7.9				
2011	4,668 ha	32,904	144	96	142,532	175,678	7				
2012	4,951 ha	38,840	156	55	27,688	66,739	7.8				
2013	4,457 ha	42,632	124	82	31,230	74,068	9.5				
2014	5,508 ha	38,096	194	138	22,296	60,724	6.9				
2015	3,042 ha	75,471	195	43	28,465	104,174	24.8				
2016	3,869 ha	89,919	181	25	19,899	110,024	23.2				
2017	4,800 ha	93,633	123	38	26,283	120,077	19.5				
2018	6,202 ha	78,323	147	28	18,898	97,396	12.6				
Total	41,088 ha	518,368	1,748	698	344,654	865,468					

• Note: data resource is from IMSMA database.

As noted above, most clearance by humanitarian clearance operators is for agricultural use. The result of such clearance is that land users are able to use the land that has been cleared fully and grow crops without fear of UXO accidents. Anecdotal evidence has shown that such clearance has allowed an intensified use of land, resulting in the creation of additional jobs. Agriculture remains a key sector in the economy of Lao PDR.

Cluster Munitions Destroyed

Province	QTY
Attapeu	52,248
10 LB INCENDIARY BOMB M74	2
20 LB Frag Bomb AN-M41	34
23 LB Frag Bomb	2
4 LB INCENDIARY BOMB AN-M50 & M126	87
6LB INCENDIARY AN-M69	2
BLU 17 B	34
BLU 24/66	9,501
BLU 26 B	39,312
BLU 3 B	1,966
BLU 42	490
BLU 49	34
BLU 61	28
BLU 63	510
M 38/M 40	1
M 83 4 LB Frag Bomb	93
MK 118 Rockeye	152
Bolikhamxai	6,784
10 Kg HE France	2
20 LB Frag Bomb AN-M41	10
4 LB INCENDIARY BOMB AN-M50 & M126	3
BLU 17 B	4
BLU 24/66	1,424
BLU 26 B	5,272
BLU 3 B	61
BLU 49	1
BLU 61	2
BLU 63	2
M 83 4 LB Frag Bomb	2
MK 118 Rockeye	1
Champasak	31,096
20 LB Frag Bomb AN-M41	32
4 LB INCENDIARY BOMB AN-M50 & M126	14

BLU 17 B	76
BLU 24/66	1,876
BLU 26 B	22,484
BLU 3 B	1,757
BLU 49	17
BLU 61	15
BLU 63	4,686
BLU 66	1
M 38/M 40	12
M 83 4 LB Frag Bomb	30
MK 118 Rockeye	96
Huaphanh	25,662
10 LB INCENDIARY BOMB M74	1
20 LB Frag Bomb AN-M41	26
6LB INCENDIARY AN-M69	1
BLU 17 B	3
BLU 24/66	149
BLU 26 B	24,168
BLU 3 B	1,128
BLU 42	16
BLU 61	1
BLU 7 HEAT	1
M 83	3
M 83 4 LB Frag Bomb	165
Khammouan	57,178
10 LB INCENDIARY BOMB M74	75
20 LB Frag Bomb AN-M41	209
23 LB Frag Bomb	6
4 LB INCENDIARY BOMB AN-M50 & M126	193
BLU 17 B	752
BLU 24/66	6,605
BLU 26 B	41,368
BLU 3 B	4,346
BLU 42	186
BLU 43	676
BLU 49	8
BLU 61	217
BLU 63	1,260

10 LB INCENDIARY BOMB M74	21
BLU 63 Phongsaly	1,216 36
•	
BLU 24/66	1
BLU 26 B	12
BLU 3 B	2
Salavan	53,798
10 LB INCENDIARY BOMB M74	4
20 LB Frag Bomb AN-M41	41
23 LB Frag Bomb	3
4 LB INCENDIARY BOMB AN-M50 & M126	279
BLU 17 B	148
BLU 24/66	7,204
BLU 26 B	36,677
BLU 3 B	1,681
BLU 42	21
BLU 45	1
BLU 49	96
BLU 61	533
BLU 63	6,421
BLU 66	127
M 38/M 40	5
M 83 4 LB Frag Bomb	131
MK 118 Rockeye	426
Savannakhet	93,193
10 LB INCENDIARY BOMB M74	144

20 LB Frag Bomb AN-M41	478
23 LB Frag Bomb	134
4 LB INCENDIARY BOMB AN-M50 & M126	423
6LB INCENDIARY AN-M69	6
BLU 17 B	1,166
BLU 24/66	13,746
BLU 26 B	67,493
BLU 3 B	3,333
BLU 42	428
BLU 43	429
BLU 45	26
BLU 49	11
BLU 61	382
BLU 63	2,477
BLU 66	130
BLU 7 HEAT	1
M 38/M 40	14
M 83	1
M 83 4 LB Frag Bomb	1,355
MK 118 Rockeye	1,016
Xaisomboun	267
10 LB INCENDIARY BOMB M74	1
20 LB Frag Bomb AN-M41	8
BLU 17 B	1
BLU 24/66	116
BLU 26 B	135
BLU 3 B	5
Bomblet	1
Xekong	35,058
10 LB INCENDIARY BOMB M74	1
20 LB Frag Bomb AN-M41	13
4 LB INCENDIARY BOMB AN-M50 & M126	163
BLU 17 B	206
BLU 24/66	2,922
BLU 26 B	28,065
BLU 3 B	1,185
BLU 42	1,458
BLU 49	2

BLU 61	241
BLU 63	530
BLU 66	11
BLU 7 HEAT	1
M 83 4 LB Frag Bomb	18
MK 118 Rockeye	242
Xiengkhuang	146,276
10 LB INCENDIARY BOMB M74	8
20 LB Frag Bomb AN-M41	245
23 LB Frag Bomb	3
4 LB INCENDIARY BOMB AN-M50 & M126	267
6LB INCENDIARY AN-M69	20
BLU 17 B	203
BLU 24/66	3,655
BLU 26 B	117,096
BLU 3 B	1,361
BLU 42	150
BLU 43	9
BLU 45	22
BLU 49	79
BLU 61	575
BLU 63	22,104
BLU 66	15
Bomblet	3
M 83 4 LB Frag Bomb	348
MK 118 Rockeye	113
Grand Total	518,368

5.1 Victim Assistance:

The number of casualties was generally maintained well below the target of <75 per year as set in the national sector strategy *Safe Path Forward II (2011-2020)*. The overall casualty figures (including injuries and deaths) were 99 in 2011; 56 in 2012; 41 in 2013; 45 in 2014; 42 in 2015; 59 in 2016; 41 in 2017 and so far 22 in 2018 (the figure for 2018 is as of 18 February 2019). Of the total of 403 casualties during the eight years, the main causes of accidents were playing, lighting fires, and land cultivation.

The Victim Assistance Strategy in line with the Convention on Cluster Munitions was issued by the NRA in 2014, providing a framework for the future planning, delivery, coordination and monitoring of victim assistance activities. In line with the Convention on Cluster Munitions, it is understood that victims of cluster munitions include indirect victims such as the families of those who are directly injured or killed by accidents. In 2008, the total number of people injured or killed by UXO accidents was as high as 302. This high figure constitutes the peak for years in which incidents have been consistently reported. Since then, a marked drop in casualties has been witnessed, reducing by more than 85% to a low of 21 in 2018. This represents a welcome over-performance against the target of less than 75 per annum that was set by the Government of Lao PDR in its *Safe Path Forward II* strategy for 2020. The success has also led to the setting of a more ambitious target of less than 40 per annum stated in the 8th National Socio-Economic Development Plan and the UXO Sector Five Year Plan 2016-2020. The work of UXO Lao and NRA supported by UNDP and other implementing partners has contributed to this positive trend. Over the past nine years, a total of 852,102 UXO items have been destroyed, reducing the actual hazard substantially in absolute terms.

The NRA has also supported the integration of UXO risk education messages into the national school curriculum with the support of the Ministry of Education. This represents a sustainable approach to the issue that is integrated in the existing non-UXO-specific structures of the Government of Lao PDR. Additionally, the NRA has broadcasted risk education messages on radio in several provinces (5 provinces in 2018), though the impact of this broadcast has not yet been measured. Other factors also considered in contributing to the decline in casualties, include changes in the market price of scrap metal and the reduced volatility of UXO more than 40 years after being dropped. The figures for accidents and casualties between 2011 and 2018 are shown in the table below, disaggregated by gender and age group.

	UXO Accidents and Casualties in Lao PDR, 2011-2018										
Year	Accidents	Injuri	es			Deaths				Total	
rear	Accidents	Man	Boy	Woman	Girl	Man	Boy	Woman	Girl	Casualties	
2011	64	32	34	9	4	6	14	0	0	99	
2012	36	17	11	11	2	6	6	1	2	56	
2013	18	9	12	2	5	5	7	0	1	41	
2014	22	8	9	5	7	4	12	0	0	45	
2015	27	15	16	1	1	6	2	1	0	42	
2016	35	17	24	3	5	2	8	0	0	59	
2017	19	12	8	11	6	3	0	0	1	41	
2018*	16	4	8	3	5	1	1	0	0	22	

Cause of Accident	No. of Accident	Injured	Death	Total Victim
Accidentally struck by digging drainage channel	1	0	1	1
Accidentally struck by digging for agricultural or farming operations	16	14	8	22
Accidentally struck by digging house foundations	1	1	0	1
Accidentally struck by digging road or pathway	2	2	1	3
Accidentally struck by ploughing/cutting vegetation	4	3	1	4
External influence - disturbed by animal(s)	2	13	1	14
Making fire for burning rubbish	22	28	0	28
Making fire for clearing fields	25	23	3	26
Making fire for cooking	24	35	1	36

Making fire for keeping warm	30	43	5	48
Others	10	14	4	18
Tamper/intentionally handle/struck - defusing	2	1	2	3
Tamper/intentionally handle/struck - dismantling	6	4	7	11
Tamper/intentionally handle/struck - make something with device	22	32	20	52
Tamper/intentionally handle/struck - recovering scrap	3	3	1	4
Touched/moved/played with by children - accidentally stepping on	2	3	0	3
Touched/moved/played with by children - deliberately playing with	8	18	7	25
Touched/moved/played with by children - playing but unaware of UXO	26	44	15	59
Unknown	31	35	12	47
Grand Total	237	316	89	405

*Interim figure for 2018 is as 18 February 2019.

During the eight years period, more than half of those injured or killed were children. In addition, it can be noted that males, both adults and children, are far more regularly the victims of accidents than females. The Convention on Cluster Munitions also defines victims as the families and communities who are affected by the injuries or death caused to their members. In addition, the Convention on Cluster Munitions states the principle of non-discrimination towards other persons with disabilities, as reference please find in annex the Guide on Integrated Approach to Victim Assistance. This approach "ensure that as long as specific victim assistance efforts are implemented, they act as a catalyst to improve the inclusion and well-being of survivors, other persons with disabilities, indirect victims and other vulnerable groups, and ensure that broader efforts actually do reach the survivors and indirect victims amongst the beneficiaries"[1].

5.2 Methodologies:

In September 2016, the Government of Lao PDR in partnership with and support of UNDP, launched the national Sustainable Development Goal 18 "Lives Safe from UXO" *with the aim to remove the UXO obstacle to national development*. The first target of this agenda, for 2030, is to reduce the number of casualties to the lowest extent possible. The commitment of the Lao Government in achieving SDG18 ensure that the country will do its utmost in reducing the UXO impact nationwide, thus contributing to other cross-cutting Sustainable Development Goals.

^[1] Guidance on an Integrated Approach to Victim Assistance – By States for States - 2016

The new approach, which has been included in the Lao PDR UXO Survey Procedures, is focused on evidence-based survey and the subsequent clearance of Confirmed Hazardous Areas (CHA). Since 2015, all six humanitarian clearance operators (NPA, MAG, Halo Trust, Hi, UXO Lao and Humanitarian teams of Lao Army) have adopted this approach, which is detailed below.

LAO PDR SURVEY AND CLEARANCE PROCESS

STEP 1: NON-TECHNICAL SURVEY

Non-technical survey (NTS) is used to identify evidence points of explosive contamination (primarily cluster munitions in Lao PDR). This involves collecting information of explosive hazards from historical operational records and from local population.

STEP 2: TECHNICAL SURVEY

Technical survey (TS) is used to identify and map Confirmed Hazardous Areas (CHA) for future clearance. The area is divided into 50m by 50m boxes, with a grid placed over the starting evidence points. Each box is scanned with detectors for more evidence and if any items are found, the team stops and moves to the next box. The process follows the cluster munitions strike until no more evidence is found. Cluster munitions identified during this process are mapped and then destroyed. The boxes are color-coded based on the findings and the results are used to establish the CHA requiring clearance. This is the crucial step to define the extent of contamination and begin to plan operations.

STEP 3: CLEARANCE

Clearance refers to activities used to remove and/or destroy all explosive hazards from a specified area, to a specified depth. The minimum depth is 25cm, which normally captures all surface and shallow contamination. Clearance is conducted on CHAs identified through the Technical Survey. Many more cluster munitions will be found and destroyed during clearance.

Articles2 and 3 of the Lao PDR Prime Minister's decree 67/PM of 12/2/2018 on the establishment of the NRA for the UXO programme in Lao PDR details the responsibilities of the NRA and assigns the NRA to issue regulations for UXO/mine action in Lao PDR. This is the authority under which the NRA has developed and implemented the accompanying Lao PDR National UXO/Mine Action Standards (NS). These NS detail the minimum standards and requirements for all UXO/mine action conducted in Lao PDR. They conform to the requirements of relevant Lao national legislation and the International Mine Action Standards (IMAS). The NS have been developed in a participatory manner with assistance and input from the UXO/mine action community in Lao PDR. The purpose of NS is to ensure safety, efficiency and effectiveness in UXO/mine action within Lao PDR. The NS deal with the accreditation of UXO/mine action organizations, the prioritization and planning for UXO/mine action tasks, the conduct of UXO/mine action activities, the handover of released land, quality management requirements, the

training and qualification of UXO/mine action personnel, the management of UXO/mine action information, the health and safety of UXO/mine action personnel, environmental considerations and supporting and logistic activities. The NS are applicable to all UXO/mine action organizations operating in Lao PDR and organizations are to use the NS as the basis for the development of their projects and Standard Operating Procedures (SOPs). Any current SOPs that do not conform to the requirements in the NS are to be amended to do so. The NS are dynamic documents that will evolve to meet changing situations, circumstances and the introduction of new technologies and methodologies. The NS will be formally reviewed by the standards section of the NRA at least every three years to ensure they remain valid for the existing conditions and all UXO/mine action stakeholders will be invited to participate in these reviews. However, UXO/mine action organizations and other UXO/mine action stakeholders are encouraged to make recommendations for changes to the NS at any time. These recommendations are to be submitted in writing to the NRA. On receipt of such a recommendation, the NRA will circulate the recommendation to stakeholders to seek input. It will then convene a fully participatory review board to consider the recommendation and the inputs received. Amendments to the NS will then be presented to the NRA Board for final approval. Every attempt has been made to develop NS to meet the needs of UXO/mine action in Lao PDR. Should an unforeseen situation arise that is outside the scope of these standards, UXO/mine action organizations are to apply judgment and common sense in the application of NS, and where necessary, seek the advice of the NRA before implementing measures to meet the situation.

(Various type of bombs has been found)



5.3 Organizational Structure:

The national mine action operation called the Lao National Unexploded Ordnance Programme (UXO Lao) was established in 1996. All humanitarian operators of the UXO Sector were under the umbrella of UXO Lao during the period 1996-2004. The National Regulatory Authority for UXO/Mine Action Sector in Lao PDR (the NRA) was established in 2004 with the mandate to provide policy direction, accreditation and management of the UXO sector. The NRA acts as the coordinator for national and international Mine/UXO clearance operations as well as acting as the national focal point for this sector. In November 2012, the structure and operations of the NRA were adjusted to fully reflect its mandate, including the CCM, Millennium Development Goal 9 and Sustainable Development Goal 18, under the responsibility and supervision of the Ministry of Labor and Social Welfare. The NRA Board comprises of 22 members from across the government spectrum. The agreement covers its role as secretariat to the Board for the overall management and consideration of policy, planning, projects and coordination of the implementation of the national strategy for the sector for the whole country, as well as planning and coordination functions at the provincial and district levels.

The obligations under the convention relevant to the NRA are Art. 4 on Clearance and Destruction of cluster munitions remnants and risk reduction education, Art. 5 on Victim Assistance, Art. 6 on International Cooperation and Assistance, and Art. 7 regarding transparency or reporting on measures taken.

The national strategy aims to fulfill these obligations under the convention is included in the Safe Path Forward (SPF) II document covering the period 2011-2020, as approved in June 2012. The SPF II has six objectives covering the four articles of the convention relevant to the sector.

The vision for the sector is stated in the SPF II document as: "a Lao PDR free from the threat of UXO, where individuals and communities live in a safe environment contributing to development and where UXO victims are fully integrated into their societies and their needs are met."

The strategic goal is "to reduce the humanitarian and socio-economic threats posed by UXO to the point where the residual contamination and challenges can be adequately addressed by a sustainable national capacity fully integrated into the regular institutional set-up of the Government."

UXO Sector Organization Chart



6. Work plan for period of extension.

Since 2015, the survey efforts by using non-technical and technical survey methodology have already started by all five humanitarian operators, the NRA will ensure the quality of the survey results and the proper use of the end of survey report introduced in 2018.

- 6.1 Current number of projects: Survey by UXO operator (Non-Technical Survey and Technical Survey).
- ✤ Non-Technical Survey.

Based on the capacity and resources available, 25 NTS teams will serve the UXO sector in Lao PDR during the extension period. We plan to conduct the NTS in 1,463 villages known to be contaminated by cluster munitions.

Year	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Team	25	25	25	25	25	
Village	292	292	292	292	295	1,463
Cost (USD)	0.9M	0.9 M	0.9 M	0.9 M	0.9 M	4.5M

✤ Technical Survey (TS).

Technical Survey is used to identify and map Confirmed Hazardous Areas (CHA) for future clearance. This is the crucial step to define the extent of cluster munitions contamination and begin to plan operations. For the next 5 years of the extension, Lao PDR will focus on 2,873 villages known to be contaminated by cluster munitions.

Survey operators will conduct re-TS in case of new report of cluster munitions found in the future during the request extension period, as necessary.

Year	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Team	76	76	76	76	76	76
Village	466	655	723	529	500	2,873
Cost (USD)	7.6M	7.6M	7.6M	7.6M	7.6 M	38 M

<u>NOTE</u>: Detail Work Plan for Non-Technical Survey and Technical Survey – Breakdown per province see Annex 10.

Cluster Munitions Clearance.

Based on the CHAs of cluster munitions identified during the TS and recorded in IMSMA, there are 9,284 CHAs, equivalent to 85,829 ha. We predict that during the extension period, the number of CHAs of cluster munitions will continue to increase. Based on the current clearance capacity with an annual figure of 5,000 ha, it appears that the ratio of clearance and survey is unbalanced.

Year	Year 1	Year 2	Year 3	Year 4	Year 5	Total
CHA (Ha)	5,000	5,000	5,000	5,000	5,000	25,000
Cost (USD)	12.5 M	62.5 Million USD				

Estimation 1 with existing resources (as of 18 February 2019):

Estimation 2 with additional resources to meet the identified needs as of December 2018 (Identified Confirmed Hazardous Areas):

Year	Year 1	Year 2	Year 3	Year 4	Year 5	Total
CHA (Ha)	6,000	10,000	15,000	21,000	28,000	80,000
Cost (USD)	15 M	25 M	37.5 M	52.5 M	70 M	200 Million USD

Estimation 3 with additional resources to meet the identified needs as of December 2018 and the needs (Confirmed Hazardous Areas) which will be identified in the period from 1 August 2020- 31 July 2025.

Year	Year 1	Year 2	Year 3	Year 4	Year 5	Total
CHA	12,000	20,000	30,000	42,000	56,000	160,000
(Ha)						
Cost	30	50	75	105	140	400 Million USD
(USD)						

<u>Remark:</u> This Option 3 is a projection, the accurate number of hectares of Confirmed Hazardous Areas (to be cleared) will be the result of the upcoming survey efforts in the period from 1 August 2020- 31 July 2025.

(UXO Detection)



7. Total area containing cluster munitions remnants to be cleared during the proposed extension.

There is a focus on survey for the period of this extension (2020-2025), with the survey in six first provinces to be completed to the greatest extent possible and other provinces will also have to be surveyed to get a National Cluster Munitions Survey to quantify the actual extent of the remaining Cluster Munitions contamination. In parallel, area clearance should take place hand in hand with the survey activity to ensure safety of the Lao people. At current level of

clearance capacity, the country will not be able to clear the identified Confirmed Hazardous Areas in the next five years period (2020-2025). To deal with the UXO/Cluster Munitions issue in a reasonable timeframe, we will have to scale-up the clearance capacity in the coming years. To do so we need more international support to the UXO Sector, including to the national operators.

According to the Non-technical Survey and Technical Survey from January 2010 to December 2018 in 10 provinces, there are CHAs of 85,829 Ha, detail as follow:

Province	Village	Task No.		Area by	v hectare
	No.	TS	CHA	TS	CHA
Attapeu	108	1,372	1,301	6,500	12,404
Bolikhamxai	3	7	1	73.25	10
Champasak	69	215	215	1,134	1,087
Huaphanh	98	286	287	3,252	3,061
Khammouan	92	437	432	5,249	6,822
Luangprabang	43	177	175	1,536	1,792
Salavan	277	2,052	1,911	7,809	8,349
Savannakhet	209	3,348	2,897	24,519	12,802
Sekong	119	1,144	1,075	4,062	7,656
Xiengkhuang	199	992	990	33,332	31,839
Grand Total	1,217	10,030	9,284	87,470	85,829

* Data as of 18 February 2019

- 8. Circumstances that have impeded the ability of the Lao PDR to destroy all cluster munitions remnants located in all areas during eight-year period and any impede its ability during the proposed extension.
 - The magnitude of the cluster munitions contamination in the Lao PDR is an essential point.

Directly linked to this point, there is a lack of resources to deal with the cluster munitions contamination in a timely manner, it means not only a lack of financial resources but also lack of fully trained human resources and modern equipment. The methodology has evolved and positively improved the operations, but more attention also should be brought to the development of new technology and innovative approaches.

• The new Survey Procedures and Clearance require sustainable resources.

The successful transition to evidence-based survey and clearance has yielded a major increase in efficiency as measured in terms of cluster munitions found per hectare cleared and has enabled a systematic approach to completing the first national survey of known cluster munitions contamination. However, the transition has revealed difficulties in terms of the operational and management aspects of the procedure. There are three main challenges that Lao PDR faces. Firstly, the existing clearance capacity cannot meet the demand of land cleared. Secondly, the number of cluster munitions found per hectare is now much higher, meaning that more explosives are needed for destruction. Explosives in Lao PDR are among the most expensive in the region, it is imperative that donors are aware of the increased financing needs to cover this part of operational costs. Thirdly, following the new survey procedure, it is required that clearance teams have the new knowledge and

necessary equipment to operate in difficult areas such as steep hillsides and dense jungle terrain. It also requires strong monitoring mechanisms to ensure that the physical obstacles do not reduce the actual quality of the survey and clearance work.

- Communicating the practical effect of the new survey and clearance approach is essential. New survey and clearance methodology needs to be understood correctly at all levels. Since the adoption of the new survey and clearance process in 2014, it has affected the planning and operation nationwide. This also affects the understanding of beneficiaries (villagers) and development partners. Under the previous methodology, the villagers submit the clearance request to the operator (i.e UXO-Lao), then the operator assesses the request area and conduct the clearance within the approved area. Under the new methodology, the request from villagers might not be fulfilled unless the request area is a part of the Confirmed Hazardous Area (CHA). As a result, the villagers need to be informed by the operators about this approach as well as the development partners because the number of beneficiaries might not be as high as using the previous methodology. It is important for villagers to understand the concept of the new process and to adapt their behavior accordingly. To ensure the concerned parties understand the Sustainable Development Goals (SDG) 18 as the domestic goal which aims to increase the knowledge of Confirmed Hazardous Area (CHA) and the survey process, all stakeholders (NRA, line ministries, local authorities and operators) should be active in educating the local communities. In addition, all development partners should also be made aware of this new approach. Therefore, resources should be mobilized to support this target alongside with the UXO clearance activities and concrete action implemented.
- The new evidence-based approach to survey and clearance has made progress on clear task prioritisation an essential next step. More than 8,750 CHAs, equivalent to 81,803 hectares of Confirmed Hazardous Areas had been established through technical survey. This amounts to several years of work at the current (2018) clearance sector capacity within the UXO sector. Planned survey activities in the coming period from 2018 onwards are likely to produce further CHAs four times faster than they can be cleared. This means that tasks will need to be prioritized.

• Increased sector coordination is essential due to the risk that remaining needs are not addressed

The UXO Sector is inclusive of many stakeholders (line ministries, UXO Lao, INGOs, commercial operators, civil society, etc). UNDP is co-chair of the UXO Sector Working Group, which inputs to the Round Table Meeting (policy dialogue between Government and the development partners) organized on annual basis. There are four Technical Working Groups, which are important mechanisms to progress the various pillars in the UXO Sector: survey and clearance, UXO risk education, victim assistance and more recently Information Management. UNDP encourages to convene these Technical Working Groups regularly and reap the benefits of information sharing among the relevant operators in each working group.

The UXO Sector has well-identified the needs in terms of survey and clearance and thus, strong sector coordination is essential in the context of the very large number of existing Confirmed Hazardous Areas (CHAs) requiring subsequent clearance. There are also unmet needs in UXO Risk Education and Victim Assistance, which should be better articulated in future. The NRA has the central role of UXO Sector coordination, but all stakeholders have to collaborate for the NRA to fulfill its coordination role. The stakeholders include line ministries, local authorities, UXO operators, development partners, etc. The UXO Sector Working Group is an important coordination mechanism to increase the sector effectiveness and efficiency.

The Government of Lao PDR has its own National Sustainable Development Goal number 18: "*Lives Safe from UXO*"; a clear National Strategic Plan "Safe Path Forward II" and the corresponding Multi-Year Work Plan 2016-2020 for the implementation. All sector activities are implemented in order to achieve the SDG18 "*Lives Safe from UXO*" to remove the UXO obstacle to national development and the activities should be implemented in line with the strategic documents and policies. In this context, it is essential that all parties consult each other at the early stage of project proposal development, especially the operators which will carry out the operations, to ensure that all projects and all resources are used in the most effective manner and in line with the national and provincial priorities.

The development partners also have an important role to play to ensure that the grantees have consulted and coordinated with the NRA Office and local authorities prior to the allocation of funding agreements. This will also allow a smoother authorization process, especially for the finalization of the Memorandums of Understanding (MoUs). Long term commitment is encouraged to enable better planning, recruitment, training, equipping and maintenance of additional clearance teams. It is required to scale up the clearance capacity if we want to clear all known contaminated areas and therefore, comply with the Convention on Cluster Munitions. Overall the funding of humanitarian UXO Sector operations has slightly increased, from less than 25 Million USD annually at the entry into force of the convention in 2010, to more than 30 Million USD annually in 2018.

Better identified needs, more effective methodologies, robust information management and increased coordination should enable to increase the international support to address the cluster munitions / UXO issue in the Lao PDR.



Conducting Technical Survey in dense jungle terrain area requires more efforts than usual.

9. The humanitarian, economic, social and environmental implications of the proposed extension.

Lao PDR has severely suffered from UXO contamination. The country has a population of 6.5 million people and about 67 percent live in rural areas where many households' income relies on agricultural activities. One important significance of the proposed extension is to continue clearing UXO for elimination of fear amongst the people. This remarkable impact resulting from the UXO clearance, has released people from the devastating consequence of the explosive remnants of war. Numbers of dangerous munitions will continue to be cleared and people in the UXO contaminated area will be able to live safely. Another significant impact of the UXO clearance has been in assuring greater security for farmers. The confidence to cultivate agriculture and explore the newly accessible non UXO arable land, has been given to more people, and thereby increases their opportunities to improve their livelihoods. After UXO clearance, people can live safely. Kids can play around their villages without much risk of stumbling into bombs that may look like toys; Villagers can dig the deep holes necessary for searching for their nutritional sources (i.e. crab or insects living underground) without fear that their shovels will hit some bomb and explode; they can plough through the once forbidding land, planting any crops they please and more importantly they can return to living normal lives, free from the threat of UXO.

The most notable impact of UXO clearance has been in assuring greater security for farmers. Due to the fact that most of arable land is still contaminated and often, the pressure of dwindling food supplies and low cash incomes forces people to cultivate land, putting them at risk of being injured by UXO. Hence, the continuous effort of UXO clearance allows people to live normal lives and free from the threat of UXO as well as creating more job opportunities. With the extension of time, UXO/Mine Action program will expand, more safe land will made available to be used to feed population. To maintain food security, UXO clearance plays the role of solving the shortage of safe land for agriculture. When the contaminated land gets cleared from UXO, people are able to expand their farmland. Economically, agricultural land has the net revenue per se, plus the UXO cleared land allows public development project to

mobilize smoothly. The construction of roads, bridges, public facilities (such as school, health center or hospital, temple etc.), is essential for poverty reduction and moving the next step forward to developing rural areas. This UXO clearance allows development agencies to mobilize their development agendas such as the construction of schools, irrigation supplies, healthcare centers and the production of rice or other crops properly. Lao PDR is under process of implementing Sustainable Development Goals, it is crucial to clear UXO from the contaminated land because the release land allow people to access to agriculture land and make them feel safe to work in their own farmland. The UXO/Mine action program provides equal opportunities for communities to have public infrastructure, because UXO-free land allows construction projects to be implement accordingly. It also will enhance community development, contribute to eradicating poverty, and support the effort to graduate from the Least Developed Country (LDC) status as well as to fostering the achievements of Sustainable Development Goals (SDGs).

10. Provide full contact details of the national focal person.

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Annex:

1. Prime Minister Decree Non. 67/PM, date 12 February 2018 on the Organization and Operations of the National Regulatory Authority for UXO in Lao PDR.

2. National Strategic Plan for the UXO Sector, 2011-2020 "The Safe Path Forward II"

- 3. Victim Assistance strategy
- 4. National Standards. See the link on website <u>http://www.nra.gov.la/resources.html</u>
- 5. Sustainable Development Goal 18 (SDG18)
- 6. UXO Sector Five years plan
- 7. List of current and future UXO/Mine Action projects in Lao PDR

8. Prime Minister order No.39, dated 08 September 2016 on the UXO Clearance and Risk Reduction Education (Only Lao Language)

9. The Guide on Integrated Approach to Victim Assistance.

10. Work Plan for Non-Technical Survey and Technical Survey – Breakdown per province.