

**MEGALITHIC JARS SITES IN
XIENGGHUANG – PLAIN OF JARS
WORLD HERITAGE NOMINATION
VOLUME 1**

OVERVIEW

The Megalithic Jar Sites in Xiengkhuang province of central Laos is a serial property of 15 components. The ancient jar sites contain extensive and remarkable evidence of funerary practices, and are the outstanding evidence of the Iron Age civilization which created the sites. They include 1,325 ancient stone jars as well as numerous associated stone discs, secondary burials and other features.

The funerary sites are believed to date from before the Iron Age (between about 500 BCE and 500 CE) into historic times, and are evidence of a substantial and widespread culture which existed in the region. Many details of this culture remain a mystery but the jar sites are its pre-eminent testimony.

Criterion (iii): The sites are exceptional testimony to the cultural traditions associated with funerary practices, and to the civilization which created the sites but which disappeared sometime after 500 CE. The megalithic jar sites are impressive because of the size of jars and the technological skill to produce and move the jars from quarry sites to funerary sites, as well as because of the large number of surviving jars, disks and other features spread in groups across a large area of the current province. The sites include important archaeological evidence related to funerary practices, possibly of different eras and cultures, as well as of the material culture of the ancient civilisation which created the jars, and the locations of the funerary sites are highly suggestive of cultural meaning. The funerary sites are the outstanding surviving evidence of this civilisation. While the use of jars in funerary sites is known in other parts of Laos, northeast India and Southeast Asia, the density of sites in Xiengkhuang is remarkable.



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Annex F: Decree of Prime Minister on Appointment of Lao National Committee for World Heritage January 2017

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Annex H: Prime Minister’s Decree on the roles and responsibilities of the Department of Heritage, MoICT 2017

Annex I: Heritage Interpretation Strategy and Plan 2016

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L.1 Overview of Management System

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L.4 Provincial Governor’s Decree concerning the Management and Conservation of the Plain of Jars World Heritage Sites – No. 996

L.5 Provincial Governor’s Decree, Safeguarding the Plain of Jars – Approval of the provincial budget, revenues from the ticket sales at the Plain of Jars sites – No. 995

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ENGLISH SPELLING FOR LAO NAMES

This nomination adopts a set of English spellings for Lao names, especially place names. However, it should be noted there is considerable variability in such spellings in other contexts and sources.

GLOSSARY OF KEY TERMS

Disk	A circular stone, potentially used to cover or otherwise mark secondary burials.
Dolmen	A type of single-chamber megalithic tomb usually consisting of two or more vertical megaliths supporting a large flat horizontal capstone or table.
Jar	A worked stone with a formed hollow. They can vary in stone type, size, shape, rim treatment and a very few have decoration.
Jar Group	A collection of jars and other features located in an area within a larger jar site.
Jar Site	A site with anywhere between one and several hundred jars and other features, which can be in one or more groups. Groups can be widely distributed.
Lid	A circular stone used to cap a jar. None has been reliably found capping a jar, and clear evidence of lids is limited. It is commonly thought that disks are actually lids, but often there is no evidence for this conclusion.
Megalith	A large stone that has been used to construct a structure or monument, either alone or together with other stones.
Menhir	A large upright standing stone.
Phonsavan	The capital of the Xiengkhuang province.
Plain of Jars	The common name used for the general locality of Xiengkhuang, including the overall collection of jar sites.
Quarry	A site with natural stone where jars were made, or at least partially made.
Xiengkhuang	The province in the Lao PDR where the nominated property is located.

NOTE REGARDING SITE 3

As part of the nominated property, 5 components including 6 groups which are part of Site 3 are included. Where appropriate, these components are treated individually. However, in a number of instances, information about these components is presented in a combined text regarding Site 3 overall as the information is common to all components.

EXECUTIVE SUMMARY

State Party

Lao People's Democratic Republic

State, Province or Region

The property is located in Xiengkhuang Province.

Name of Property

Megalithic Jar Sites in Xiengkhuang – Plain of Jars

Geographical coordinates to the nearest second

The serial property comprises 15 components. The geographical coordinates of the property central point to the nearest second are 19°27'21" North and 103°17'39" East, and the components lie between 19°16'26" and 19°38'14" North and 102°53'06" and 103°41'60" East.

ID No.	Name of the Component Part	Region(s)/District(s)	Coordinates of the Central Point	Area of Nominated Component of the Property (ha)	Area of the Buffer Zone (ha)	Map No.
1	Site 1	Paek District/Na O & Ban Ang Villages	N 19°25'48" E 103°9'18"	33.97	89.61	Figure 3
2	Site 2	Phaxay District/Ban Na Kho Village	N 19°19'12" E 103°9'15"	13.19	133.00	Figure 4
3-1-3	Site 3 – Groups 1 & 3	Phaxay District/Ban Xiengdi Village	N 19°17'46" E 103°9'33"	12.31	352.75	Figure 5
3-2	Site 3 – Group 2	Phaxay District/Ban Xiengdi Village	N 19°17'24" E 103°8'35"	0.38		
3-4	Site 3 – Group 4	Phaxay District/Ban Xiengdi Village	N 19°17'32" E 103°9'8"	0.53		
3-5	Site 3 – Group 5	Phaxay District/Ban Xiengdi Village	N 19°17'28" E 103°8'57"	1.32		
3-7	Site 3 – Group 7	Phaxay District/Ban Xiengdi Village	N 19°17'35" E 103°9'15"	5.60		
8	Site 8	Phaxay District/Ban Xiengdi Village	N 19°17'3" E 103°9'11"	8.39		
12	Site 12	Paek District/Ban Phakeo Village	N 19°28'59" E 103°25'59"	1.25	1.76	Figure 6
21	Site 21	Paek District/ Khangnongluang Village	N 19°28'41" E 103°5'14"	32.34	146.89	Figure 7
23	Site 23	Kham District/Ban Namhom Village	N 19°32'43" E 103°41'42"	24.44	33.41	Figure 8
25	Site 25	Phoukood District/ Ban Songhak Village	N 19°37'48" E 103°5'46"	8.03	6.14	Figure 9

Table 1. Geographical coordinates of component parts to the nearest second						
ID No.	Name of the Component Part	Region(s)/District(s)	Coordinates of the Central Point	Area of Nominated Component of the Property (ha)	Area of the Buffer Zone (ha)	Map No.
28	Site 28	Phoukood District/ Ban Nakhuan Village	N 19°34'16" E 102°53'14"	0.38	6.73	Figure 10
42	Site 42	Kham District/Phou Xang Village	N 19°35'21" E 103°34'5"	22.66	114.88	Figure 11
52	Site 52	Paek District/Ban Phakeo Village	N 19°29'42" E 103°25'56"	9.77	127.77	Figure 6
Total area (ha)				173.56	1,012.94	

Textual description of the boundaries of the nominated property

The nominated property is a serial nomination of 15 components.

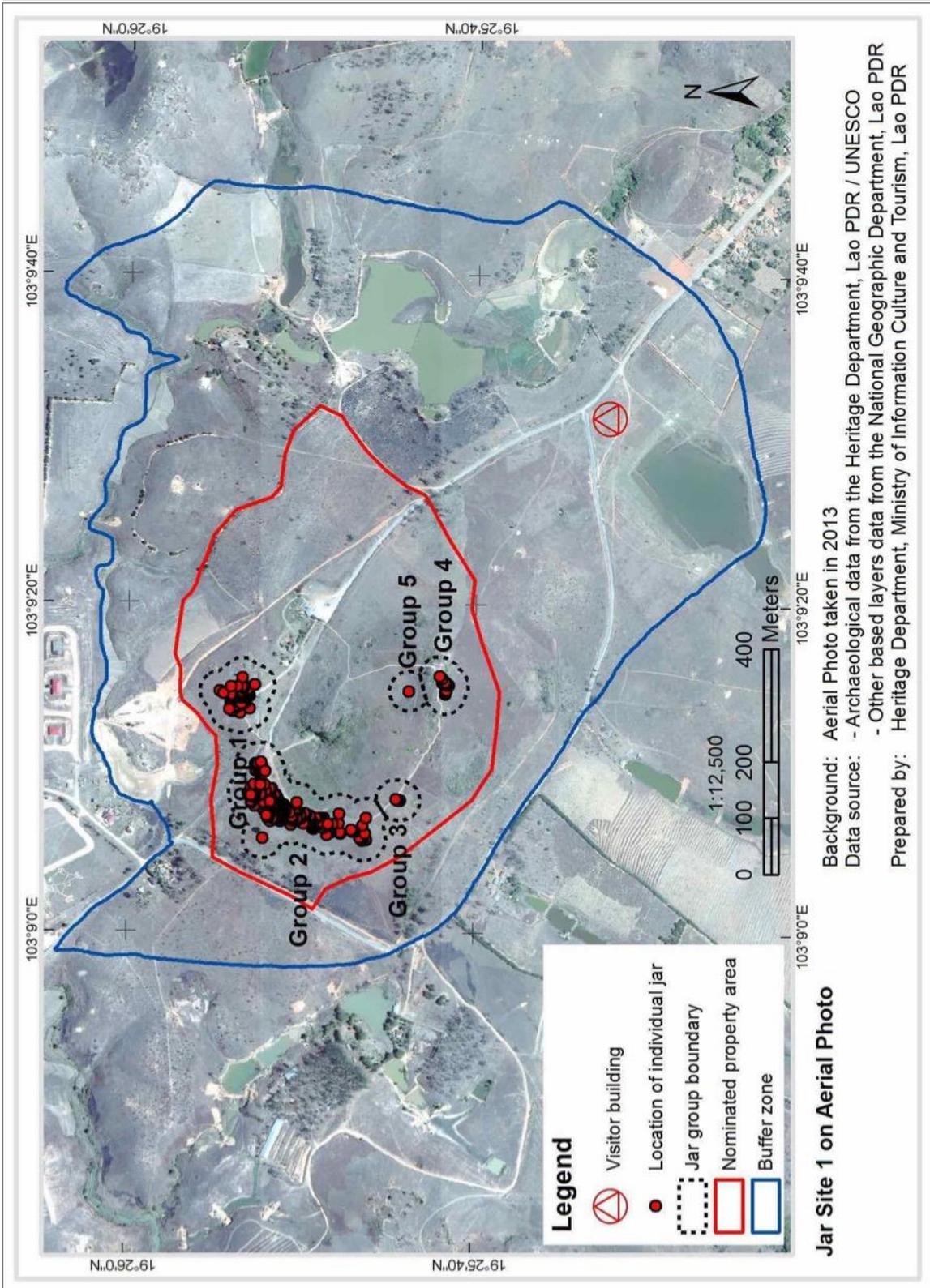
The boundaries of each component have been determined on the basis of ensuring the attributes of Outstanding Universal Value have been included, and in an area of adequate size. This has also been influenced by the protective designation of the property under the *Law on National Heritage 2013* and under a provincial decree, and by the available effective management for the property. As such, the boundaries include all of the jars and other attributes necessary to convey the significance and characteristics of each component as it contributes to the complete expression of the Outstanding Universal Value, including its integrity and authenticity.

The buffer zone boundaries have been determined in order to provide a sufficient area within which to control development or other factors that might have a negative impact on the Outstanding Universal Value of the property. These boundaries have also been influenced by the protective designation existing for the buffer zones under the *Law on National Heritage 2013* and a provincial decree.

A4 maps of the nominated property, showing boundaries and buffer zone

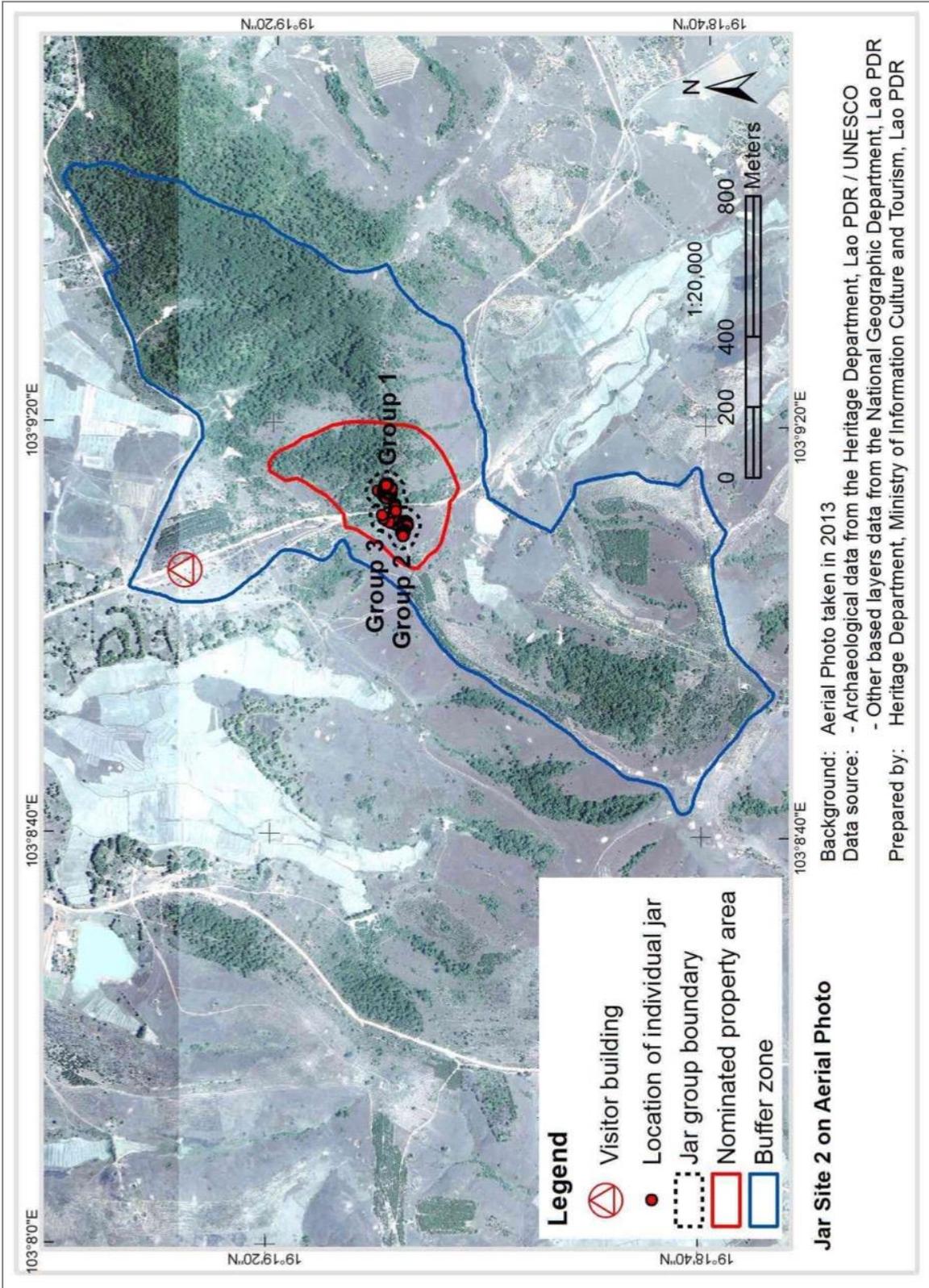
Site 1 plan

Source: Department of Heritage



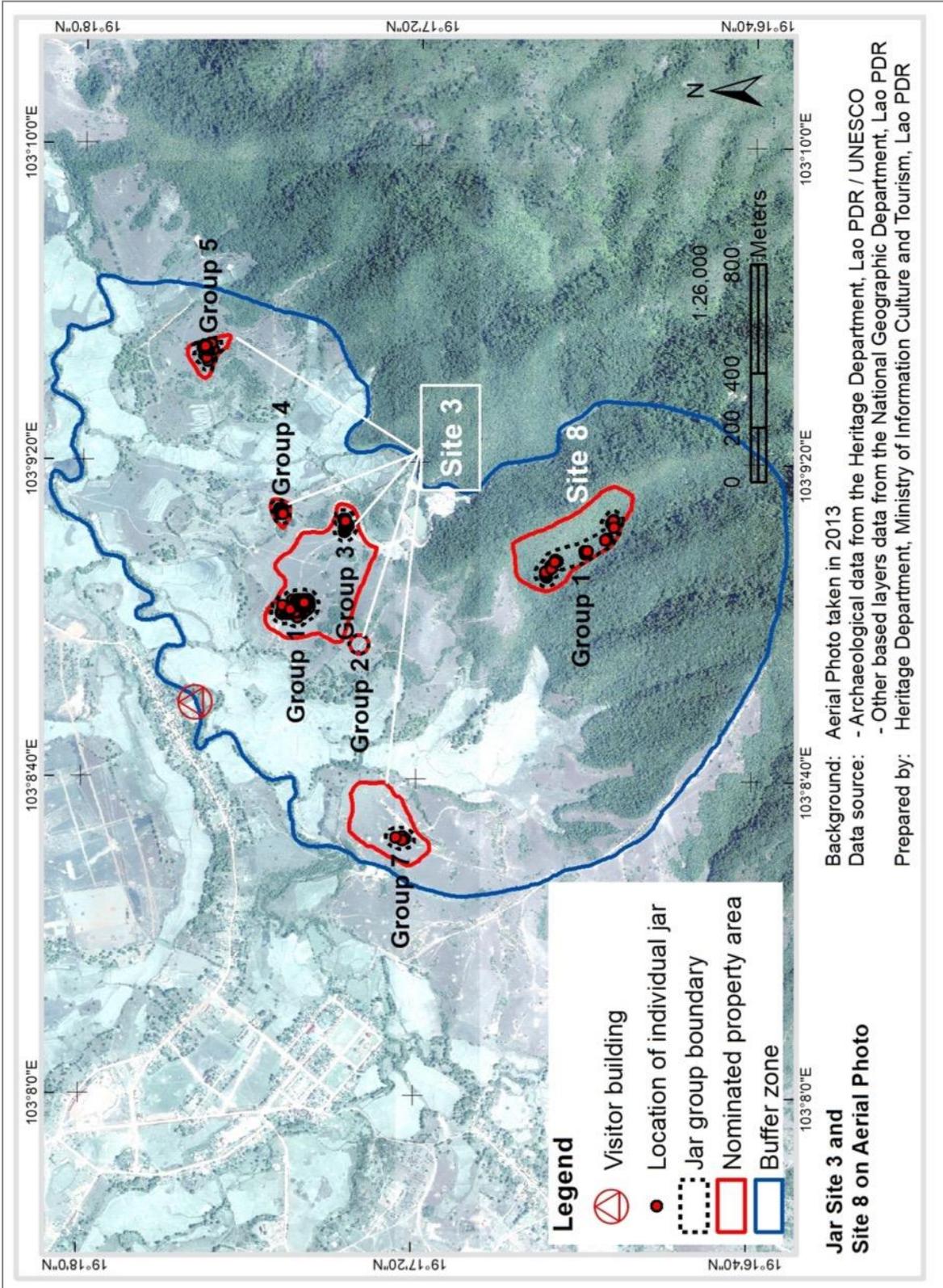
Site 2 plan

Source: Department of Heritage



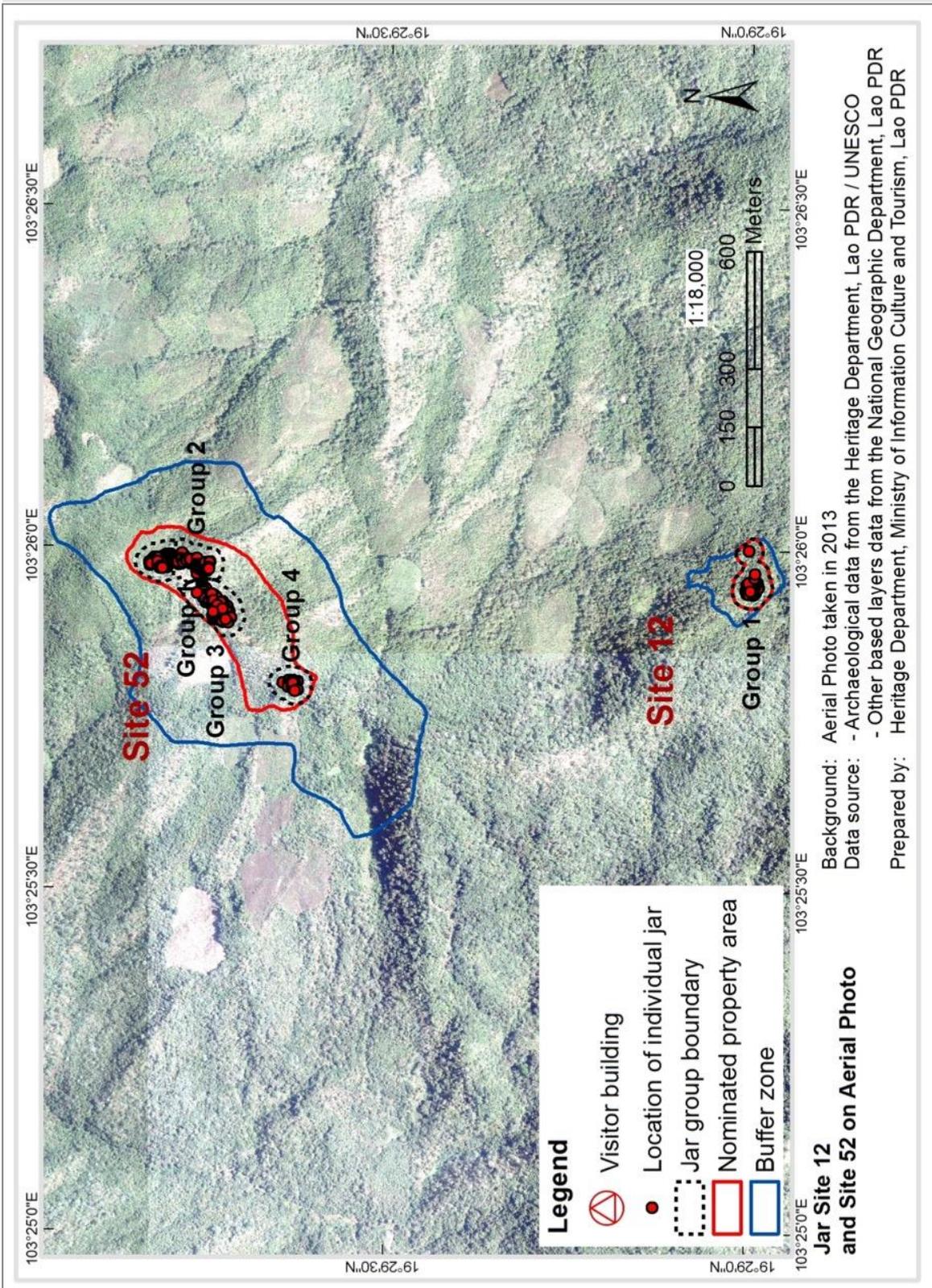
Site 3 – Groups 1 & 3, Site 3 – Group 2, Site 3 – Group 4, Site 3 – Group 5, Site 3 – Group 7 and Site 8 plan

Source: Department of Heritage



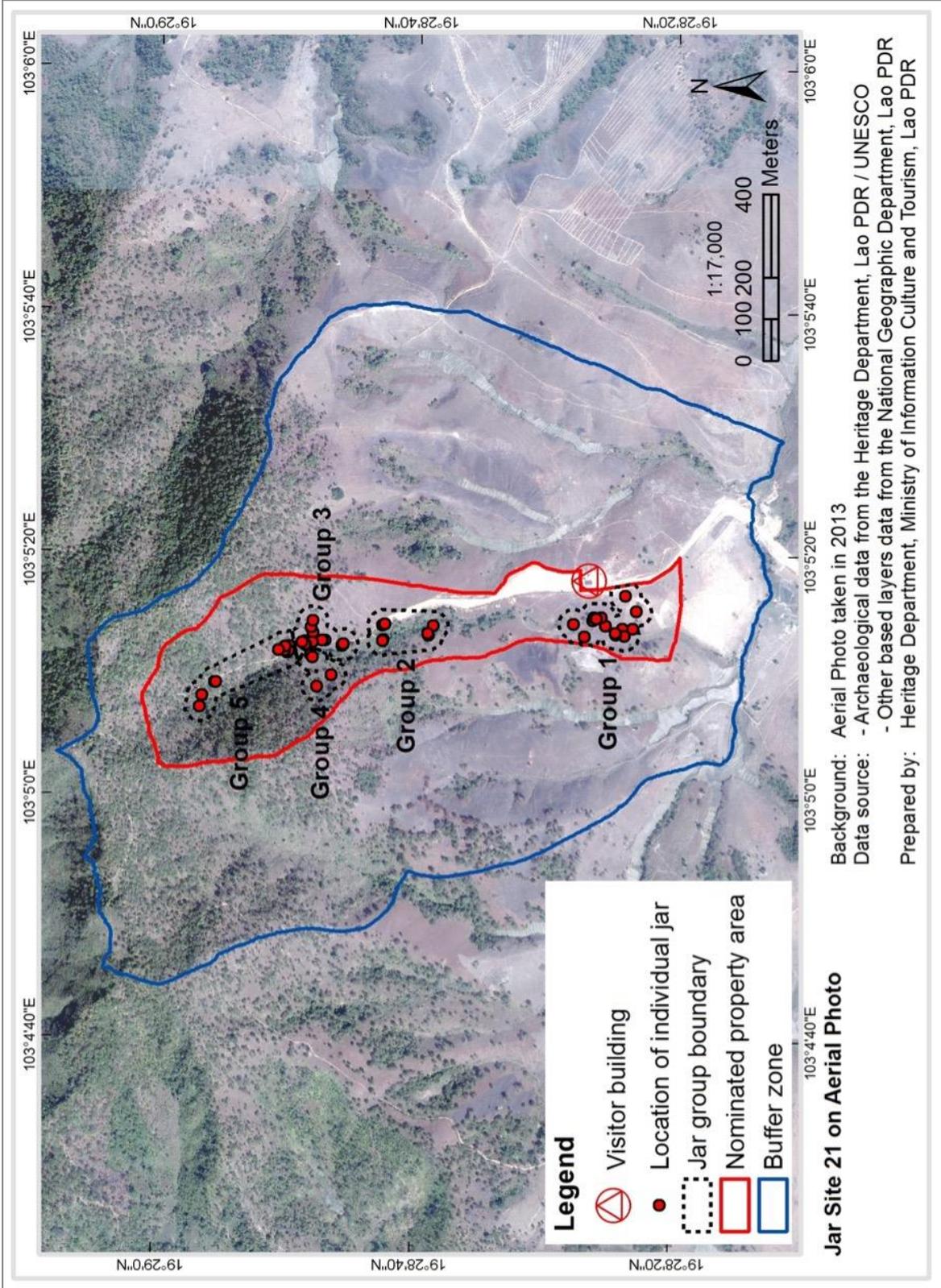
Sites 12 and 52 plan

Source: Department of Heritage



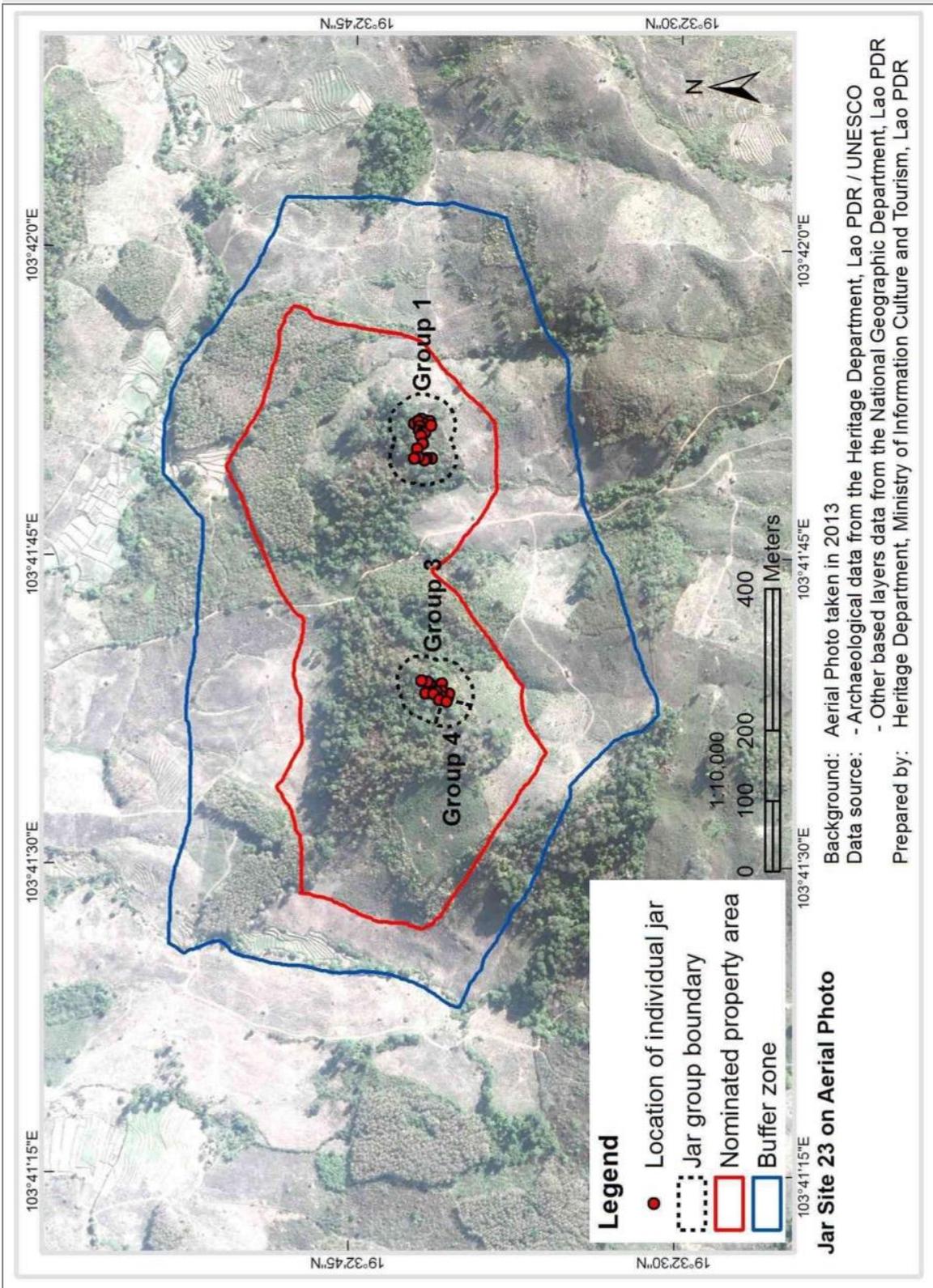
Site 21 plan

Source: Department of Heritage



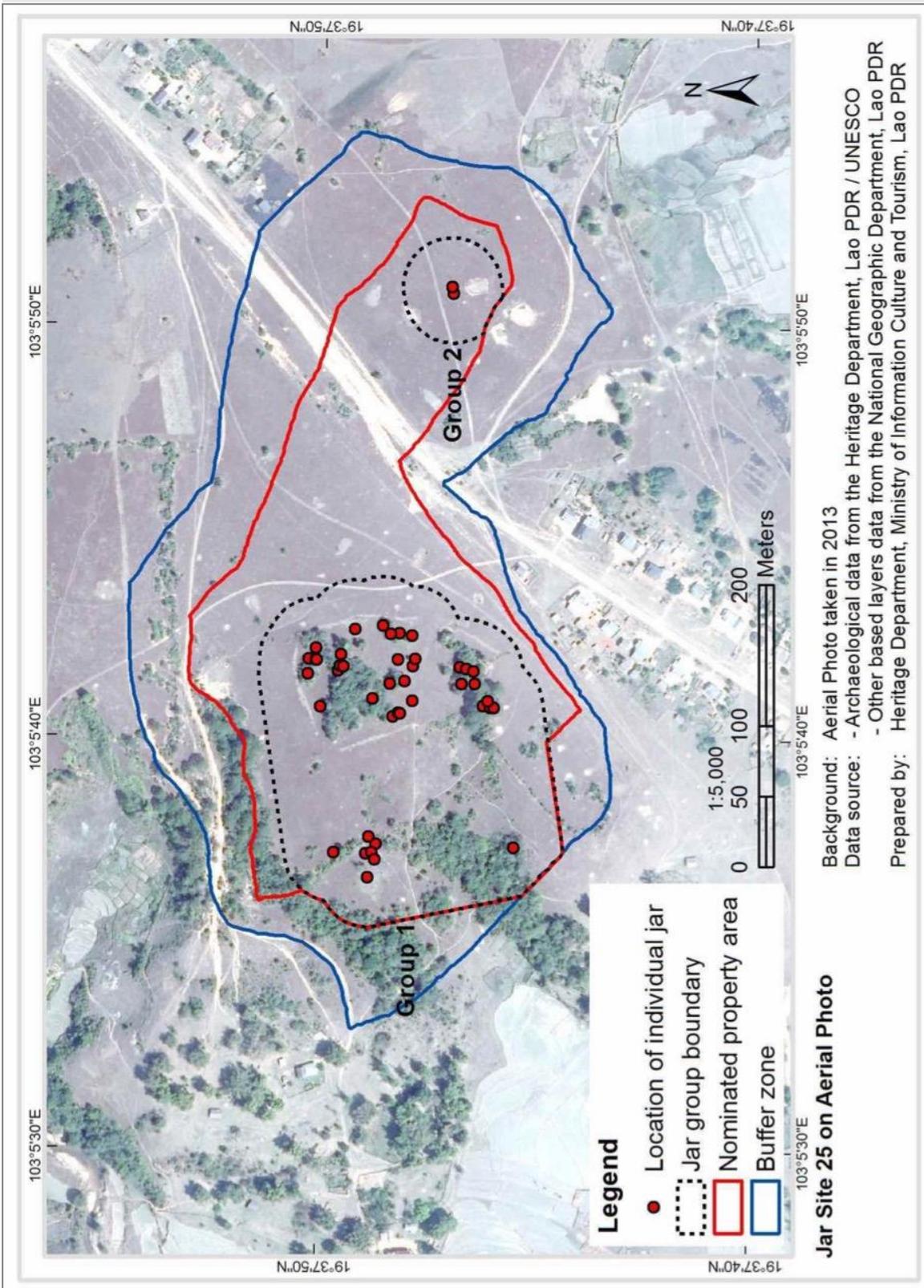
Site 23 plan

Source: Department of Heritage



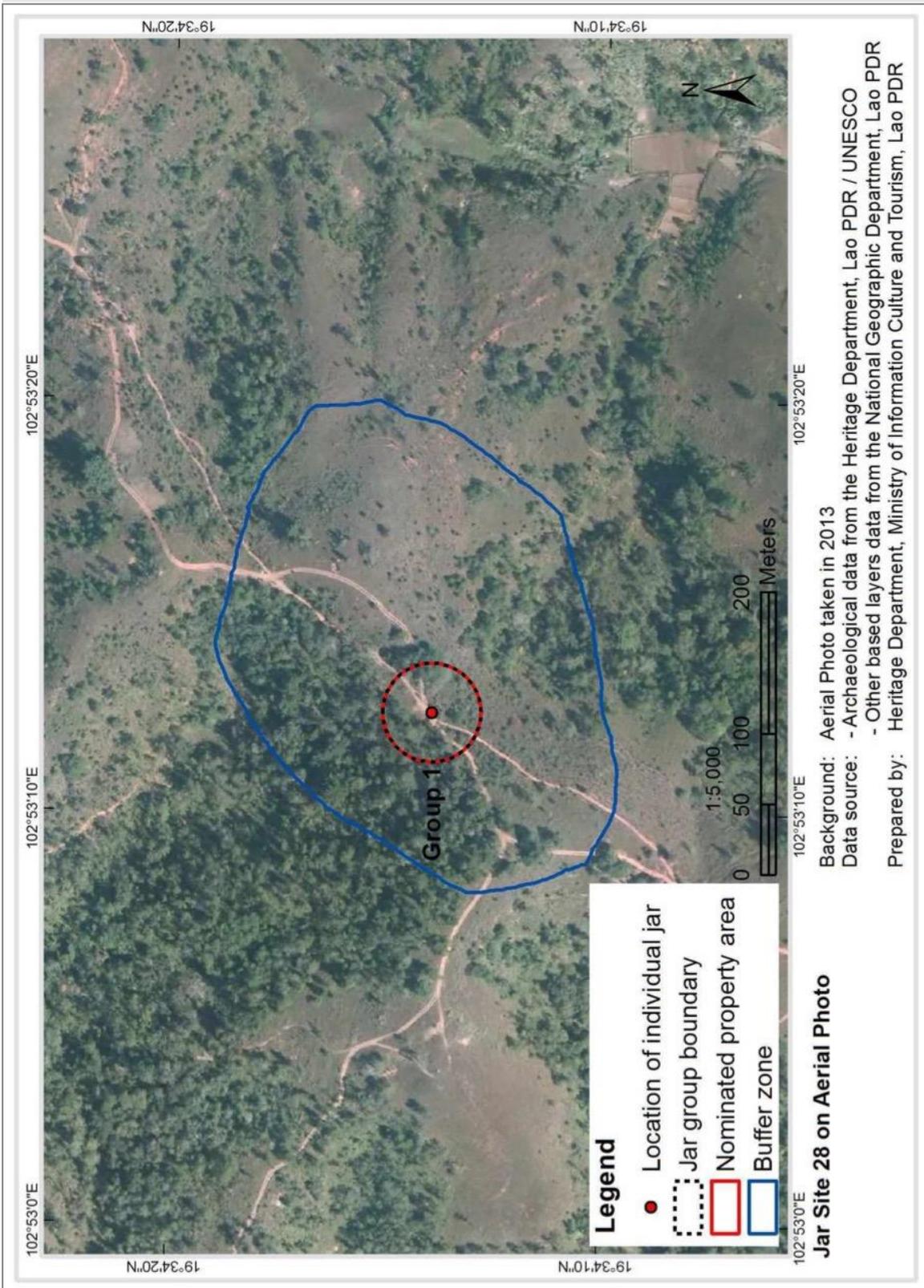
Site 25 plan

Source: Department of Heritage



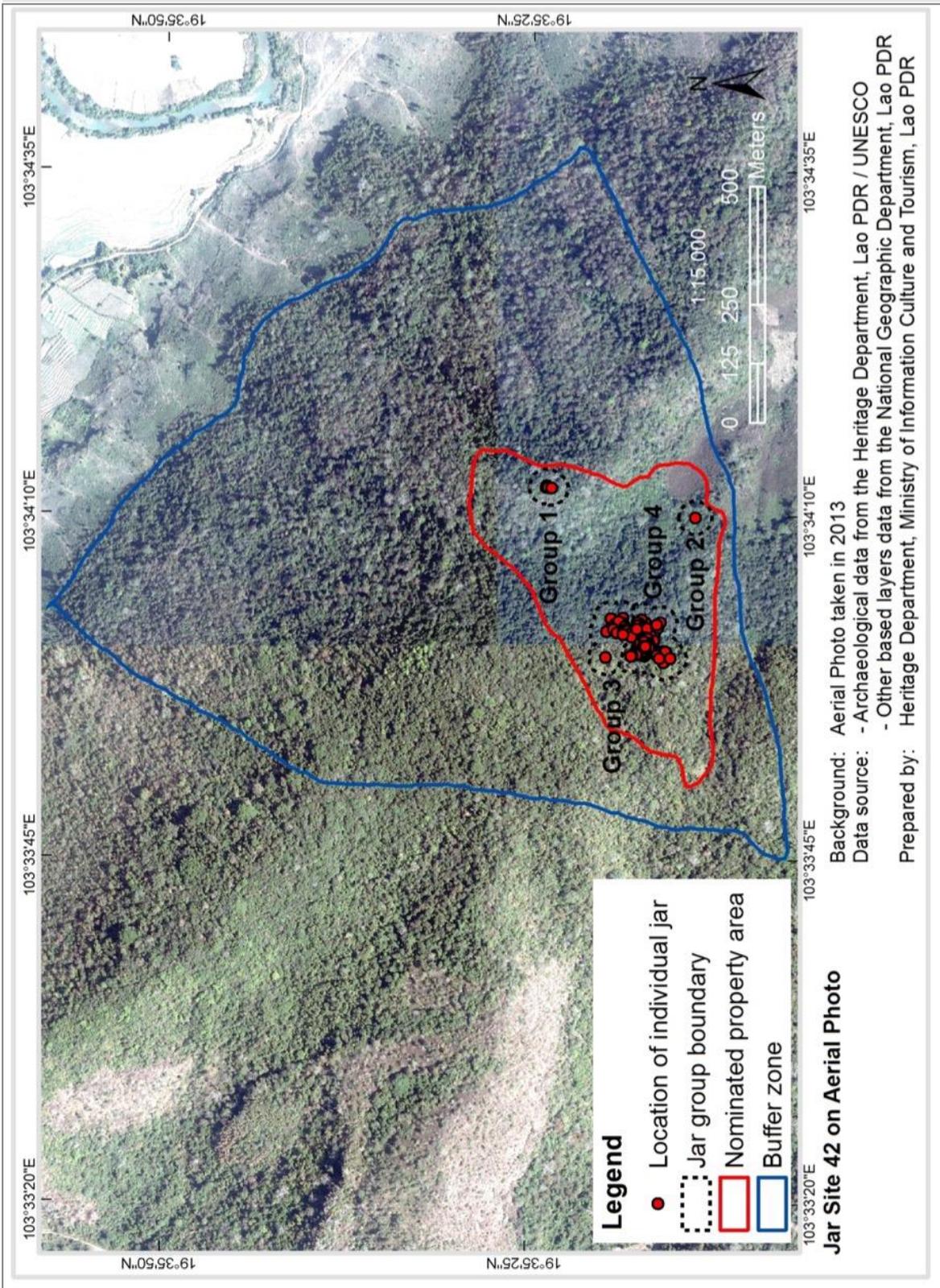
Site 28 plan

Source: Department of Heritage



Site 42 plan

Source: Department of Heritage



Criteria under which property is nominated (itemize criteria)

The property is nominated under Criterion (iii).

Draft Statement of Outstanding Universal Value

Brief synthesis

The Megalithic Jar Sites in Xiengkhuang province of central Laos is a serial property of 15 components. The ancient jar sites contain extensive and remarkable evidence of funerary practices, and are the outstanding evidence of the Iron Age civilization which created the sites.

Most of the funerary sites are located in elevated positions on hills or ridges, although one major site is located on the low hills of a central plain. The sites include 1,325 ancient stone jars as well as numerous associated stone discs, secondary burials and other features. The jars are the dominant and impressive feature of the sites being large in size and carved mostly from sandstone. Some of the jars are massive. In addition, the property includes exceptional sites with the largest concentration of jars, over 400 in one case, representing a very large proportion of the known evidence, as well as a range of smaller sites representing quarry sites or the geographic extent of sites.

The stone jars and disks have been carefully crafted and in some cases, especially disks, they exhibit decorative carving with animal or anthropomorphic figures, concentric circles, circular mouldings or a central knob or loop.

The funerary sites are believed to date from before the Iron Age (between about 500 BCE and 500 CE) into historic times, and are evidence of a substantial and widespread culture which existed in the region. Many details of this culture remain a mystery but the jar sites are its pre-eminent testimony.

Following this initial period, the jar sites were used by other cultures until the 18th century CE, as reflected in the complex archaeological evidence.

Criterion (iii): The sites are exceptional testimony to the cultural traditions associated with funerary practices, and to the civilization which created the sites but which disappeared sometime after 500 CE. The megalithic jar sites are impressive because of the size of jars and the technological skill to produce and move the jars from quarry sites to funerary sites, as well as because of the large number of surviving jars, disks and other features spread in groups across a large area of the current province. The sites include important archaeological evidence related to funerary practices, possibly of different eras and cultures, as well as of the material culture of the ancient civilisation which created the jars, and the locations of the funerary sites are highly suggestive of cultural meaning. The funerary sites are the outstanding surviving evidence of this civilisation. While the use of jars in funerary sites is known in other parts of Laos, northeast India and Southeast Asia, the density of sites in Xiengkhuang is remarkable.

Integrity

The Megalithic Jar Sites include the attributes necessary to express the Outstanding Universal Value. The 15 components include 1,325 ancient stone jars as well as numerous associated discs, secondary burials and other features. These include nine components of

the five major sites (Sites 1, 2, 3 – Groups 1 & 3, 3 – Group 2, 3 – Group 4, 3 – Group 5, 3 – Group 7, 42 and 52) which have the largest number of attributes of all the known jar sites in the province (1,186 jars and 198 discs), as well as six smaller components (Sites 8, 12, 21, 23, 25 and 28). The property is of an adequate size to include the sites and their attributes.

There are a number of factors in the past and currently which have or may result in adverse effects. These include looting, bomb and other war damage, unexploded ordnance, vegetation growth, inappropriate tourist activities including graffiti, as well as inappropriate development in the property or buffer zones, and a lack of active management.

Authenticity

The property displays a high level of authenticity. The form, design, materials and location of the jars and discs are all original, noting the effects of age and the damage to some attributes. In most cases, the setting remains as an agricultural or forest landscape, which is believed to be consistent with or at least sympathetic to the original. The archaeological deposits are believed to be little disturbed, with very limited excavation having been undertaken, although war-time bomb damage has had an impact at some sites, and some looting and disturbance by animals or agricultural practices has occurred.

Management and protection requirements

The property is protected under the *Law on National Heritage 2013*, a provincial decree and provincial guidelines regarding provincial and village-level protection, management, conservation and support for heritage. The property has a management system which operates at three levels – national, provincial and district/village. At each level, there are key instruments which identify roles and responsibilities, and in some cases specific management activities.

The management system operates through a range of agencies at the various levels, especially the provincial Plain of Jars Heritage Technical Division, with day to day management of most sites being the responsibility of villages in the vicinity of sites, supported by the Division. The national Department of Heritage plays a key technical role in research, conservation, heritage impact assessment and overall monitoring. Coordination is achieved through national and provincial committees.

Long-term management expectations include: enhanced conservation of the sites; ongoing research into the sites; avoidance or mitigation of adverse developments; harmonious tourism development; strengthened community understanding and support; and increased conservation capacity.

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1. IDENTIFICATION OF THE PROPERTY

1.A COUNTRY

Lao People's Democratic Republic

1.B STATE, PROVINCE OR REGION

The property is located in Xiengkhuang Province.

1.C NAME OF PROPERTY

Megalithic Jar Sites in Xiengkhuang – Plain of Jars

1.D GEOGRAPHICAL COORDINATES TO THE NEAREST SECOND

The serial property comprises 15 components. The geographical coordinates of the property central point to the nearest second are 19°27'21" North and 103°17'39" East, and the components lie between 19°16'26" and 19°38'14" North and 102°53'06" and 103°41'60" East.

Table 1. Geographical coordinates of component parts to the nearest second

ID No.	Name of the Component Part	Region(s)/District(s)	Coordinates of the Central Point	Area of Nominated Component of the Property (ha)	Area of the Buffer Zone (ha)	Map No.
1	Site 1	Paek District/Na O & Ban Ang Villages	N 19°25'48" E 103°9'18"	33.97	89.61	Figure 3
2	Site 2	Phaxay District/Ban Na Kho Village	N 19°19'12" E 103°9'15"	13.19	133.00	Figure 4
3-1-3	Site 3 – Groups 1 & 3	Phaxay District/Ban Xiengdi Village	N 19°17'46" E 103°9'33"	12.31	352.75	Figure 5
3-2	Site 3 – Group 2	Phaxay District/Ban Xiengdi Village	N 19°17'24" E 103°8'35"	0.38		
3-4	Site 3 – Group 4	Phaxay District/Ban Xiengdi Village	N 19°17'32" E 103°9'8"	0.53		
3-5	Site 3 – Group 5	Phaxay District/Ban Xiengdi Village	N 19°17'28" E 103°8'57"	1.32		
3-7	Site 3 – Group 7	Phaxay District/Ban Xiengdi Village	N 19°17'35" E 103°9'15"	5.60		
8	Site 8	Phaxay District/Ban Xiengdi Village	N 19°17'3" E 103°9'11"	8.39		
12	Site 12	Paek District/Ban Phakeo Village	N 19°28'59" E 103°25'59"	1.25	1.76	Figure 6
21	Site 21	Paek District/ Khangnongluang	N 19°28'41" E 103°5'14"	32.34	146.89	Figure 7

Table 1. Geographical coordinates of component parts to the nearest second

ID No.	Name of the Component Part	Region(s)/District(s)	Coordinates of the Central Point	Area of Nominated Component of the Property (ha)	Area of the Buffer Zone (ha)	Map No.
		Village				
23	Site 23	Kham District/Ban Namhom Village	N 19°32'43" E 103°41'42"	24.44	33.41	Figure 8
25	Site 25	Phoukood District/Ban Songhak Village	N 19°37'48" E 103°5'46"	8.03	6.14	Figure 9
28	Site 28	Phoukood District/Ban Nakhuan Village	N 19°34'16" E 102°53'14"	0.38	6.73	Figure 10
42	Site 42	Kham District/Phou Xang Village	N 19°35'21" E 103°34'5"	22.66	114.88	Figure 11
52	Site 52	Paek District/Ban Phakeo Village	N 19°29'42" E 103°25'56"	9.77	127.77	Figure 6
Total area (ha)				173.56	1,012.94	

1.E MAPS AND PLANS SHOWING THE BOUNDARIES OF THE NOMINATED PROPERTY AND BUFFER ZONE

Table 2. List of Maps		
Name	Scale – original maps	Date
Location map of Xiengkhuang Province within Laos (Figure 1)	See map	2017
Topographic map of whole property – location of nominated jar sites in Xiengkhuang Province (Figure 2)	1:500,000	2017 on 1965 base map
Topographic and airphoto maps of components showing boundaries and buffer zones: Site 1 (Figure 3) Site 2 (Figure 4) Site 3 – Groups 1 & 3, Site 3 – Group 2, Site 3 – Group 4, Site 3 – Group 5, Site 3 – Group 7 and Site 8 (Figure 5) Sites 12 and 52 (Figure 6) Site 21 (Figure 7) Site 23 (Figure 8) Site 25 (Figure 9) Site 28 (Figure 10) Site 42 (Figure 11)	1:12,500 1:20,000 1:26,000 1:18,000 1:17,000 1:10,000 1:5,000 1:5,000 1:15,000	Topographic – 2017 on 1965 base maps Airphoto – 2017 on 2013 base images
Maps showing boundaries of zones with special legal protection: Xiengkhuang Special Economic Zone Plan (Figure 71) Development Plan for area around Site 1 (Figure 72)	See maps	2017
Other maps in Annex A: Map No. 1, Sites 1, 2, 3, 8 and 21 on US Army Topographic Map Series L7015 Sheet 5647 iv Map No. 2, Sites 23 and 42 on US Army Topographic Map Series L7015 Sheet 5748 iii Map No. 3, Site 25 on US Army Topographic Map Series L7015 Sheet 5648 iii Map No. 4, Site 28 on US Army Topographic Map Series L7015 Sheet 5548 ii	1:50,000 1:50,000 1:50,000 1:50,000	2017 on 1965 base map 2017 on 1965 base map 2017 on 1965 base map 2017 on 1965 base map

Table 2. List of Maps		
Name	Scale – original maps	Date
Map No. 5, Sites 12 and 52 on US Army Topographic Map Series L7015 Sheet 5647 i	1:50,000	2017 on 1965 base map

Figure 1. Location map of Xiengkhuang Province within Laos

Source: Department of Heritage



Figure 2. Location of nominated jar sites in Xiengkhuang Province

Source: Department of Heritage

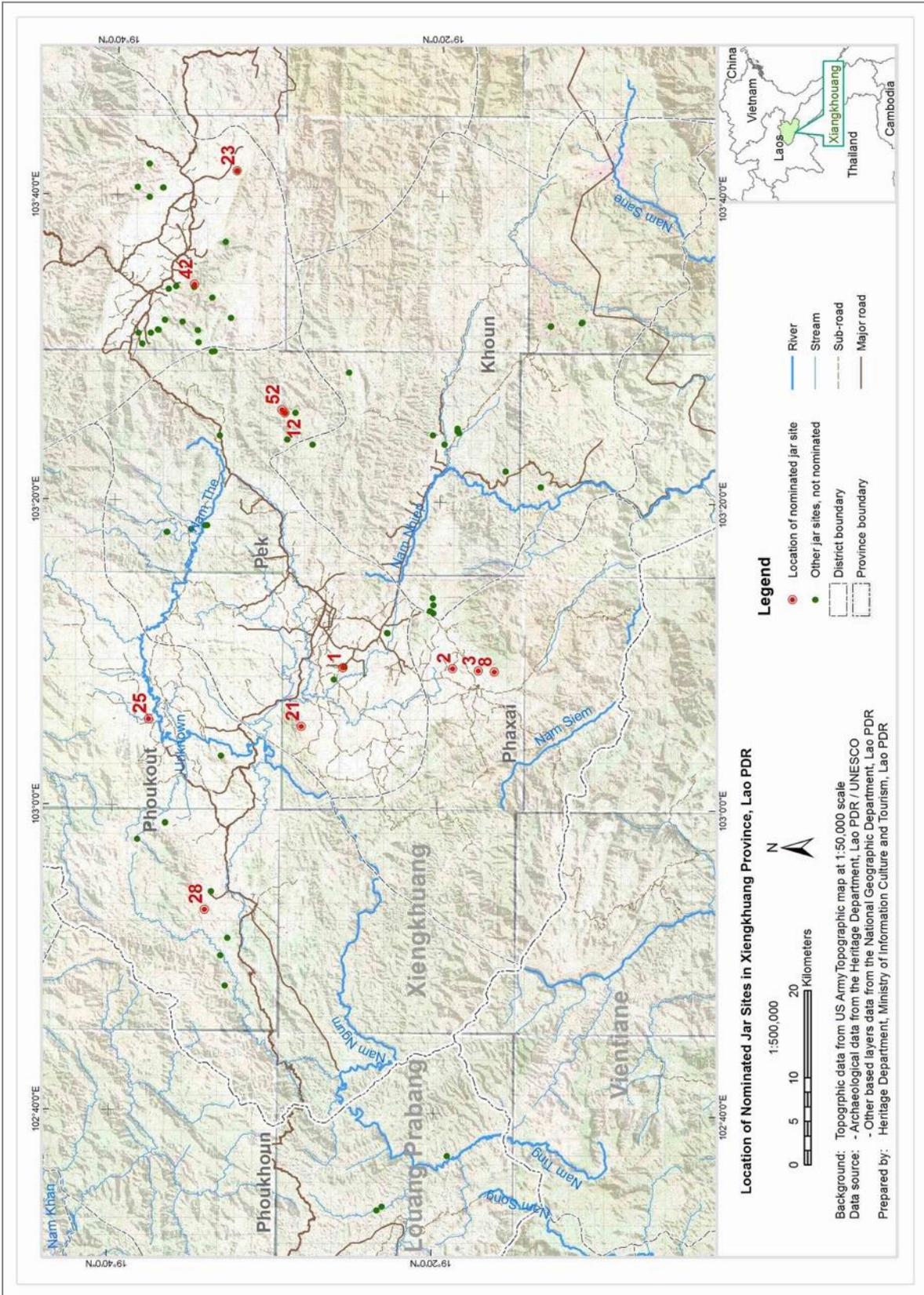


Figure 3. Site 1 plans
 Source: Department of Heritage

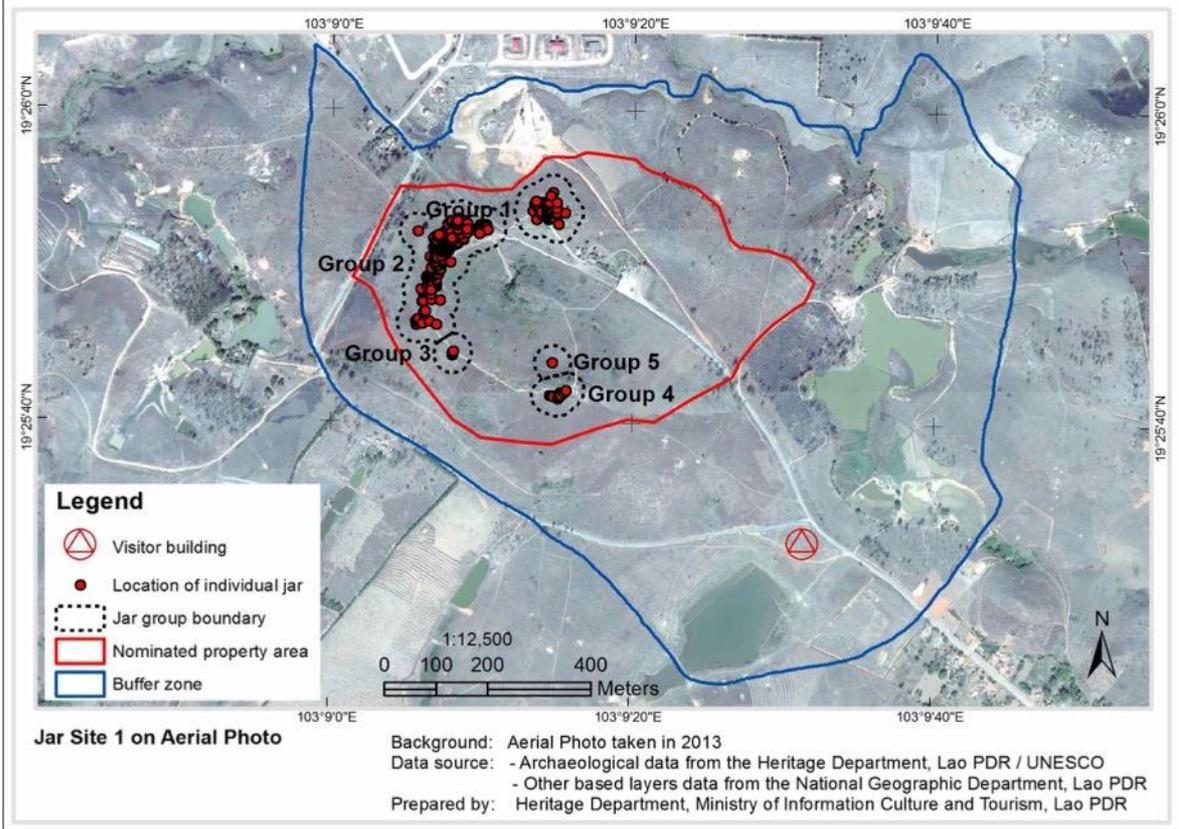
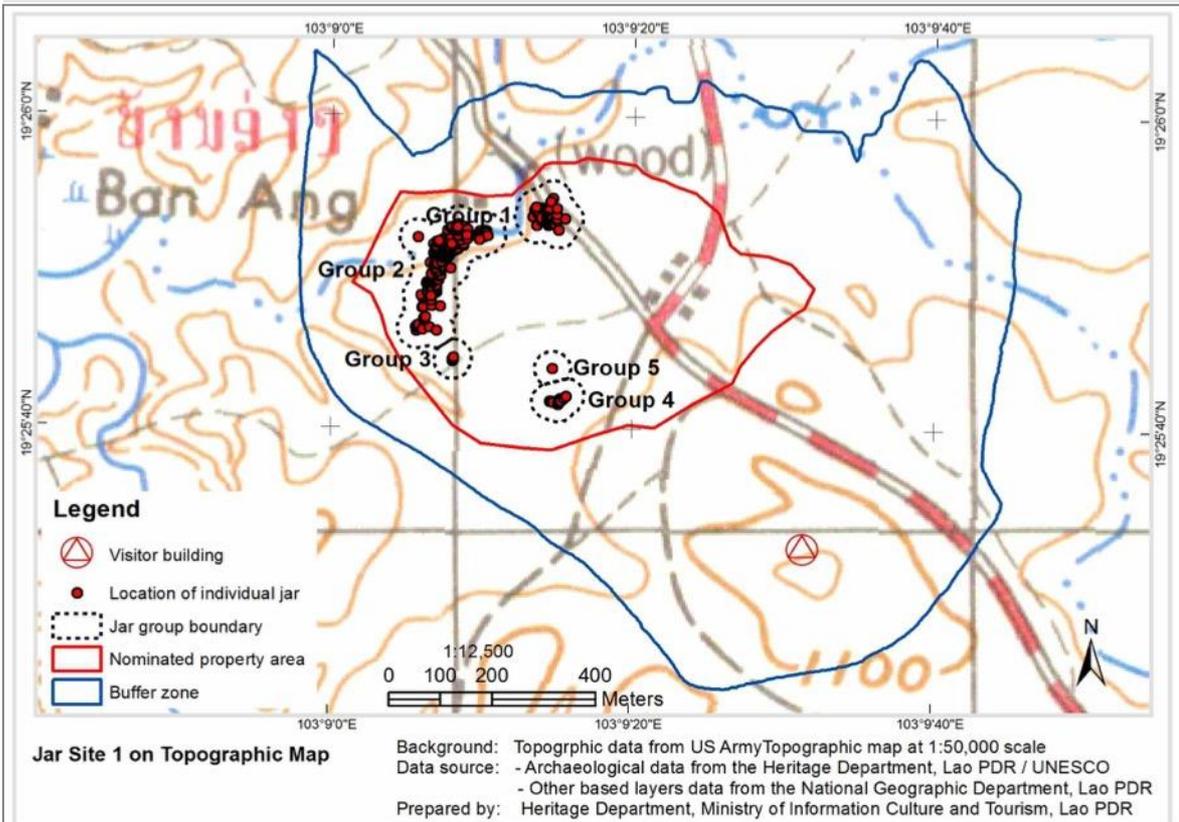


Figure 4. Site 2 plans

Source: Department of Heritage

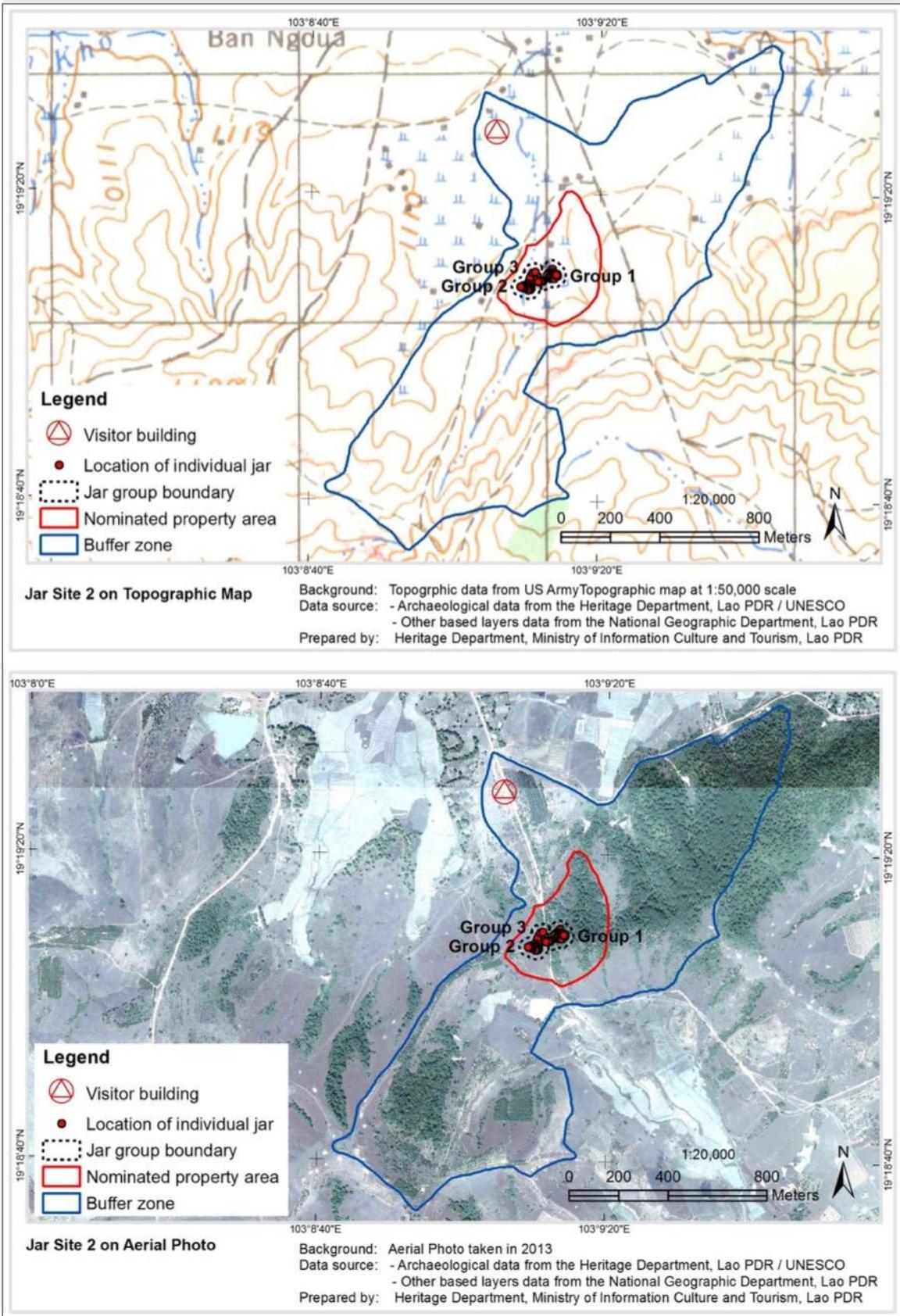


Figure 5. Site 3 – Groups 1 & 3, Site 3 – Group 2, Site 3 – Group 4, Site 3 – Group 5, Site 3 – Group 7 and Site 8 plans

Source: Department of Heritage

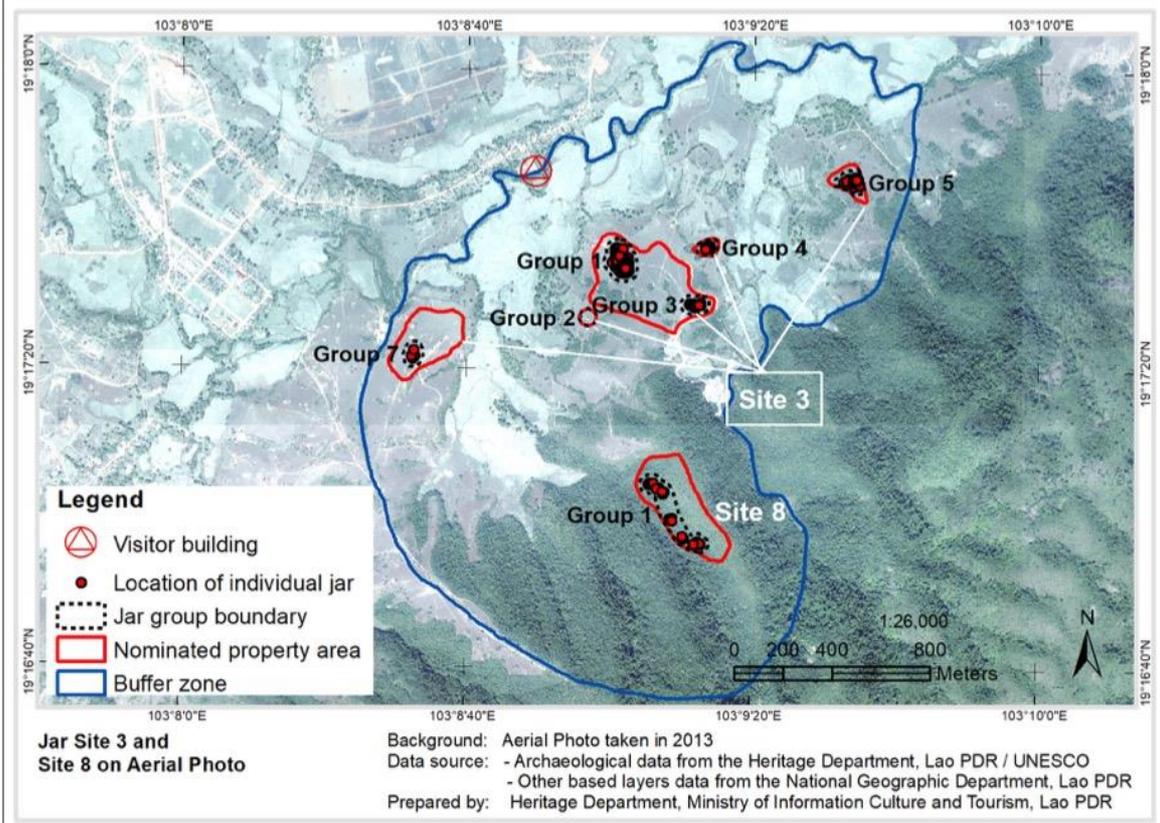
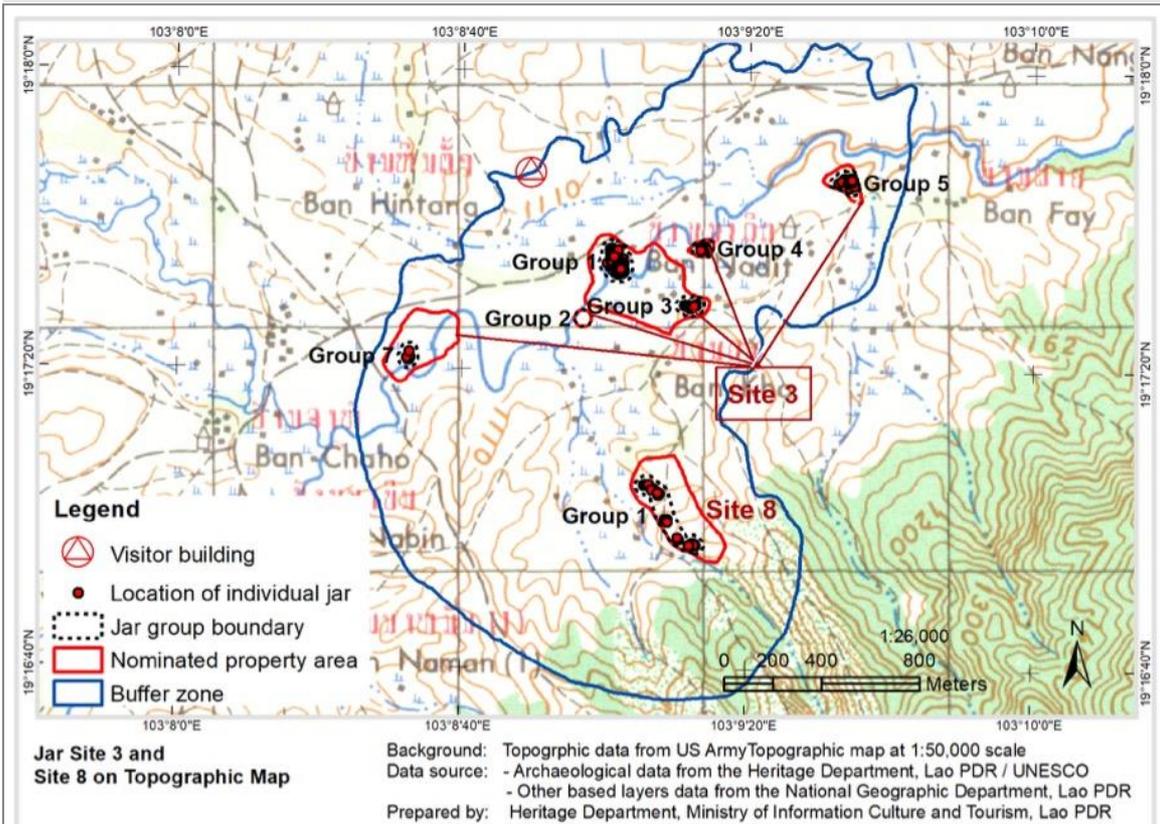


Figure 6. Sites 12 and 52 plans

Source: Department of Heritage

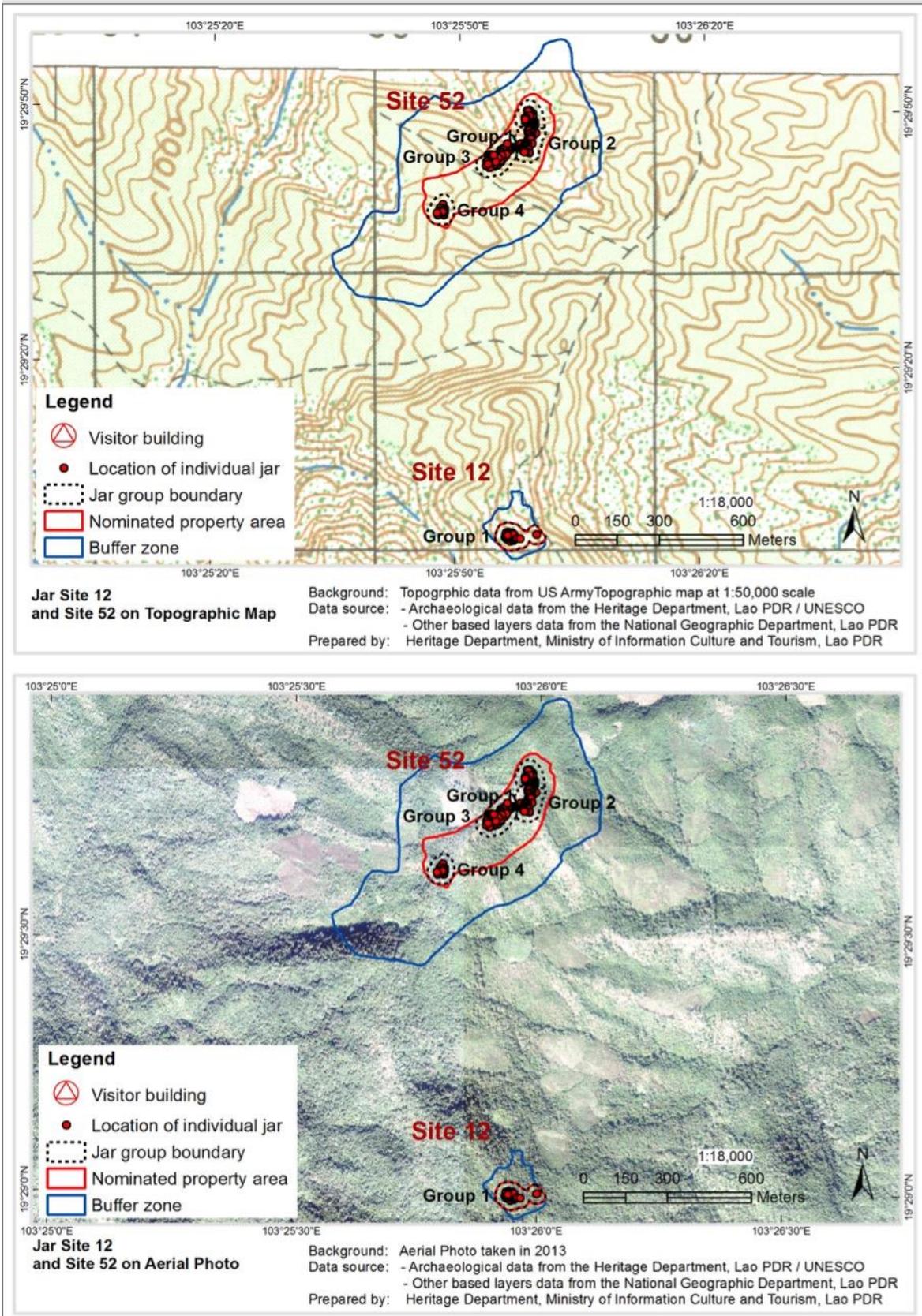


Figure 7. Site 21 plans
 Source: Department of Heritage

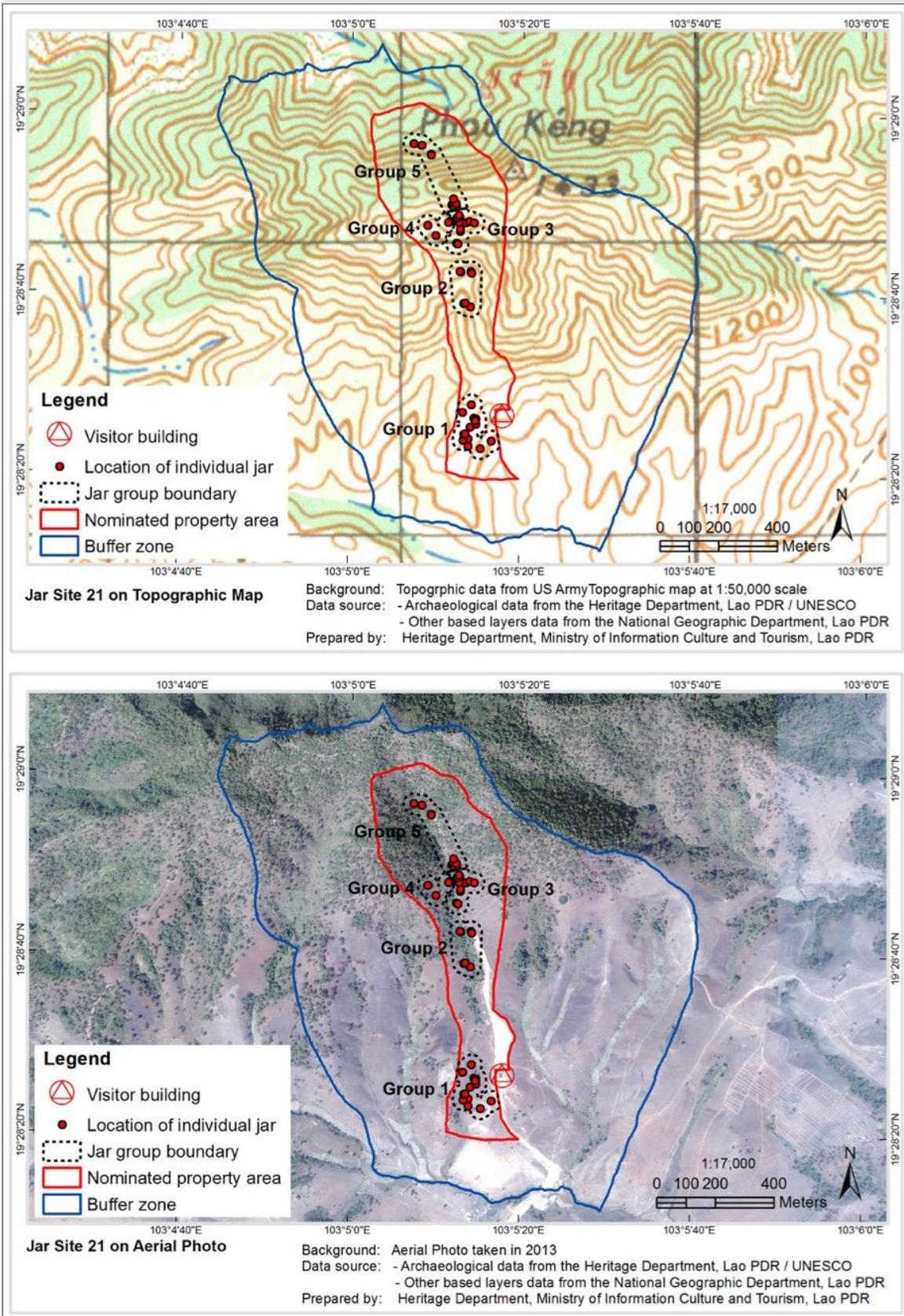


Figure 8. Site 23 plans
 Source: Department of Heritage

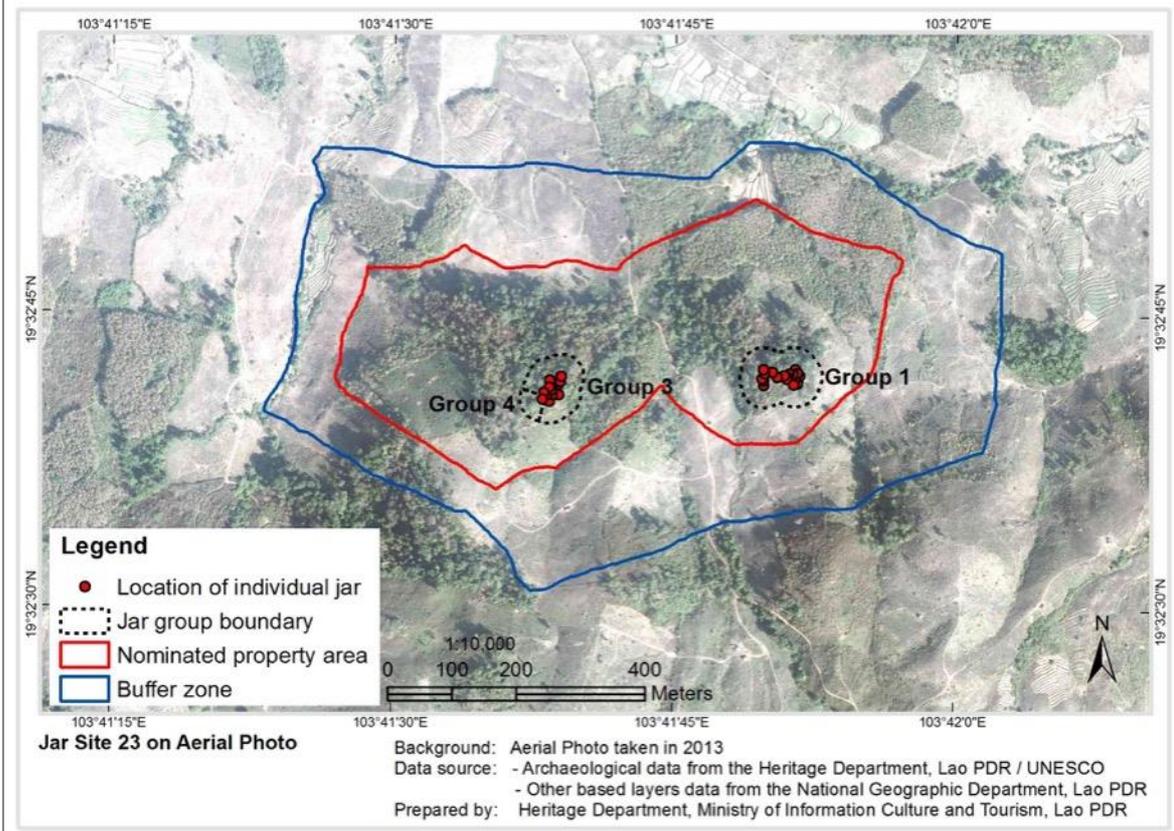
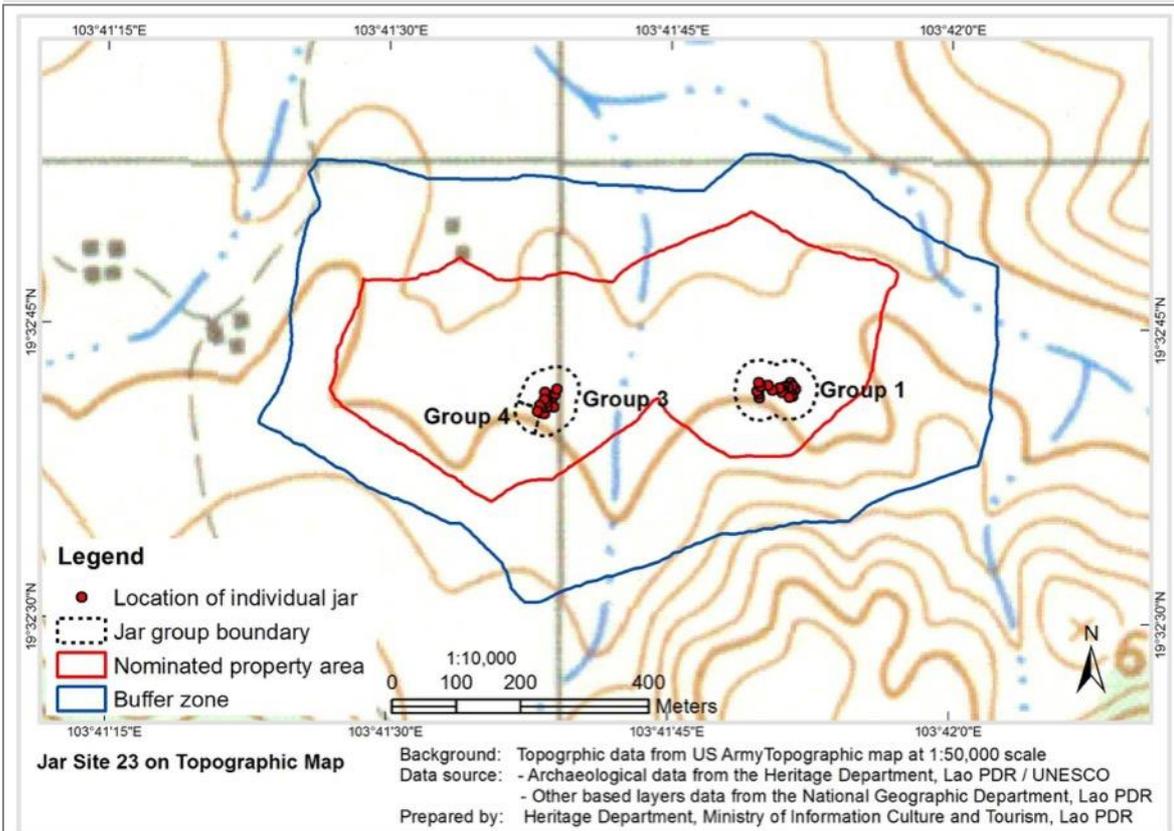


Figure 9. Site 25 plans
 Source: Department of Heritage

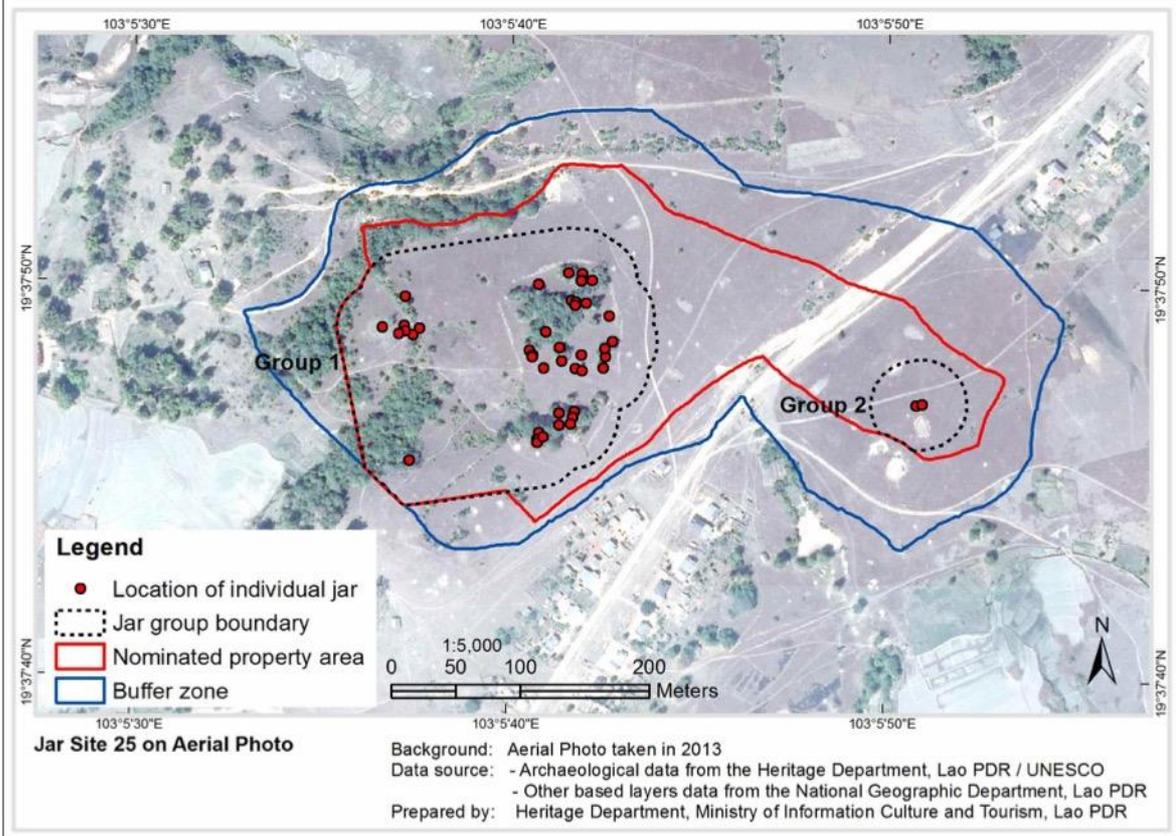
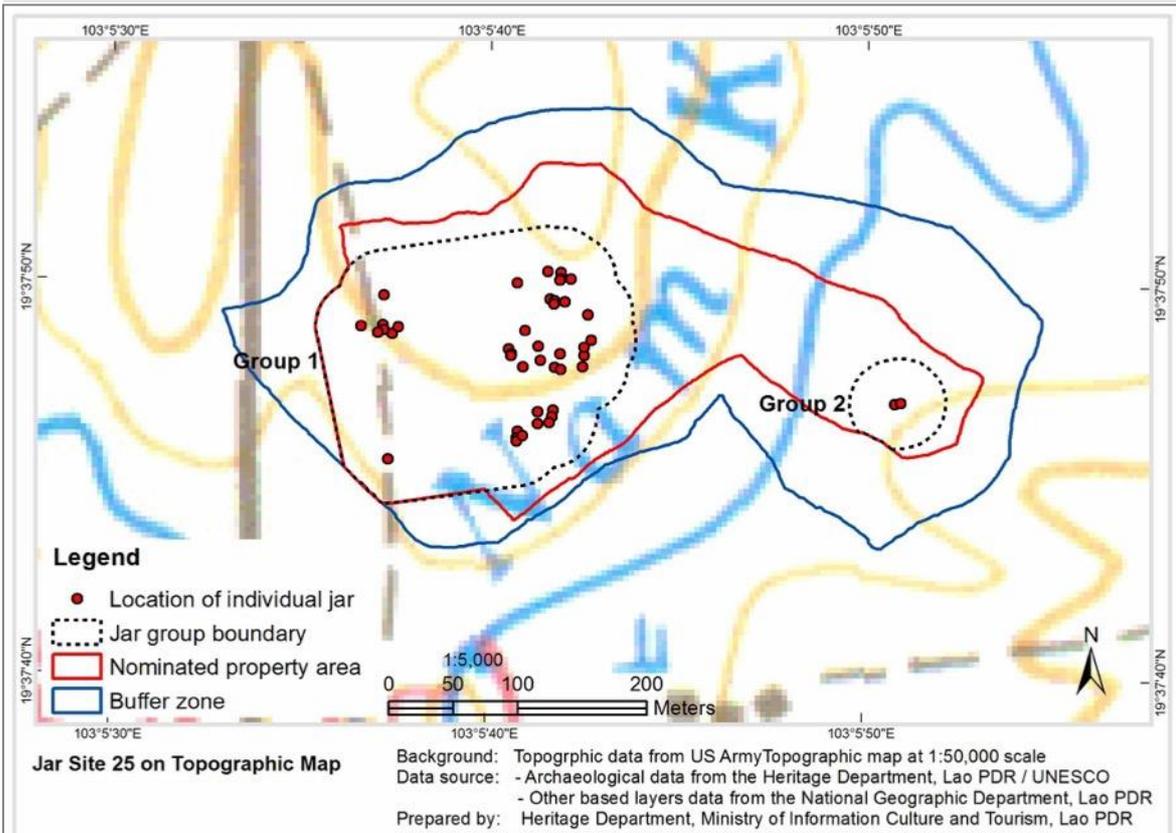


Figure 10. Site 28 plans

Source: Department of Heritage

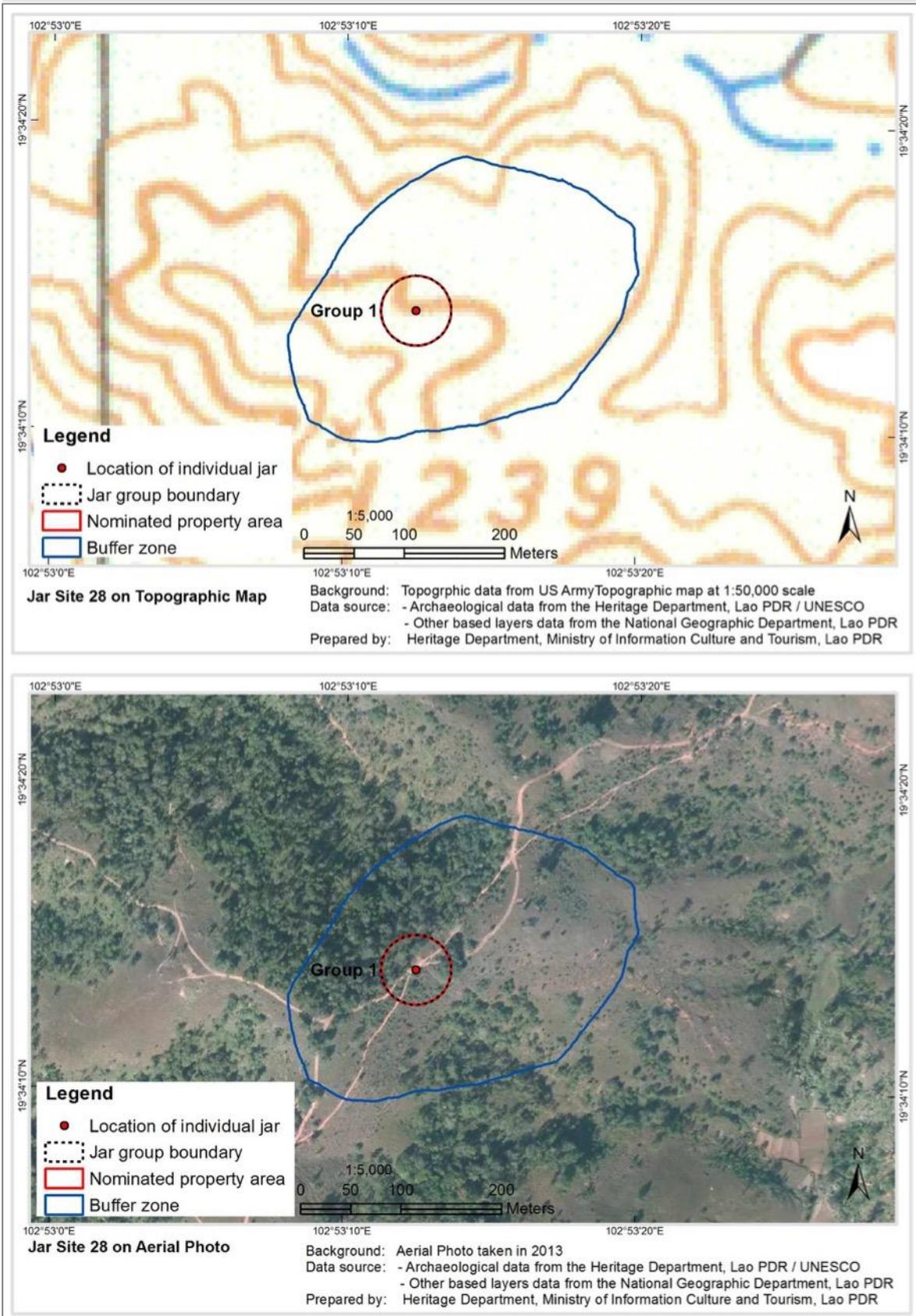
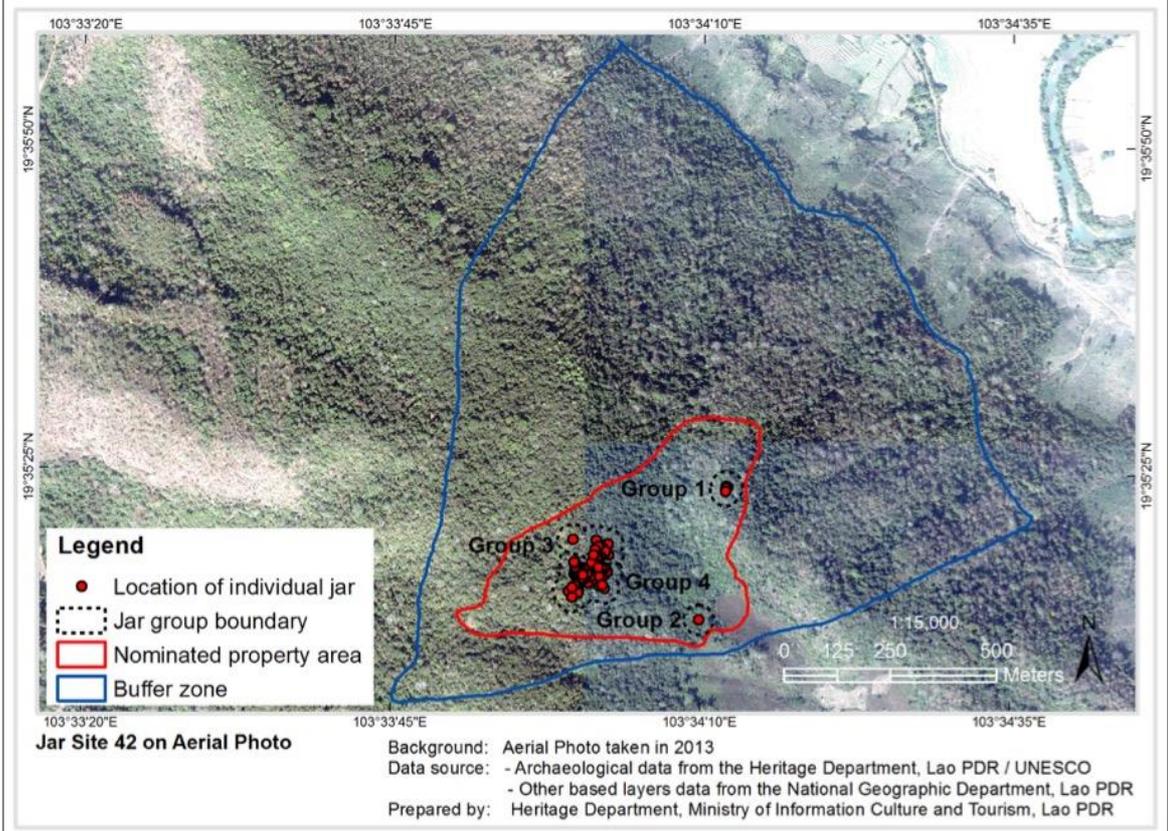
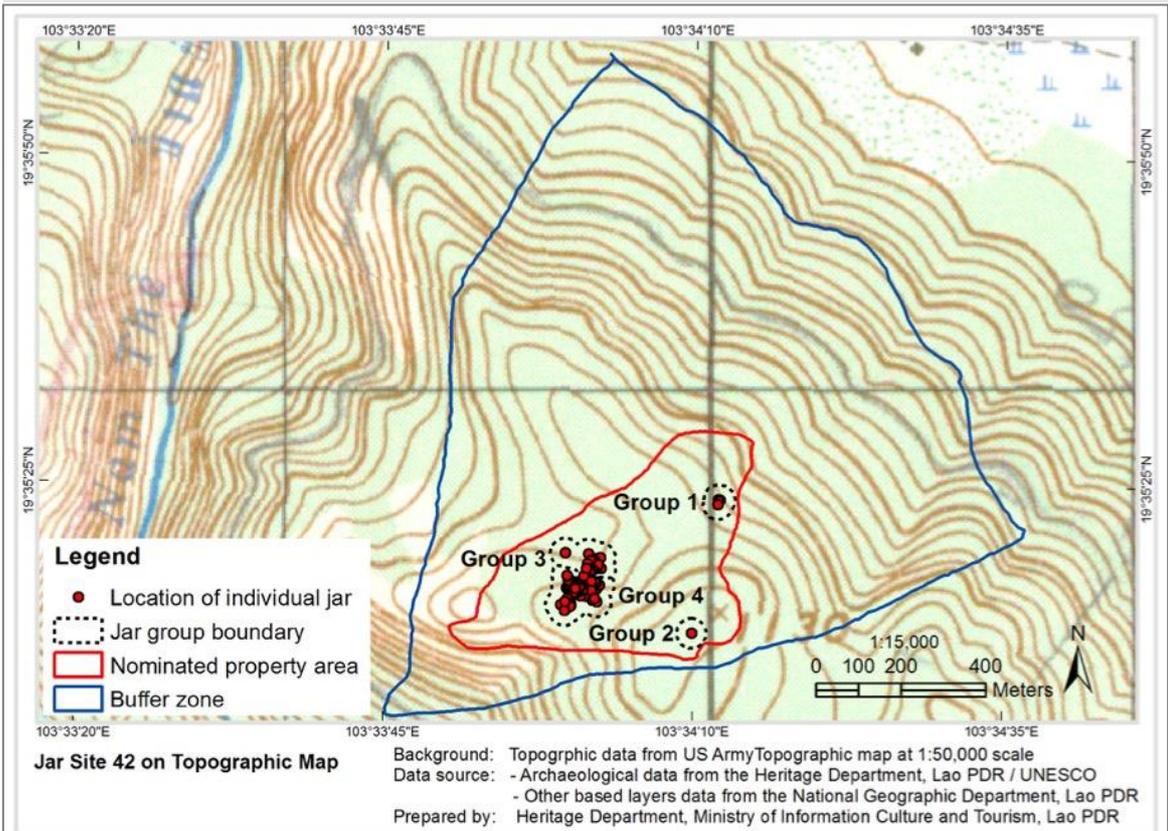


Figure 11. Site 42 plans

Source: Department of Heritage



1.F AREA OF NOMINATED PROPERTY (HA) AND PROPOSED BUFFER ZONE (HA)

The summary information about the property is provided below. Details for the component parts are provided in the table in Section 1.d.

Table 3. Area of nominated property and buffer zone	
Area of nominated property	173.56 ha
Buffer zone	1,012.94 ha
Total	1,186.5 ha

2. DESCRIPTION

2.A DESCRIPTION OF PROPERTY

This description begins with a short introduction which is followed by an overview of the jar sites in Xiengkhuang. The last part of the section is a description of each of the sites included in the nomination.

2.a.1 Introduction

Xiengkhuang Province is situated in the central east of the Lao PDR (Figure 1). The plateau of Xiengkhuang rises more than 1,000 metres above sea level and its central plain gives the name to the enigmatic landscape which includes more than 2,100 megalithic stone jars clustered in 59 surveyed sites which date from the Iron Age, and are widely known as the *Plain of Jars* (UNESCO-Lao *Safeguarding the Plain of Jars* project).

This nomination is for a small selection of key sites from this larger population. The proposed serial property focuses on the five major jar sites, which include, within relatively small areas, a very large proportion of the jars and related evidence found in the province. In addition, six smaller sites are included to ensure the range of sites is represented (ie. jar and quarry sites, as well as sites of different sizes), and also sites which give some representation of the geographic spread are included.



Figure 12. View of the Xiengkhuang plateau from Site 21 looking southeast
Source: Duncan Marshall 2015

2.a.2 Overview of the Megalithic Jar Sites in Xiengkhuang – Plain of Jars

The topography of Xiengkhuang is characterised by three distinct areas – the high plateau, low-lying graben (depressed blocks of land bordered by parallel faults), and mountains. The plateau consists of undulating landscape of grassland with isolated hills at an elevation of about 1,000 metres crossed by shallow river valleys. To the northeast of the province is a low lying, steep sided, fault-bounded graben with elevations of about 600 to 750 metres. Shallow spurs have been formed against the steep sides of the valley. The mountains attain elevations up to 2,800 metres and are often heavily wooded. It is on the lower slopes and spurs of the mountains surrounding the central plain and upland valleys to the north and south that jar sites are located (Figure 2).

The megalithic stone jars are evidence for vernacular burial tradition. Human remains

have been found inside and buried around the stone jars. The individual sites consist of clusters of stone jars but may also include a number of other typical associated elements, such as stone discs, stone grave markers, the natural limestone cave at Site 1 and burials with grave goods. Each site contains one or more clusters ranging from 1 to more than 400 jars.



Figure 13. Jar Group 2 at Site 1

Source: Duncan Marshall 2015

The elements which make up the Megalithic Jar Sites in Xiengkhuang – Plain of Jars are generally discussed below, and a description of specific jar sites within the series is provided after this.

The stone jars are the most identifiable element of the Plain of Jars. They range in height and diameter between 1 and 3 metres. The jars are tubular with a height to width ratio of 1.5:1 and are mainly distinguished by their rim execution and stone type.

The sites within the nomination include jars which are mostly sandstone at most sites, two of these sites also have jars made of conglomerate, and one site has only conglomerate and breccia jars (conglomerate at Sites 1 and 21, and conglomerate and breccia at Site 23). The majority of the jars have been manufactured with a degree of knowledge of what materials and techniques were suitable. It is assumed that Plain of Jars' people used iron chisels to manufacture the jars although no conclusive evidence for this exists.

The stone jars are undecorated with the exception of a single jar at Site 1. This jar has a human bas-relief carved on the exterior. Parallels between this 'frogman' at Site 1 and the rock painting at Huashan in Guanxi, China, have been drawn. The paintings which depict large full-frontal humans with arms raised and knees bent, are dated to 500 BCE – 200 CE. Another possible parallel is with a disc with a human figure located between Kartong and Waichung in Assam, India, and recorded in the early 20th century (Van Den Bergh, personal communication 2017).

It is presumed that the stone jars also had lids when they were being actively used for mortuary purposes, although little evidence of this has been found. It is thought lids were generally fashioned from perishable materials. It has also been suggested that stone discs found at the sites might generally also have functioned as lids, and firm evidence of this has been found at Sites 42 and 52 at least. No disc has ever been found in place on a jar in circumstances where the placement appears original. This issue is also discussed in the section below on the history of archaeological research (Section 2.b.6).

The stone discs have at least one flat side and are grave markers which were placed on the

ground surface to cover or mark a burial pit. These grave markers appear more infrequently than stone jars, but are found in close proximity. Decorations on stone discs include animal or anthropomorphic figures (thought to be monkeys, tigers and human figures – so-called frogmen), concentric circles and circular moulding. Other decorations found on discs are a central knob or loop. Genovese notes that, ‘decorations on the discs are diverse and frequent’ compared to jars (Genovese 2014, p. 232).



Figure 14. Disk with anthropomorphic figure at Site 2
Source: Duncan Marshall 2015

In some cases, discs display symbols suggestive of sun worship, and there may be some associated astronomical significance (Sayavongkhamdy, personal communication, 2017).

Similar to stone discs are stone grave markers. These stones are unworked, but have been placed intentionally to mark graves. In the case of Site 1, these are boulders of siliceous quartz breccia and the source is located a few kilometres away.

Quarries have been recorded in close proximity to the jar sites with the exception of Site 1. Various stages of manufacturing can be seen at most quarries, such as extracting of blocks, working the outer surface and commencing the aperture. Regular stone blocks defined through fault and bedding lines were also extracted and worked. Boulders were also worked into jars, though this is more likely for granite jars which are not included within the nominated property.

The natural limestone cave at Site 1 is the only known element of this type associated with a jar site.

The location and distribution of the jar sites is characterised by use of lower hill slopes and spurs surrounding the central plateau and upland valleys, access to rock for the jars and other features, and connections between the plain to the Red River and Gulf of Tonkin in the north and east, and to the Mun/Mekong River Basin in the south and west.

The Plain of Jars is situated at the crossroads of two major eco-cultural systems of Iron Age Southeast Asia – the Mun-Mekong System and the Red River/Gulf of Tonkin System. Recorded history has indicated that Xiengkhuang being situated at the northern end of the Annamite Range, provides relative easy passage from the north and east to the south and west which would facilitate trade and/or cultural exchange.

The distribution of the sites may be connected to overland routes. The early French researcher Madeleine Colani suggested that the location of the jars sites was linked to ancient trade routes and in particular to the salt trade. Colani assumed salt was a

commodity sought after by the Plain of Jars people, bringing traders to the Xiengkhuang Plateau. The Xiengkhuang area is rich in metallic minerals mainly due to granite intrusions and associated hydrothermal activity. It is interesting to note that two principal iron ore deposits exist in Lao and that both are located in Xiengkhuang. The presence and locations of the numerous jar sites in Xiengkhuang may be related to trading and mining activities.

Within the geographic setting of Xiengkhuang, the jar sites appear to reflect a network of villages linked through overland routes and/or economic activity. The jar sites show superficial regional differences such as jar form, material and number of jars per site and appear to share common characteristics such as burial practices and usually elevated location.

While there is no discernible placement pattern of location of jars within a site, they often appear more or less linear along the ridge or spur on which they have been placed. This may be due to topographical limitations, or ancient patterns of land use, or it may reflect a landscape cosmology prevailing among the now-disappeared makers and users of the jars. The jars sometimes appear in small groups within a larger site, which may be related to clan or family groups although this has not been investigated.



Figure 15. Jar Group 2 at Site 2 located on a ridgeline
Source: Duncan Marshall 2015

Overall, there are known to be 2,107 megalithic stone jars (both finished and unfinished), 207 disks and 672 rocks/grave markers clustered in 59 surveyed sites located in Xiengkhuang, and a further 26 sites are known but have yet to be surveyed. It is from this overall collection of 59 sites that 11 sites have been selected for the nominated series.

A sample extract of the current site database is provided in Annex B.

2.a.3 Site Descriptions

This section provides a summary description of the 15 components at 11 sites included in the series – Sites 1, 2, 3 – Groups 1 & 3, 3 – Group 2, 3 – Group 4, 3 – Group 5, 3 – Group 7, 8, 12, 21, 23, 25, 28, 42 and 52. Key information about the sites is provided in the following tables and these are followed by descriptive text for each site.

Table 4. Overview Property Data

Site No.	District	Village name		Site type	No. of groups	Stone type	Rim style of jars						Unexploded Ordnance Clearance
		Present name	Old name				FR	RIR	OR	RIR-O	PR	CR	
Major jar sites													
1	Paek	Na O/Ban Ang	Ban Ang	J	5	S, C	Y	N	Y	N	Y	N	JG, P
2	Phaxay	Ban Na Kho	Phousalato or Latsen	J	3	S	Y	Y	Y	Y	N	N	JG, P
3	Phaxay	Ban Xiengdi	Ban Soua	J	6	S	Y	Y	Y	N	N	N	JG, P
42	Kham	Phou Xang		QS	4	S	Y	Y	N	N	N	N	N
52	Paek	Ban Phakeo		QS	4	S	Y	Y	Y	N	N	N	JG, P
Quarry sites which complement major jar sites													
8	Phaxay	Ban Xiengdi		Q	1	S	Y	Y	N	N	N	N	P
21	Paek	Khangnongluang		Q	5	S, C	Y	Y	Y	N	N	Y	Y
Manufacturing site													
12	Paek	Ban Phakeo		MS?	1	S	?	?	?	?	?	?	JG, P
Smaller jar sites													
23	Kham	Ban Namhom		QS	4	C, B	Y	Y	Y	N	N	N	JG, P
25	Phoukood	Khum Songhak		J	2	S	Y	N	Y	N	N	N	JG
28	Phoukood	Ban Nakhuan		QS	1	S	Y	N	N	N	N	N	N

Legend

Types of sites

J = field of jars
 Q = quarry
 QS = field of jars +
 manufacturing site (generally
 near a quarry)
 MS = manufacturing site

Main rock types

S = sandstone
 G = granite
 L = limestone
 C = conglomerate
 B = breccia

Rim styles of jars

FR = Flat rim
 RIR = Recessed inner rim
 OR = Outer rim
 RIR-O = RIR & Outer rim
 PR = Prominent rim
 CR = Collar rim

Unexploded Ordnance

Clearance
 JG = Jar Group/s
 N = No clearance
 P = Pathway/s
 Y = Cleared

Table 5. Numbers of Attributes in the Property

Component	Jars								Stones							Disks							Total			
	Group No.							Total	Group No.							Total	Group No.							Total		
	1	2	3	4	5	6	7		1	2	3	4	5	6	7		1	2	3	4	5	6			7	
1	60	256	4	13	1			334	51	233	1	17	1			303	7	23							30	667
2	55	36	2					93								0	6	8							14	107
3 – Groups 1 & 3	159		27					186	20							20	33								33	239
3 – Group 2		2						2								0		2							2	4
3 – Group 4				16				16								0				1					1	17
3 – Group 5					34			34					1			1					1				1	36
3 – Group 7							4	4								0							1		1	4
8	12							12	10							10									0	22
12	32							32	11							11	6								6	49
21	14	2	7	4	7			34		3	6	3				12		2							2	48
23	16		10	1				27	21		6					27	1								1	55
25	31	2						33	1							1	8								8	42
28	1							1								0									0	1
42	3	1	40	69				113				14				14	1			9					10	137
52	112	85	185	22				404								0	23	30	42	11					106	510
Total								1,325								399								215	1,939	

Site 1 – Na O and Ban Ang is a major jar site located 8 kilometres from the provincial capital Phonsavan. It is the most central jar site and the only one located on the actual plain. Site 1 remains the most investigated site to date and archaeological evidence ranging from the Neolithic to the 19th century has been discovered in burials, cultural layers and incidental finds.

The archaeological evidence indicates that Site 1 was occupied at least since the Neolithic period and the French archaeologist Madeleine Colani even ventured a Palaeolithic date with stone material recovered from within a natural limestone cave at Site 1. The original people associated with the Plain of Jars placed stone jars on the ground and cut burial pits into this surface around the stone jars, in the estimated period of 2000 ± 500 years ago. Archaeological material deposited on top of that ancient surface which consists of burial ‘dumps’, iron knives, Chinese pottery and coins have been recorded around the stone jars. These may be testimony of the Chinese Haw bandits’ intentional disturbance and destruction of the site during the 18-19th centuries or, as C14 dating of one dumped burial assemblage suggested, as early as the 11th century (UNESCO-Lao *Safeguarding the Plain of Jars* project).

The site currently includes 334 sandstone and conglomerate stone jars, 30 discs and 303 mainly quartzite stone markers. The jar resources are found in 5 groups all located within short walking distance of each other within an area of about 34 hectares. The site includes decorated disks and the only decorated stone jar in the province – this jar has a human bas-relief carved on the exterior representing a human standing and raising his arms. The area where the stone of the jars was sourced is located at a distance of over 8.5 kilometres, which is the furthest recorded distance between a jar site and its quarry.

A 2017 survey found 315 jars, 25 discs and 582 stones. This data is yet to be integrated with the formal Department of Heritage inventory.

Colani recorded intentional breakage of jars by Haw bandits. She recorded 18 jars broken out of approximately 50 at Group I; 84 smashed out of 208 at the largest Group II; and 7 jars damaged out of 16 at Groups III and IV (Colani 1935, Vol. 1, pp. 121-2).

Later figures indicate a significant rise in damage most likely resulting from the Second Indochina War. For example, at Group I, out of 60 recorded jars 37 are broken or fragmented, and at Group II, 149 jars are fragmented or broken out of 256 jars recorded in 2001. A 2016 survey indicated about 63% of jars were broken or fragmented. Colani included a schematic Site 1 jar distribution map and photographs in her published monograph. Comparing this schematic with the current situation shows that at least 5 jars were displaced by exploding bombs at Group I. Recent research suggests either Colani’s sketch map is not fully accurate or that there has been a considerable movement of jars.

Excavations at Site 1 have revealed several pit burials surrounding the jars. Japanese archaeologist Eiji Nitta found no less than seven burial pits surrounding the stone jar with carved human representation. Lao archaeologist Thongsa Sayavongkhamdy excavated three burials alongside a jar at Group II and in 2004 the Plain of Jars project, a major UNESCO supported research project, discovered two burial jars in an excavated area of 1 x 1.5 metres (Van Den Bergh, personal communication, 2017; O’Reilly and others 2016, p. 7). If these investigation results are projected onto the entire site, between 1,000-2,500 burials could be present at Site 1. Non-invasive technology such as ground penetrating radar (GPR) may be used to test this theory.

The most recent archaeological research at Site 1 has been conducted by a team from the Australian National University and University of Melbourne in 2016, including three excavations which are the first major archaeological dig at the Plain of Jars since the 1930s. In summary,

‘The recently concluded field season has established that the jar field was used for mortuary purposes, with evidence for primary and secondary burials and potentially buried inhumation jars [since confirmed]. There is no evidence of any occupation at the site, and the period of activity appears, based on the distribution of debitage and artefacts, to have been chronologically limited, although a better understanding of dating should emerge when radiocarbon samples are processed. It is clear that a range of grave markers were used, including sandstone discs, limestone boulders and quartz-veined blocks.’ (Shewan, O’Reilly & Luangkhoth 2016)

This research has established dates for secondary burials much later than previously identified by some researchers, in the period about 900-1200 CE, although these are consistent with Nitta (1996).

The natural limestone cave at Site 1 has an opening to the northwest and two human-made holes in the ceiling of the cave. Colani interpreted the cave as a crematorium and columbarium, with the holes acting as chimneys. However, more recent consideration of the crematorium hypothesis has questioned this use, and suggested Neolithic occupation and use including the use of fires but not for cremation (personal communication, Thongsa Sayavongkhamdy, 1 October 2016).



Figure 16. Jar Group 2 at Site 1
Source: Duncan Marshall 2015



Figure 17. Stone disc with concentric circle markings at Site 1, Group 2
Source: Duncan Marshall 2015

Site 1 was a strategic military position during the 1965-75 Second Indochina War.

Trenches, foxholes, anti-aircraft positions and tank scrapes were constructed and used by the various warring factions at some point during the war. There are also a number of bomb craters. A number of jars were destroyed and displaced as a result of this conflict. Site 1 is important in current day Lao history because of these wartime activities and a number of associated features are conserved as part of the interpretation of this story (eg. trenches).

Only the jar groups and pathways have been cleared of unexploded ordnance but not the whole site. Additional UXO clearance is planned.

The site is also the major tourist destination related to the jar sites in the province, being close the provincial capital. It has a large visitor centre with interpretive displays and tourist shops some distance from the jars groups. The site is fenced with a permanent security guard.

New boundary markers are planned to better mark the site.



Figure 18. Jar with anthropomorphic figure in Jar Group 2 at Site 1

Source: Duncan Marshall 2015

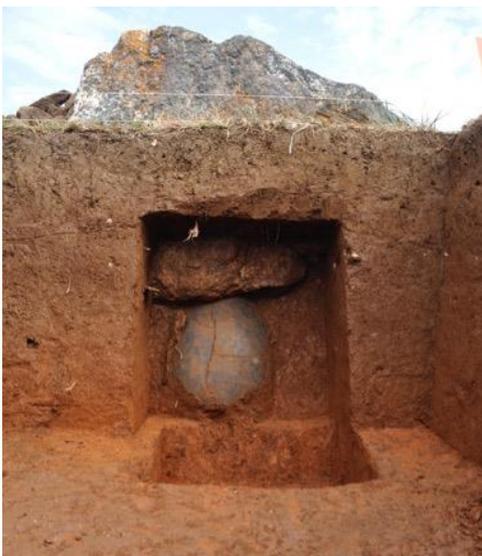


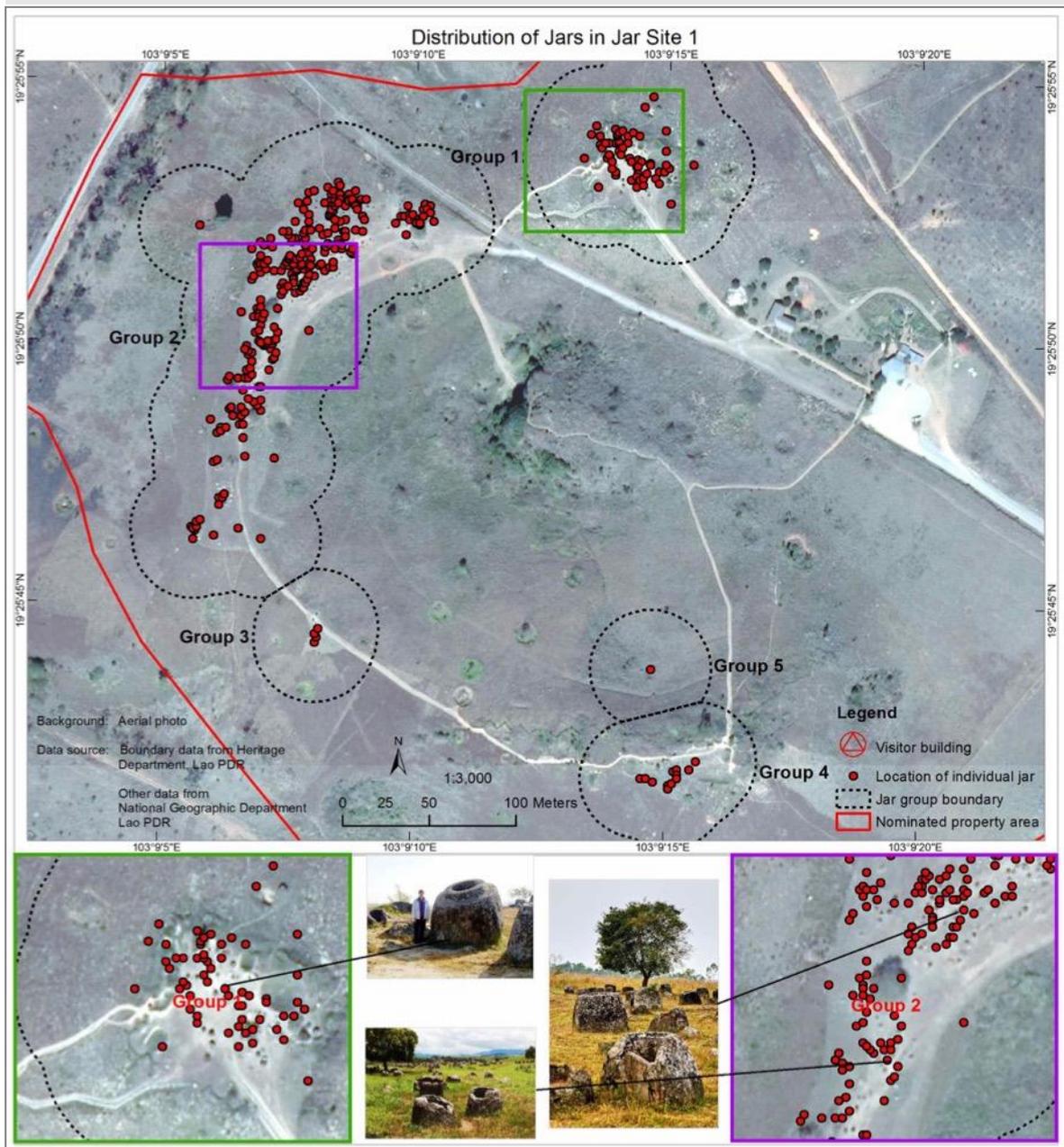
Figure 19. Ceramic burial jar underneath stone marker at Site 1

Source: Plain of Jars Archaeological Project 2016



Figure 20. Visitor centre at Site 1
Source: Duncan Marshall 2015

Figure 21. Distribution of Jars at Site 1
Source: Department of Heritage



Site 2 – Ban Na Kho is a major jar site and one of the most visited along with Sites 1 and 3. It is located on a hill ridge near the edge of the plain in Phaxay District, approximately 20 kilometres from Phonsavan. The site is divided into 3 groups and is dissected by a road. The road constructed during the French colonial period has resulted in significant slope erosion and the displacement of jars. The jars at Site 2 are made of sandstone – in total 93 jars and 14 discs were recorded. The site includes decorated stone disks.

Archaeological investigations by Colani and Sayavongkhamdy suggest that no subsurface graves surround the eastern jar group (Colani 1935, Vol. II, pp. 64-68; Personal communication, Khamman Phimmasan, 1990s excavation team member). Very little material has been recovered from Site 2 but recent investigations revealed fragments of a soft, friable white paste pot (Archaeological Assessments 2005). It was suggested that this pot may be similar to Sa Huynh pottery which is associated with secondary burial sites in central Viet Nam and may date to 2,000 years ago (Personal communication, Nguyen Thuong Hy). Site 2 includes a disc with bas-relief set in concentric raised circles. The central figure is not easily identified and suggestions have been made that it represents a frog or human figure.

Only the jar groups and pathways have been cleared of unexploded ordnance but not the whole site. Additional UXO clearance is planned.

The site has a minor visitor centre with interpretive displays, a restaurant/shop, toilets and carpark, located some distance from the jar groups.



Figure 22. Part of Jar Group 1 at Site 2

Source: Duncan Marshall 2015



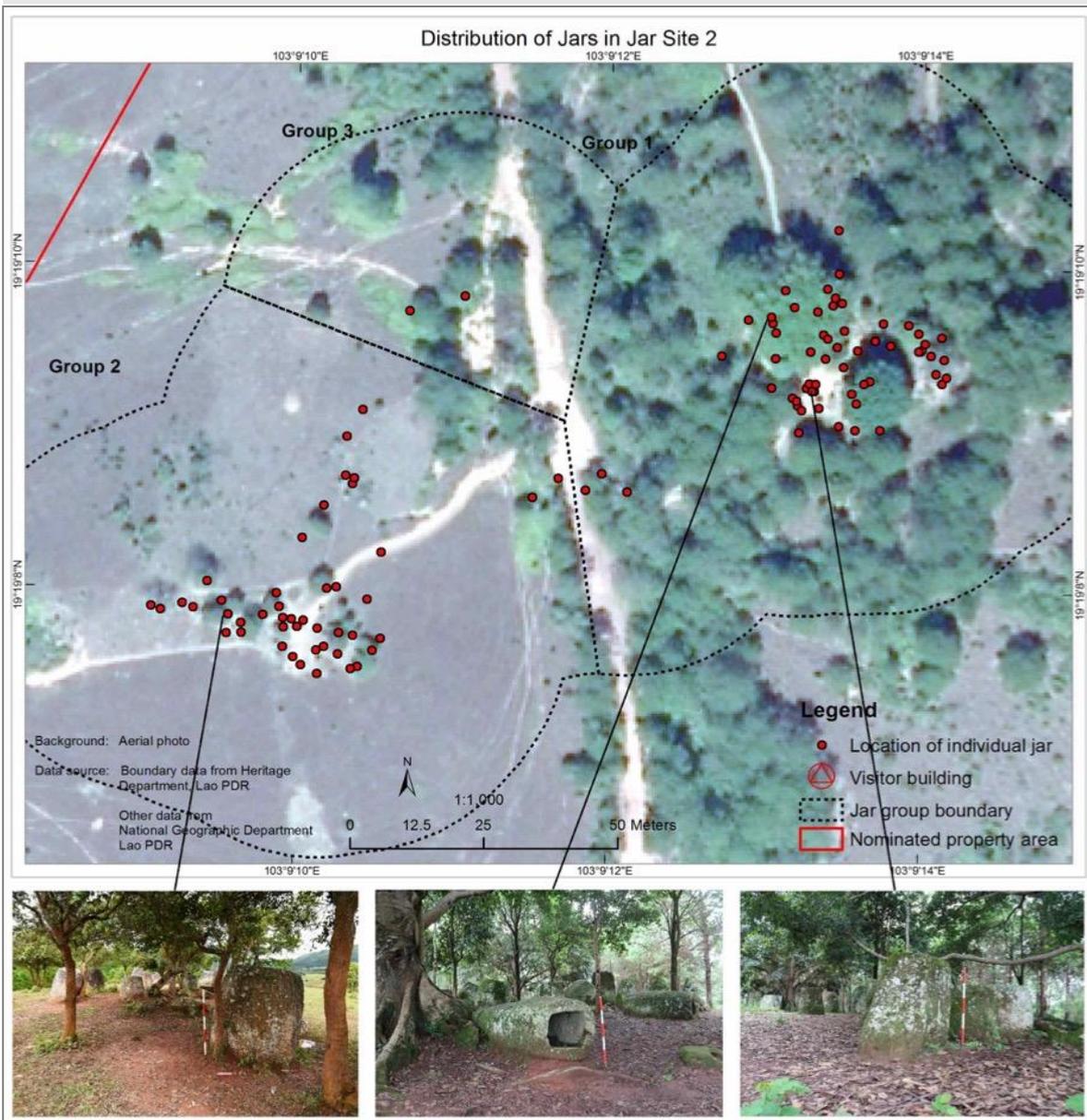
Figure 23. Stone disc with concentric circle markings and anthropomorphic figure at Jar Group 2, Site 2

Source: Duncan Marshall 2015



Figure 24. Visitor centre at Site 2
Source: Duncan Marshall 2015

Figure 25. Distribution of Jars at Site 2
Source: Department of Heritage



Site 3 – all components – Ban Xiengdi is a major jar site located a few kilometres to the southwest of Site 2 and consists of 5 components with 6 groups. The jar site groups are located on lower hill slope spurs and overlook the expansive plain. The quarry of the jar resources has been located further up the hill slope (Site 8), and all jars are sandstone.

The groups are located within 600-700 metres of each other. Group 6 is more distant from the other groups, has only a small number of features, and is not included in the property.

The archaeological investigations¹ conducted at Site 3 indicate the presence of burials surrounding the stone jars as well as pottery fragments, glass beads, iron, charcoal, human bones and teeth inside some jars.

Only the jar groups and pathways have been cleared of unexploded ordnance but not the whole site. Additional UXO clearance is planned.

The site has a minor visitor centre with interpretive displays, a restaurant, toilets and carpark, located some distance from the jar groups.

New boundary markers are planned to better mark the site.

Additional information about the specific components which are part of Site 3 is provided below.

Site 3 – Groups 1 & 3 – Ban Xiengdi includes the main group, Group 1, which is located to the south of the present village and includes 159 jars, all sandstone, 33 discs and 20 stones. Group 1 is a moderately-sized area on gently sloping or flat ground and includes a dense grouping of jars. The area is grassed with an open woodland of small trees, set within a timber and wire fence.

Group 3 is a short distance to the southeast of Group 1. It is a small group of 27 jars. Set on a low rise in open grassland, the jars are mostly set among small trees and shrubs.

The remainder of this component is open and undulating farm land or small areas with trees and shrubs.



Figure 26. Jar Group 1 at Site 3
Source: Duncan Marshall 2015

¹ Colani and Sayavongkhamdy both excavated at Site 3. In addition, a single test pit was conducted during the UXO clearance program in 2004-5 to verify the context of a cache of iron knives.



Figure 27. Jar Group 3 at Site 3
Source: Duncan Marshall 2015

Site 3 – Group 2 – Ban Xiengdi is a very small component with a very small number of features – 2 jars and 2 disks. Located on gently sloping ground, the jars are located among small trees and shrubs.



Figure 28. Jar Group 2 at Site 3
Source: Duncan Marshall 2016

Site 3 – Group 4 – Ban Xiengdi is a small component with a limited number of features – 16 jars and 1 disk. Located on a flat area in open grassland, the jars are set among small trees and shrubs. The jars are within a concrete post and wire fenced enclosure.



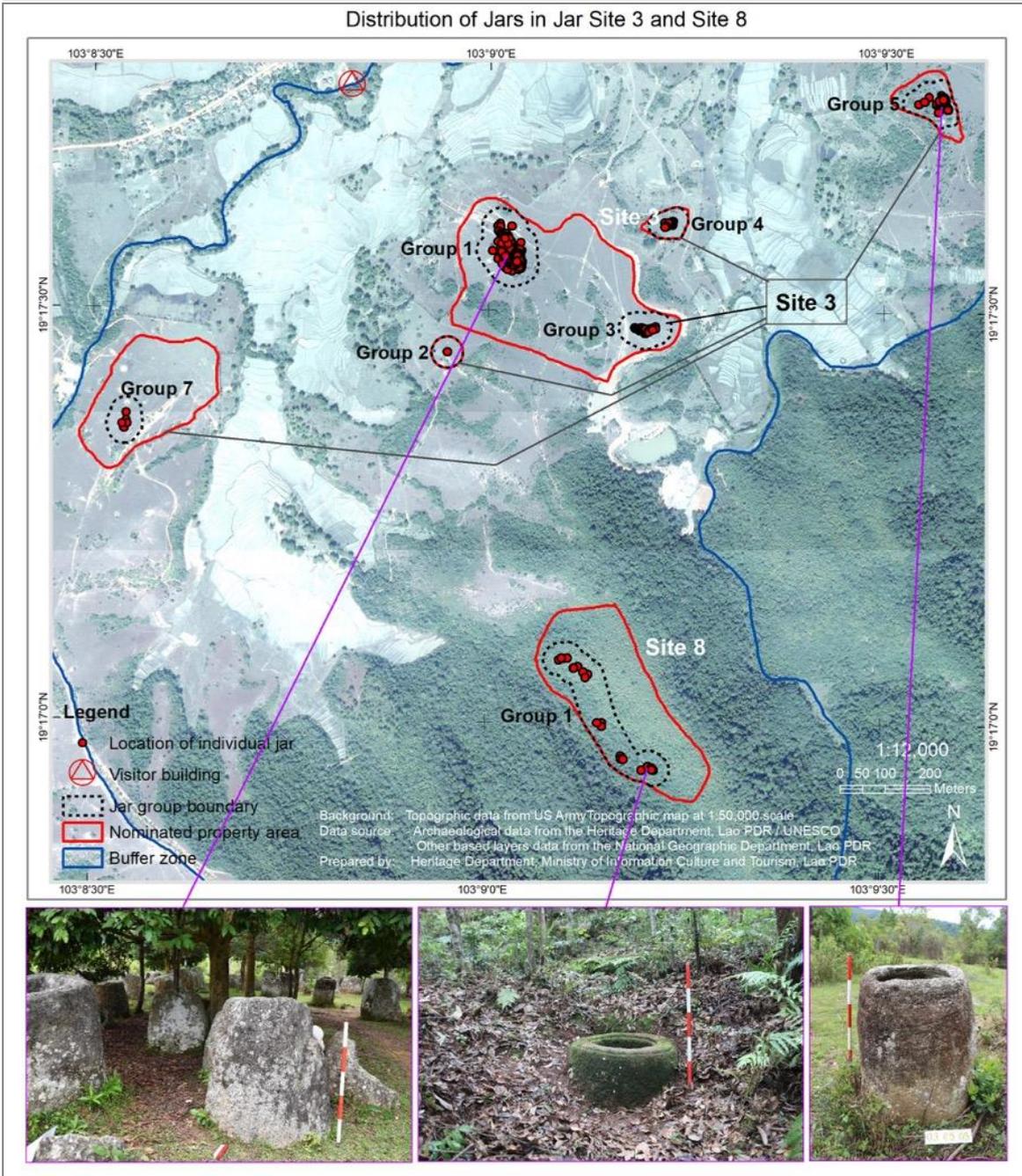
Figure 29. Jar Group 4 at Site 3
Source: Duncan Marshall 2015

Site 3 – Group 5 – Ban Xiengdi is a small component with a limited number of features – 34 jars, 1 disk and 1 stone. The area is grassed with a scattering of trees.

Site 3 – Group 7 – Ban Xiengdi is a very small component with a very limited number of features – 4 jars and 1 disk. This is an open grass area with a few groups of trees.

Figure 30. Distribution of Jars at Site 3 – Groups 1 & 3, Site 3 – Group 2, Site 3 – Group 4, Site 3 – Group 5, Site 3 – Group 7 and Site 8

Source: Department of Heritage



Site 8 – Quarry site at Ban Xiengdi is to the south of the Site 3 jar groups, located on the hill slopes of the mountains. There are several quarry areas and various groups of unfinished, broken and complete sandstone jars, the complete jars presumably ready for transport to the site. Preliminary identification of the rock suggests that this mountain is the source of the Site 2 and Site 3 jars.

The site has not been cleared of unexploded ordnance, apart from the access pathway. Additional UXO clearance is planned. Nonetheless, access is only possible if accompanied by a villager.

There are no visitor facilities at the site but it shares the facilities for Site 3.



Figure 31. Part of quarry at Site 8
Source: Duncan Marshall 2016

Site 12 – Ban Phakeo lies in a forest on the tip of a mountain ridge overlooking the wide mountain range to the southwest, on the ridge of the main Ban Pakeo site (Site 52) towards the west. Among the 32 recorded red sandstone jars are both finished and unfinished products, and 6 discs were also recorded. The site includes decorated stone disks.

Sixty percent of the jars are in good condition and 40% are damaged, especially as a result of falling trees.

Another 2017 survey found 43 jars, 28 being unfinished and 13 broken. This data is yet to be integrated with the formal Department of Heritage inventory.

There have been differing expert views about the nature of this site over time, with some concluding that it is a quarry site, and related to Site 52. The relatively large number of unfinished jars strongly suggests either a quarry or manufacturing site rather than a jar site. However, geological evidence indicates it is more likely a manufacturing site, not related to Site 52, and the quarry site may be located close by but it has not yet been found because of dense vegetation.

Only the jar group and pathway have been cleared of unexploded ordnance but not the whole site.

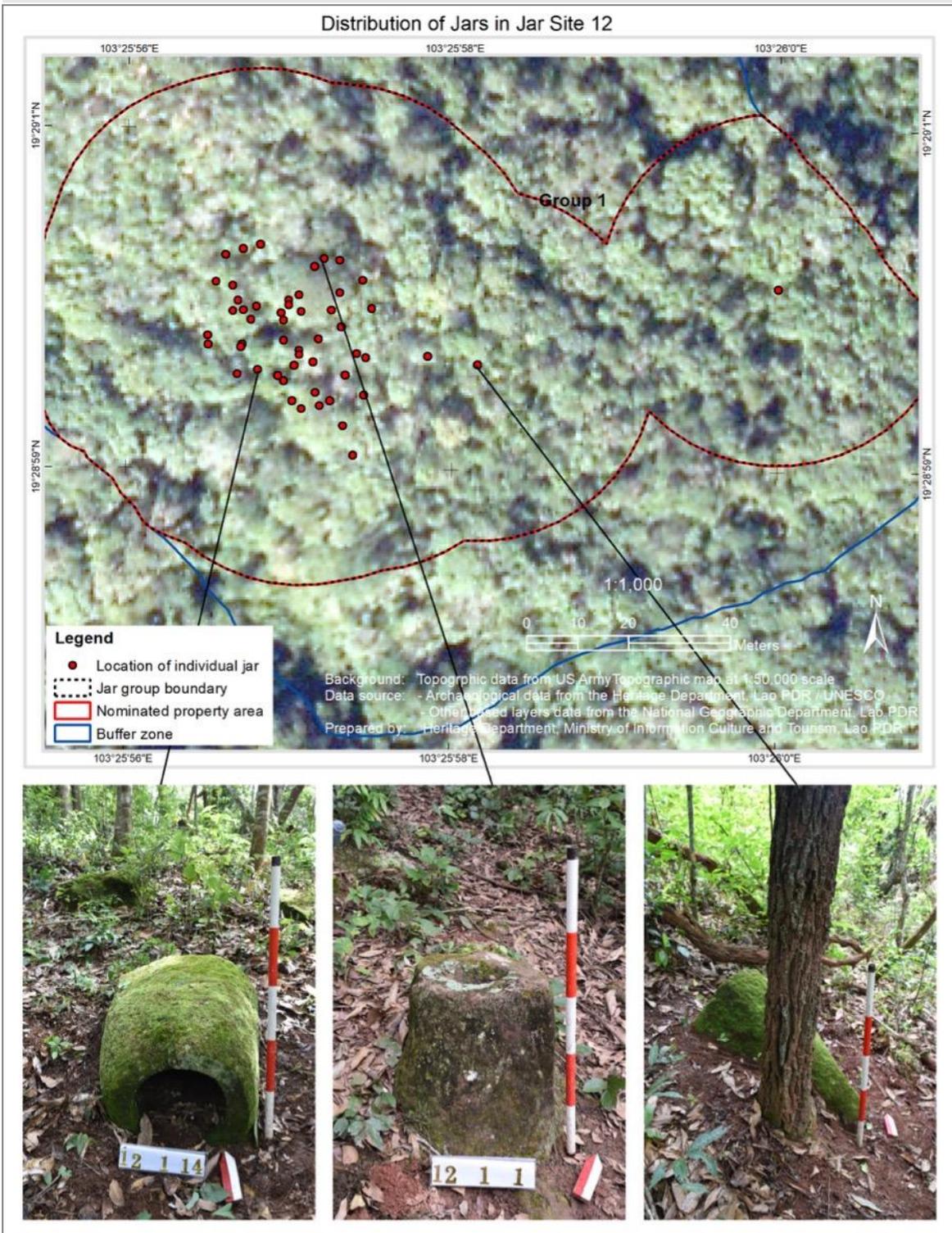
This is a remote site with no facilities.



Figure 32. Site 12
Source: Samlane Luangaphay 2016

Figure 33. Distribution of Jars at Site 12

Source: Department of Heritage



Site 21 – Khangnongluang is the largest recorded quarry site, the quarry area being approximately 20 hectares, and it has been scientifically proven as the source of jars for Site 1. The site is sometimes referred to as Phoukeng. The quarrying process can be followed through various stages at this site. Unfortunately, the area was heavily bombed during the war. UXO clearance has been completed for the property. The unfinished or rock source for the jars can be found on the steep hills of the mountain. Jars are also located on the lower, gentler slopes leading to the main quarry area. It is possible that these jars were being transported to Site 1 but were abandoned for unknown reasons.

While most jars are sandstone, a few conglomerate jars are also present.

The site has a minor visitor centre with no current interpretive displays, toilets and carpark, located some distance from the quarry.

This site also includes historically significant wartime features.

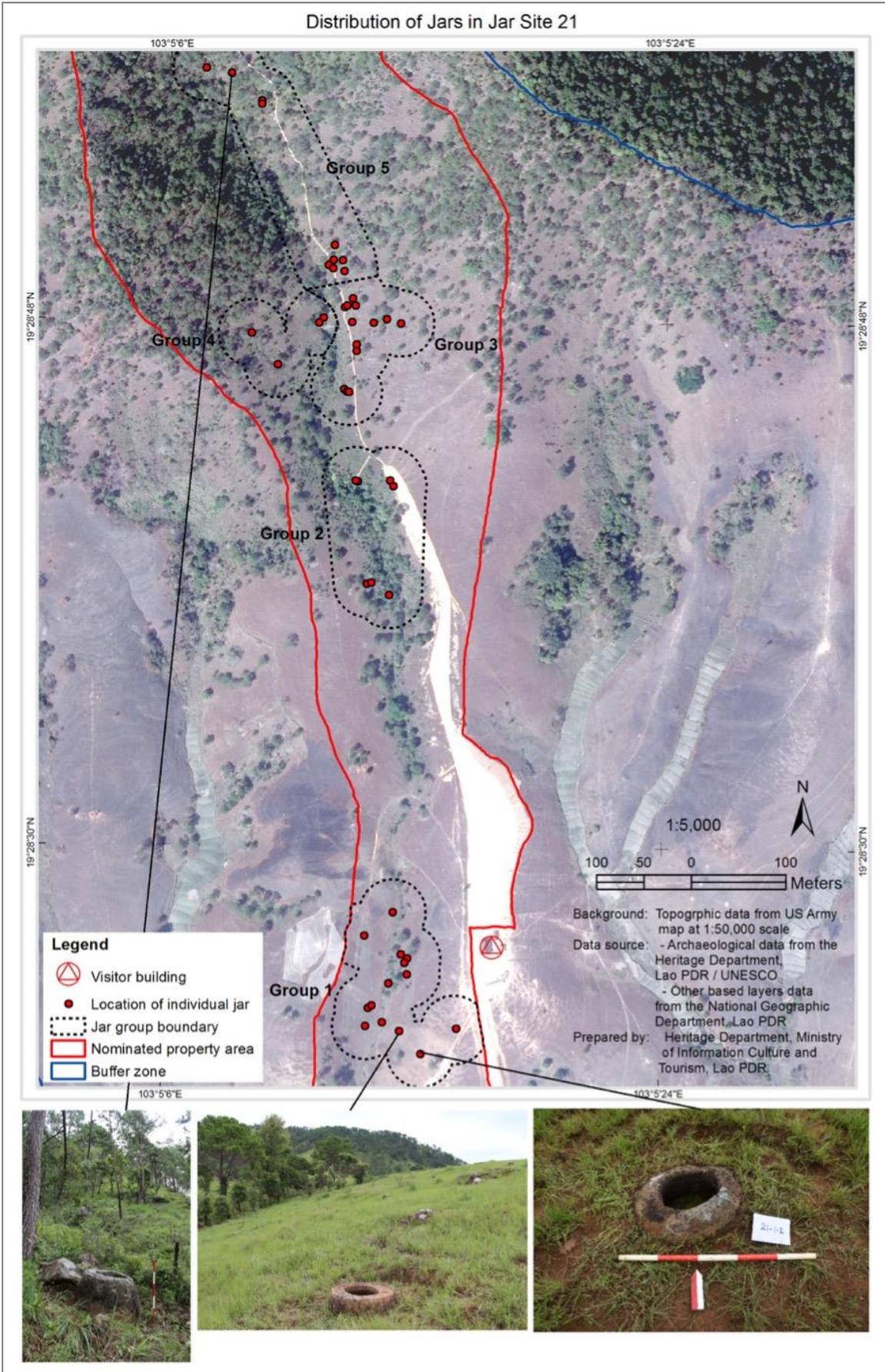


Figure 34. Part of Jar Group 3 at Site 21

Source: Duncan Marshall 2015

Figure 35. Distribution of Jars at Site 21

Source: Department of Heritage



Site 23 – Ban Namhom is located near the hot springs in Muang Kham. It consists of four groups (27 jars), of which three are jar sites and one is a quarry site. The groups are located close to each other on two spurs overlooking the expansive Muang Kham valley. The jars have been carved out of conglomerate and breccia.

Only the jar groups and pathways have been cleared of unexploded ordnance but not the whole site.

This is a somewhat remote site with no facilities.



Figure 36. Part of Jar Group 3 at Site 23

Source: Duncan Marshall 2015

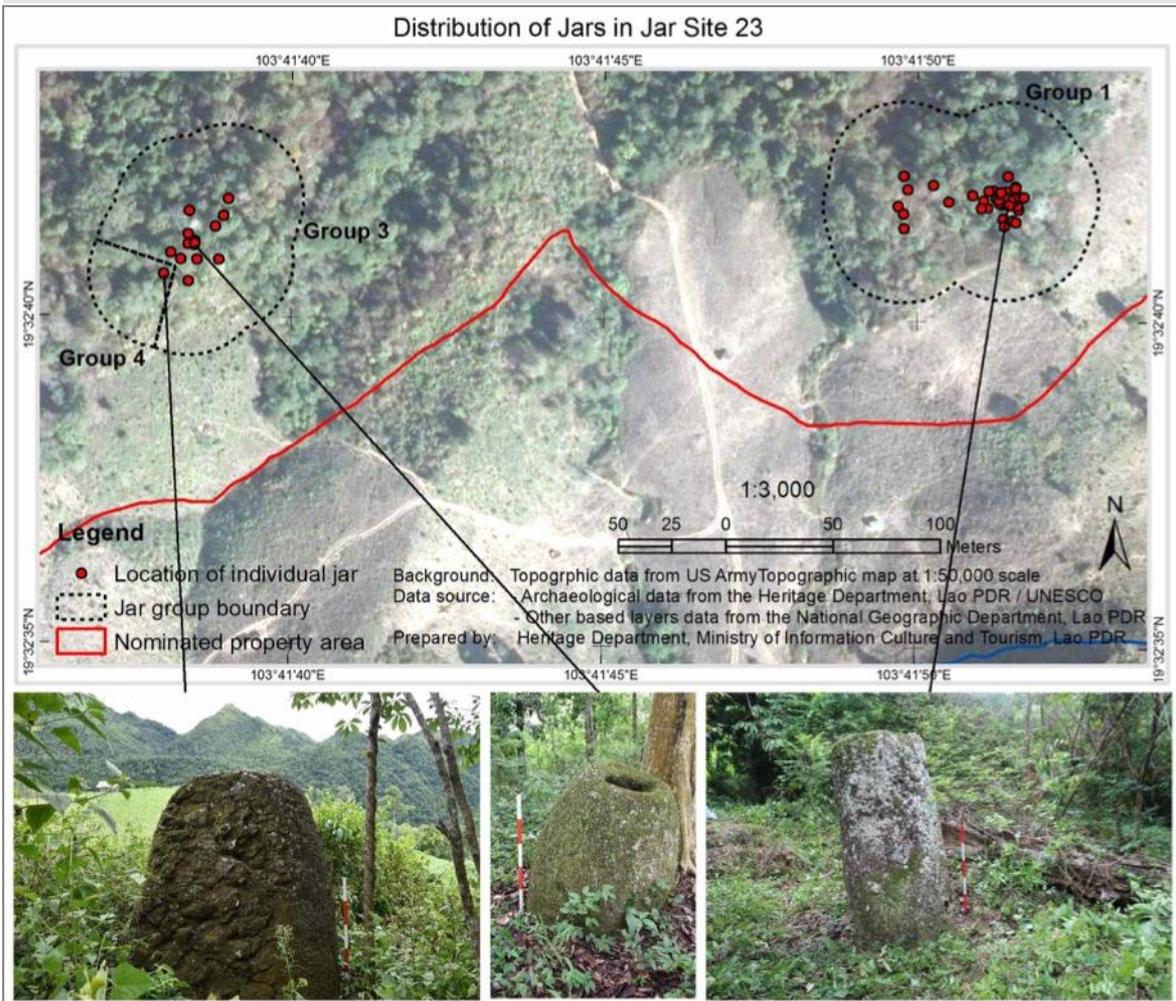


Figure 37. Quarry site – Group 3, Site 23

Source: Duncan Marshall 2015

Figure 38. Distribution of Jars at Site 23

Source: Department of Heritage



Site 25 – Khum Songhak jar site is located on undulating hills in close proximity to the current village. The jar site comprises 33 sandstone jars in two groups (Groups I and II). The main jar group (Group I) is surrounded by trees. The villagers are afraid to awaken the spirits by cutting the wood or causing disturbance at the jar site and this has resulted in little damage to jars in recent decades.

Two small groups (Groups III and IV) located close to the road or village are excluded from the component.

Some damage was sustained during the Second Indochina War in the mid-twentieth century and Pathet Lao trenches are located very close to the main jar group. The site has expansive views over the surrounding Phoukood plain including the ancient stupa to the southwest. The main group contains some andesite (an igneous stone) partly completed jars which may have been brought to Songhak from 8 kilometres away.

Only the jar groups have been cleared of unexploded ordnance but not the whole site. Additional UXO clearance is planned.

There are no visitor facilities.

New boundary markers are planned to better mark the site.

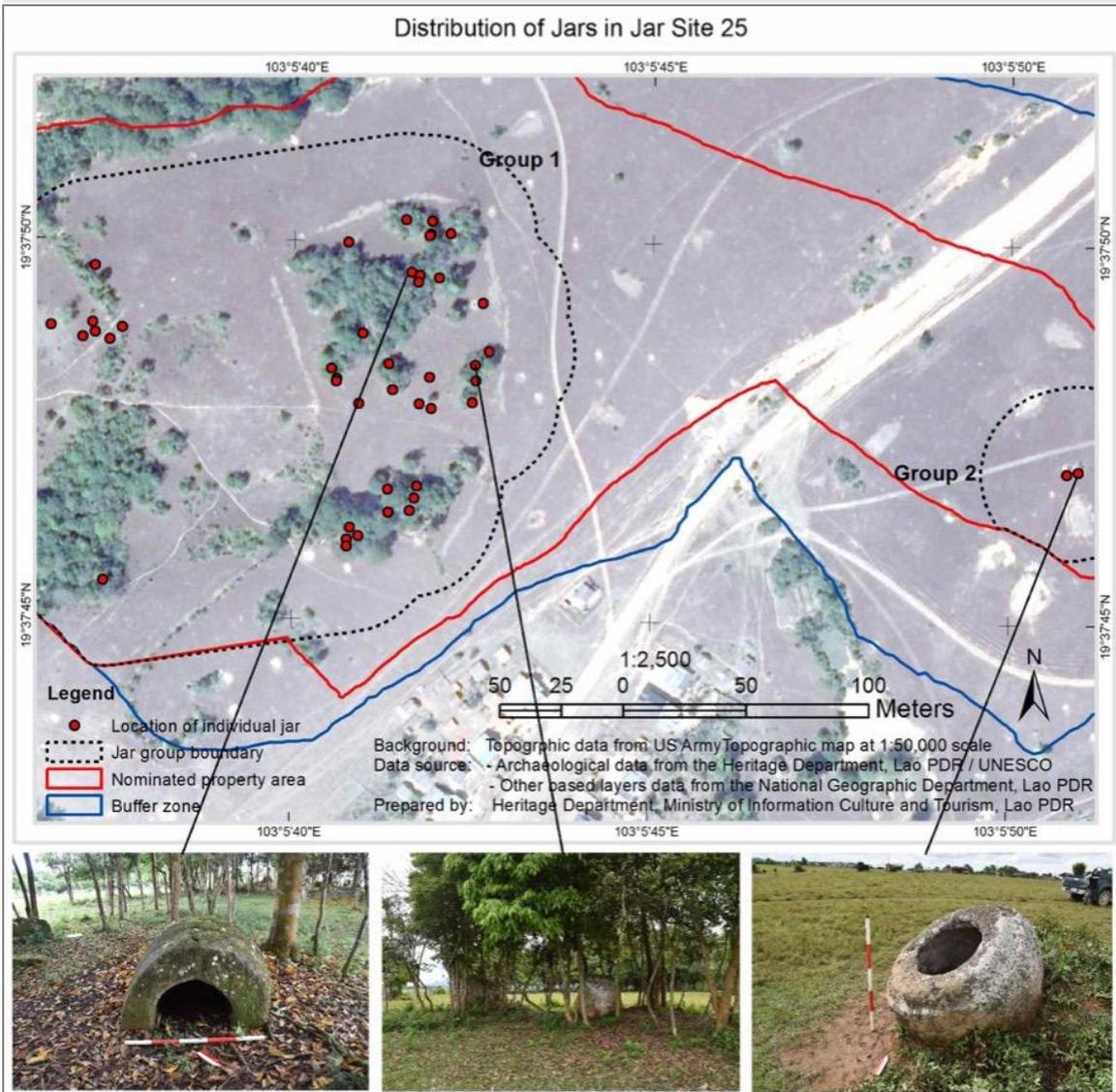


Figure 39. Part of Jar Group 1 at Site 25

Source: Duncan Marshall 2015

Figure 40. Distribution of Jars at Site 25

Source: Department of Heritage



Site 28 – Ban Nakhuan has a single jar, which is located at a mountain ridge saddle near the village of Ban Nakhuan. The site has spectacular views of the mountains to the northwest. The massive sandstone jar remains in very good condition. Colani excavated around the jar and the depression the digging left is still visible (Colani 1935, Vol. I, pp. 245). She found the jar empty but around the jar a polished adze, pottery fragments, glass beads, fragments of bronze and iron bracelets, and charcoal were excavated.

The site has not been cleared of unexploded ordnance but clearance is planned.

This is a somewhat remote site with no facilities.



Figure 41. The single jar at Site 28

Source: Duncan Marshall 2015

Figure 42. Distribution of Jars at Site 28

Source: Department of Heritage



Site 42 – Phou Xang is a major jar and quarry site located along a mountain ridge in Kham district. The site consists of 4 groups and no less than 113 jars. The jars and discs have been carved out of fine red sandstone. One of the disks has a knob with a hole (now broken), possibly to enable the lifting of the disk by placing a stick through the hole (Figure 40). The site includes decorated stone disks. The rock source of the quarry is exposed at the site.

The site has not been cleared of unexploded ordnance.

This is a remote site with no facilities, although there are minor facilities in the valley below the site.



Figure 43. Part of Jar Group 4 at Site 42, with stone disc to left with knob

Source: Duncan Marshall 2016

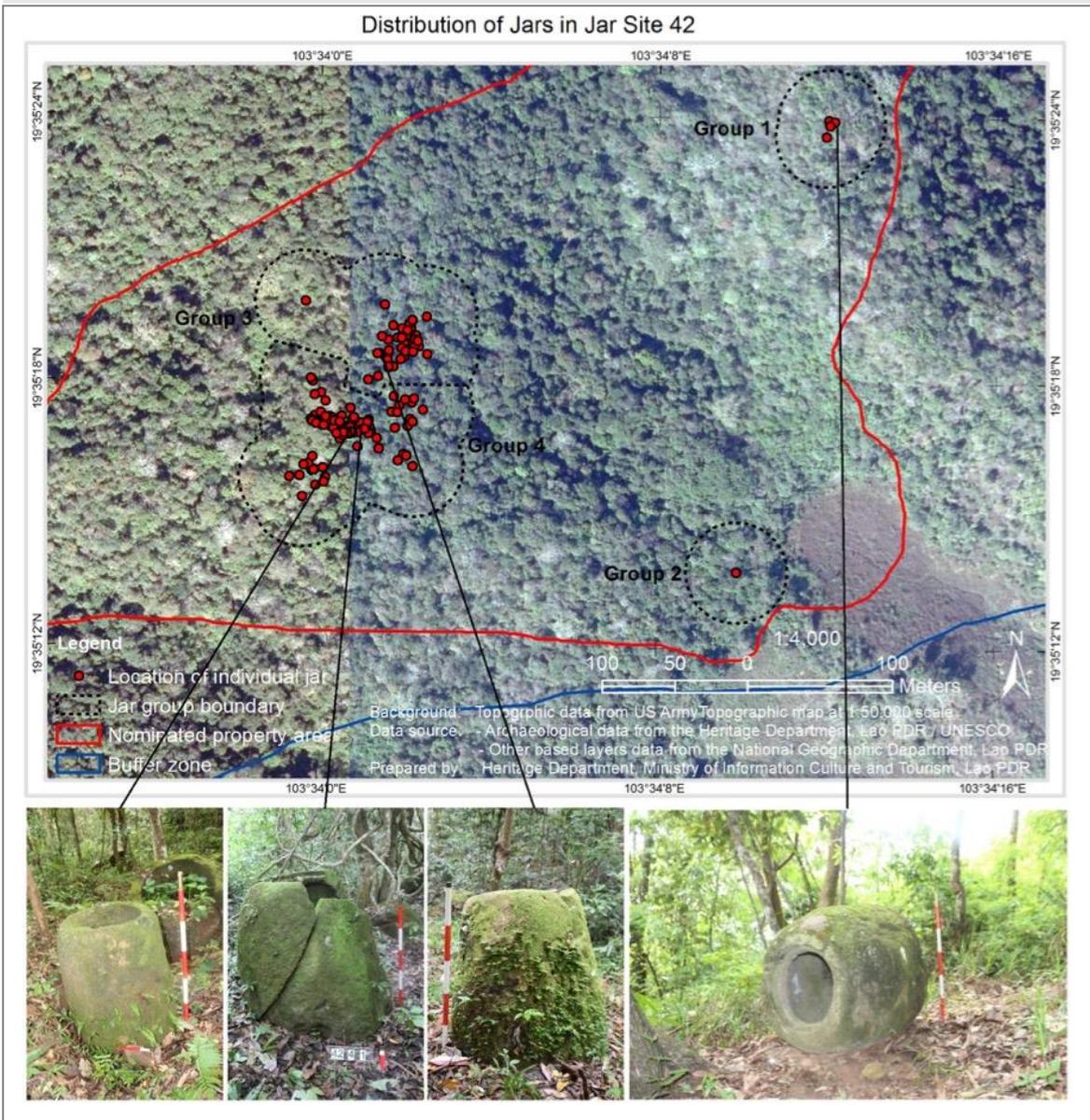


Figure 44. Stone disk at Jar Group 4 at Site 42 with a knob with a hole (now broken)

Source: Duncan Marshall 2016

Figure 45. Distribution of Jars at Site 42

Source: Department of Heritage



Site 52 – Ban Phakeo is a major jar site and contains four groups with 404 jars located on a forested mountain ridge. The fine sandstone jars have been carefully carved and the site has a number of stone disks and lids. The site includes decorated stone disks. A lot of the jars have been smashed and the groups are littered with sandstone fragments. Here too some contemporary Hmong graves are located among the jars. Only the jar groups and pathways have been cleared of unexploded ordnance but not the whole site.

Another 2017 survey identified 420 jars and 182 disks. Additional quarry sites were also found. This data is yet to be integrated with the formal Department of Heritage inventory.

This is a remote site with no facilities, although there are minor facilities, a basic visitors' lodge, in the village some distance from the site. The road to the site has been upgraded in recent years, improving access.

In 2017, additional roadworks resulted in damage to or displacement of three jars.



Figure 46. Part of Jar Group 4 at Site 52

Source: Duncan Marshall 2015



Figure 47. Part of Jar Group 1 at Site 52

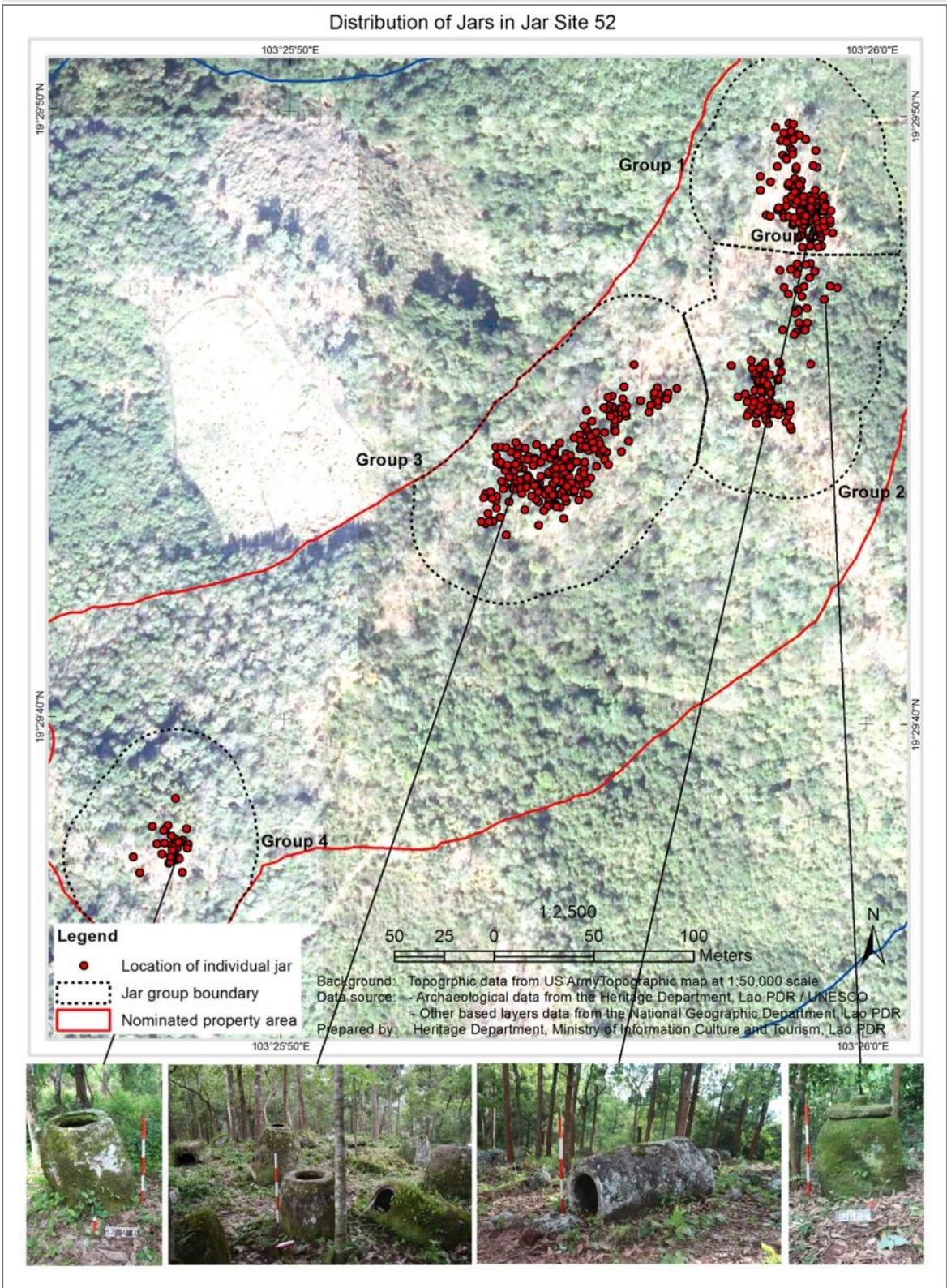
Source: Duncan Marshall 2015



**Figure 48. Stone disk at Site 52
with knob with hole**

Source: Duncan Marshall 2015

Figure 49. Distribution of Jars at Site 52
 Source: Department of Heritage



2.B HISTORY AND DEVELOPMENT

As noted above, the jar sites extend well beyond the 11 sites included in this nomination. The following history relates mostly to the overall jar sites in Xiengkhuang Province, with some specific information provided about the nominated series.

2.b.1 Summary History

The Plain of Jars present evidence of elaborate and widespread funeral practices of the associated civilisation. However, relatively little is known about this civilisation, about its rise and fall, or its people. The numerous testimonies of stone jars suggest, however, that a substantial population occupied the plateau and practiced burial rites which included the jars.

The Xiengkhuang Plateau is believed to have been the centre of trade representing a large area of upland Southeast Asia. While older prehistoric material has been found, material from the Iron Age period of 500 BCE to 500–800 CE dominates previous archaeological finds at the jar sites. However, recent but limited research has found later dates of about 900-1200 CE. Further research will shed some light on this re-occupation of the Plain of Jars and in particular the nature of the new population/settlers.

Whereas there is a fairly robust understanding of the historical trajectory in what are now Vietnam and Thailand, the prehistory of Laos remains poorly understood. In neighbouring Vietnam, many hunter-gatherer sites have been identified that fall within the culture group, defined by Madeleine Colani, as the Hoabinhian. This Mesolithic cultural assemblage is broadly recognised across Southeast Asia although it is poorly defined in regional terms. Hoabinhian occupation is well-documented in Vietnam especially in the region of the Ma and Black rivers, sites which date between the late Pleistocene and early Holocene. There are also sites documented in Mae Hong Son, Thailand and it can be reasoned that similar occupations are likely to have existed in Laos given the similarity in latitude. Colani (1935) reported finding a bifacial stone tool inside the cave at Site 1 at the Plain of Jars which she dated to the Palaeolithic period, similar to those found at Hoabinhian sites.

As is the case with the pre-neolithic period in Xiengkhuang, we know little of the succeeding Neolithic, Bronze (about 1200BCE-500BCE) and Iron Ages (500 BCE-500CE) in the area. Colani did, however, report finding ceramics inside the cave at Site 1 that she ascribed to the Neolithic period. In neighbouring countries where more research has been undertaken, the Neolithic is characterised by the introduction of ceramics, often decorated with incisions and punctate designs, and agriculture, and with the Bronze Age heralding a period of settlement expansion and increasing socio-political complexity. This trend intensifies in the Iron Age when more hierarchical social structures are discernible in mortuary contexts, and evidence exists for expanding trade and exchange networks, technological innovation and transfer, and developments in site morphology and settlement use (see also Thailand's Khorat Plateau and Cambodia). While Colani considered the Laos Jar sites to be Iron Age constructions, her investigations of the menhir sites in Houaphanh Province, to the north of Xiengkhuang, led her to conclude that these sites pre-dated the jar sites, probably being erected during the Bronze Age.

We must rely, for the time being, on local tradition regarding events during the Iron Age (about 200 BCE) in Laos. It is believed, based on scant evidence, that a ruler named Khun Mong founded the first Lao polity known as Ai Lao which was independent until it came

under the hegemony of the Han Dynasty under Emperor Wudi (about 157-87 BCE).² The Han did expand their political control during this period in neighbouring Vietnam establishing the protectorate of Jiaozhi. However, maps of the extent of Chinese control do not indicate that Xiengkhuang was included in the protectorate but contact between these areas is testified by the discovery of Han ceramics and stone rings at Plain of Jars Sites.

There is some indication that Xiengkhuang formed part of a later Lao kingdom known as Khottaboun (about 1000-600 BCE – 979 CE) but this is not confirmed. It is apparent that the region was incorporated into the Lane Xang Kingdom in the mid-14th century CE and part of the population of the area comprised Tai Phuan peoples who it is thought were displaced from southern China by Mongol incursions. By the late 13th century CE this ethnic group is thought to have established an independent polity in the area of the Plain of Jars.

By the 16th century CE the capital of this polity, Muang Khun, was prospering and fortified and by the late 18th century it had fallen under the control of Siam. Historical documents including the Muang Phuan Chronicles indicate that the Siamese forced the Lao subjects of the Vientiane Kingdom to battle the Vietnamese in Xiengkhuang, and later the Siamese undertook forced resettlement of people from the Plain of Jars into Central Thailand leaving central Xiengkhuang largely unpopulated.

From 1875, the area around Xiengkhuang was a lawless territory subject to incursions by bandits from China known as the Haw (Yellow and Black Flag bandits). Order was restored by 1884 and this is an account of the devastation wrought by the Haw on the countryside from a British cartographer, James McCarthy, who was in the employ of the Siamese.

Laos came under the control of France in 1887 becoming part of that nation's Southeast Asian colonial holdings. The country was governed by a small contingent of European administrators although nominal kingdoms continued to exist. Xiengkhuang and the kingdom of Vientiane fell under the control of Luang Prabang in 1941 as French control of the region eroded due to Japanese expansion in Southeast Asia.

The province of Xiengkhuang suffered heavily due to the long-running war which was damaged many of the jar sites. The region today is plagued by the presence of unexploded ordnance which continues to cause injuries and deaths, otherwise hampering the lives of ordinary people, affecting agriculture, and restricting archaeological research.

Only limited research into the Plain of Jars has been undertaken since Colani's investigations in the 1930s (Nitta 1996, Sayavongkhamdy and others 2000, Van Den Bergh 2003 and 2011, Travers and Nuan 2010, Genovese 2012 and 2014) until recent collaborative survey, excavation and research funded by the Australian Research Council (Shewan, O'Reilly and Luangkhoth 2016, O'Reilly and Shewan 2016).

² The Ai Lao traditional story has been refuted by scholars. See, for example, Evans 2014.

2.b.2 Regional Historical Context in the Period before the Creation of the Jar Sites

The regional historical context in the period prior the creation of jar sites can be structured as follows:

- appearance of modern humans in the Late Pleistocene/early Holocene;
- significant population diversity in mainland Southeast Asia; and
- evidence of menhirs and underground tombs in Hua Pan province in Laos.

These themes are discussed below.

Appearance of modern humans in the Late Pleistocene/early Holocene

In 2001 Sayavongkhamdy (Museum and Archaeology Department, Lao PDR) and Demeter (Musée de l'Homme, France) created a research project in order to study the prehistory of Laos within a regional context, and in particular to re-visit the famous Tam Hang rockshelter where Fromaget conducted a vast excavation in 1934.

Fromaget discovered middle Pleistocene fossil-rich deposits (Arambourg and Fromaget 1938; Fromaget 1940a), as well as late Pleistocene/early Holocene human biological and cultural remains (Fromaget 1936, 1937, 1940b; Fromaget and Saurin 1936) but unfortunately all of this archaeological material has since been lost, except for the skeletons that are stored at the Musée de l'Homme in Paris.

In 2012, human remains were discovered at Tam Pa Ling, in the immediate proximity of Tam Hang, and named them TPL 1. After analysis, these were revealed to be the oldest modern humans ever found in Laos and Southeast Asia. Tam Pa Ling and Tam Hang are situated in the province of Hua Pan, approximately 70 kilometres northeast of the Plain of Jars.

'The age of TPL 1 suggests that it was contemporaneous with archaic humans in the western Old World. Its features, however, are relatively gracile and lack many of the characteristics of the European and Near Eastern Neanderthals... Also of interest is the similarity or difference between TPL 1 and other East and Southeast Asian archaic and modern human fossils, particularly the Chinese specimens of Xujiayao dated to 125–100 ka cal BP, Zhirendong dated to ~100 ka cal BP, Tianyuandong dated to ~40 ka cal BP, and those from the nearby site of Tam Hang, Laos, dated to ~16 ka cal BP...

Mainland Southeast Asia is notable for its absence of fossil evidence for early human occupation, mainly due to taphonomic issues in a warm and wet climate... This temporal baseline for occupation of eastern Eurasia corresponds to the timing of the earliest dispersal events into Southeast Asia using genetic data. Inferences from nuclear, Y chromosome, and mitochondrial genome data support an early migration of modern humans out of Africa and into Southeast Asia using a southern route by at

least 60 ka. Patterns of genetic variation in recent human populations recognize Southeast Asia as an important source for the peopling of East Asia and Australasia via a rapid, early settlement. In addition, the focus of hypotheses regarding early modern human migration in the region has concentrated on island and coastal regions. The fossil evidence presented here suggests that Pleistocene modern humans may have followed inland migration routes or used multiple migratory paths.’ (Demeter, Shackelford, Bacon, Duringer, Westaway, Sayavongkhamdy, Braga, Sichanthongtip, Khamdalavong, Ponche and Wang 2012)

The study of Tam Hang is an on-going project:

‘Tam Hang rockshelter was occupied by hunters who appear to have produced stone tools during the Late Pleistocene periods, whereas the Holocene period saw the spread of a new economic system based on agricultural production along with the manufacture of earthenware storage vessels, such as those found in the later cultural levels at Tam Hang... The ‘debitage’ mode identified at Tam Hang would certainly belong to the common technological system found all over Southeast Asia (Vietnam, Thailand, Malaysia, Philippines and Indonesia) known as the ‘core flakes industry’ from the Late Pleistocene (Bellwood 1997; Bellwood et al 1998; Forestier 1998, 2000; Patole Edoumba 2002, 2006)’

Significant population diversity in mainland Southeast Asia

From 2000 to 2008 Sayavongkhamdy and Souksavatdy (then Department of Museums and Archaeology, Lao PDR) conducted a Socio-Environmental Impact Assessment (SEIA) in advance of the construction of a dam as part of the Nam Theun II Power Project. Large numbers of rockshelters and caves were surveyed in fifteen districts of three provinces, namely Khammuan, Bolikhamsay and Savannakhet (central Laos). In 2004, the Pha Phen rockshelter in the Khamkeut district of the Bolikhamsay province was selected for archaeological excavation. A prehistoric human skeleton was discovered and transferred to the National Museum in Vientiane. (Sayavongkhamdy and Souksavatdy 2008)

The assessment of the significance of the evidence from this individual in a human biological context found,

‘This individual is the only skeleton described from that period in the region of the Mekong River watershed that is now central Laos. To place the burial in context, aspects such as burial position, dental health and body size are compared with approximately contemporary pre-metal age burials dating from 16000BP to 5000BP in the wider region of mainland Southeast Asia... this brief review has shown... that Pha Phen represents an important contribution to understanding of human biology during the period around 6000 BP in the watershed of the Mekong River basin/valley...’ (Tayles, Halcrow, Sayavongkhamdy and Souksavatdy 2015)

From the 1980s until 2011 more than 200 prehistoric sites were identified while conducting Socio-Environmental Impact Assessments (ESIA) throughout Laos. Their distribution includes the valleys of the river system and the rockshelters and caves of the mountains. Some main tributaries of the Mekong River were investigated. Prehistoric sites were also found as part of other assessments –in Xiengkhuang and Saysomboune province (northeast Laos); prehistoric mining of copper was discovered at Savannakhet province (central Laos); and prehistoric stone moulds to produce bronze artefacts (spearheads and axes) were discovered at Attupeu province (southernmost Laos).

In addition, 69 prehistoric sites were identified, and of them three caves were excavated by

the Middle Mekong Archaeology Project (MMAP)³ since 2005, concentrating on the Mekong River and its tributaries in Luang Prabang province. This collaborative program has yielded thousands of stone and ceramic artifacts, human skeletal remains, and other evidence from over 11,000 years of human habitation in this area only.

To date, the Tam Hang rockshelter is the most significant prehistoric site because it had been occupied from the late Pleistocene to the Holocene, but also because of interaction with the menhir culture of Hua Pan (Patole-Edoumba, Durringer, Richardin, Shackelford, Bacon, Sayavongkhamdy, Ponche, Demeter 2015). A disc stone pendant was retrieved in Tam Hang South during excavation in 2003, and similar discs were found by Colani (1931).

Such interaction might echo, at a smaller scale, Bellwood’s hypothesis for the diffusion of language and agriculture. He noted that,

‘it evolved within a region characterized by a high degree of communication and interaction, perhaps focused on a chain of quite closely related ethnolinguistic populations.’ (Bellwood 20-05b, p. 120)

Evidence of menhirs and rock cut underground tombs in Hua Pan province, Laos

Colani investigated a number of menhir sites in upper Laos in the 1930s. She described the sites, the upright stones, discs, underground tombs, and the findings of her excavation conducted in the trenches surrounding the tombs and in each underground tomb. She concluded that these sites predated the megalithic jar based on a comparative analysis of the archaeological material found at the two types of sites (Colani 1935, vol. 2. pp. 120-127).

The three main menhir sites reported by Colani were San Kong Pan, Keo Hin Tan and Dong Mut (Ban Koute). The remaining sites she considered as secondary sites. The menhirs or upright stones have a blade-shape and are up to 3.4 metres tall by 0.6 metres wide. Disks are up to 2.3 metres in diameter. Further details are provided below.

Site	Upright stones	Lying stones	Discs	Underground tombs	Length of site (m)
Sang Kon Pan 1	115	a few	70	18	67
Keo Hin Tan 1	121	a few	25	10	20
Dong Mut 1	37	a lot	4	4	20
Dong Mut 2	18	-	18	2 (looted and opened)	4.70
Dong Mut 3	8	-	0	0	
Keo Hin Tan 2	7	-	0	0	
Keo Hin Tan 3	7 small groups	-	0	0	
Tham Ban	13	-	30 (no. 11 was excavated but no underground tomb)	No information because no research under 29 discs	215

³ The MMAP is lead by J White from the Pennsylvania Museum University and Boumheuang Bouasisengpaseuth of the Museum, USA and Archaeology Department, Ministry of Information and Culture, Lao PDR.

Table 6. Summary information on Menhir Sites

Site	Upright stones	Lying stones	Discs	Underground tombs	Length of site (m)
Phac Kho Mong	2 groups	-	2	0	
Keo Bouac Khouai	12 groups and 2 isolated upright	7 groups of oblique	4	0	
San Kong Pan 2	4 groups	-	5	0	
Vieng Noc Khoum	29	2 of large size lying flat	2 large discs (irregular circle)	2	
Kang Dong	9 in rhyolite (thicker)	A few	0	0 (after excavation)	



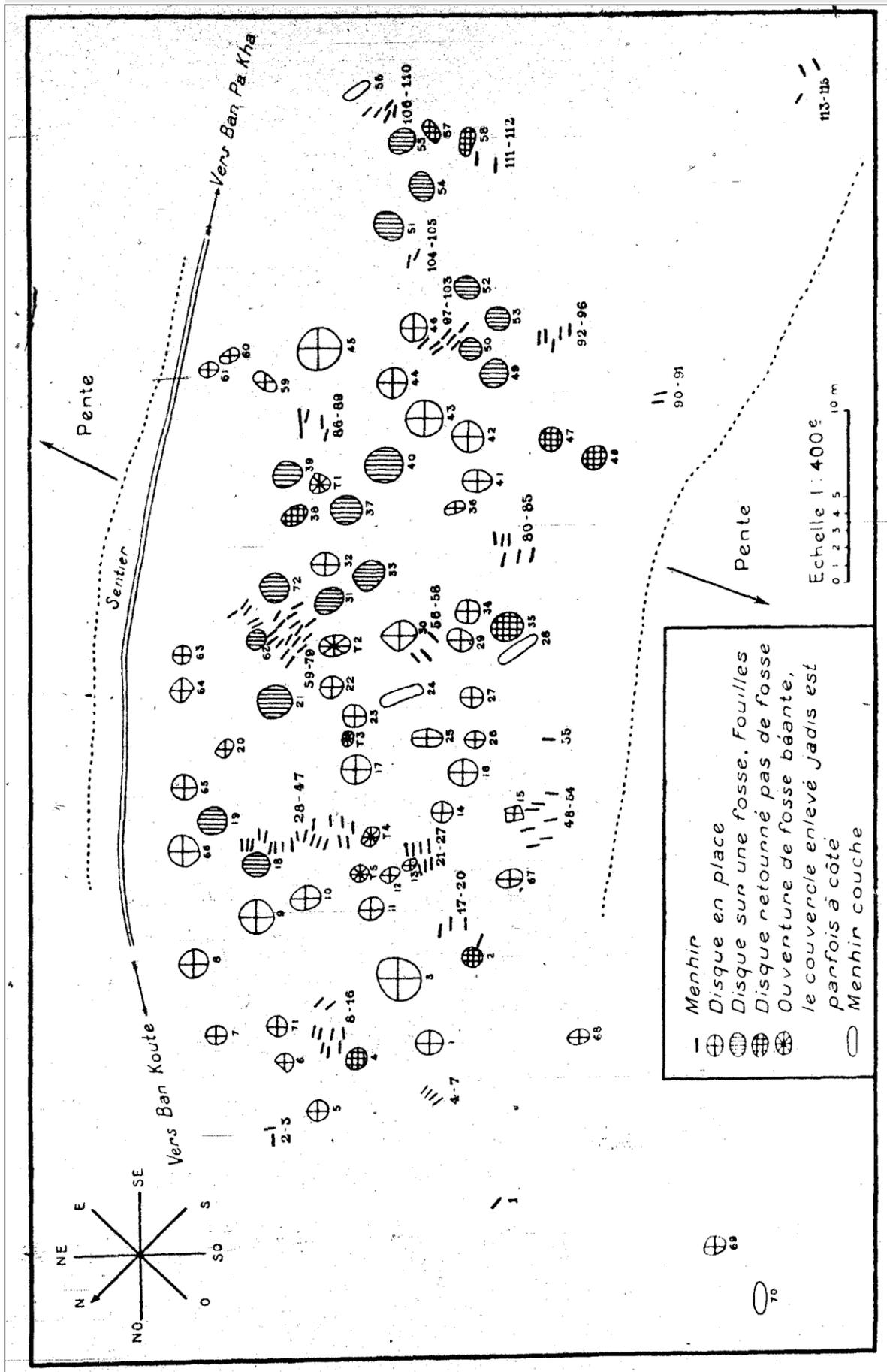
Figure 50. San Kong Phan in Colani’s time (1931-2), renamed since Ban Pacha in the 1980s
Source: Thongsayavongkhamdy 2001



Figure 51. Muong Huamuong District, Hua Phan province
Source: Thongsayavongkhamdy 2001

Figure 52. Colani's 1935 sketch plan of the San Kong Pan site

Source: Colani 1935, vol. 1, p. 28



In addition, Colani identified five models of underground tomb. An example of one type is provided in the figure below.

Figure 53. Colani's 1935 sketch of underground tomb no. 44 at San Kong Pan
Source: Colani 1935, vol. 1, p. 33

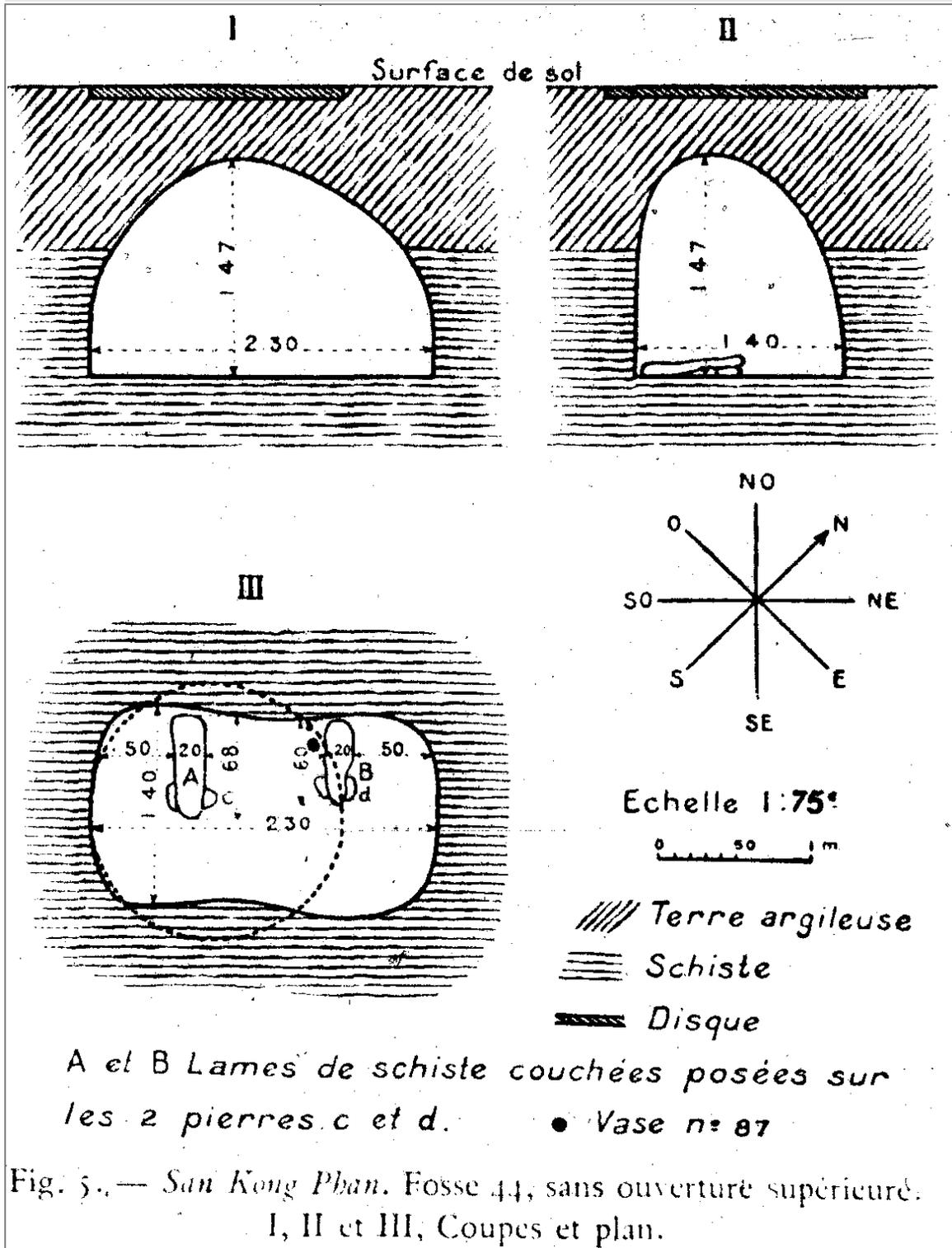


Fig. 5. — San Kong Pan. Fosse 44, sans ouverture supérieure.
I, II et III, Coupes et plan.

2.b.3 Jar Site Creation Period – 500 BCE to 500 CE

Except for the evidence of elaborate and widespread funeral practices, little is known about the Plain of Jars civilisation, about its rise and fall, or its people. The numerous testimonies of stone jars suggest however, a substantial population occupied the plateau and practiced burial rites which included stone jars. While prehistoric material recorded to the period of 2000 BCE has been found, material from the Iron Age period of 500 BCE to 500–800 CE dominates the archaeological finds at the jar sites.

Based on archaeological finds of the Bronze and Iron Ages of the period between 500 BCE and 500 CE and later, the Xiengkhuang Plateau has been surmised as a crossroads in inter-regional and even international trade. This includes the exchange of ideas based on the interaction of people and goods, and covering a large area of upland Southeast Asia from Vietnam, Samrong Sen in Cambodia, the Khorat Plateau in northeast Thailand, Laos, the North Cachar Hills of Assam in northeastern India and beyond.

The stone jars are believed to reflect the funerary practices of elites but engaging the whole local or regional community. Production of megalithic jars, transportation, placement of jars and secondary burial rituals might not be affordable for ordinary people. At the same time, the survival and welfare of the whole community might have been a crucial issue to explain why the whole community was so fully engaged. Thus, the stone jars could have played a double role, one related to the prestige of the owners and at the same time affirmation of the whole community.

Figure 54. General location of the BAA site in relation to Site 1

Source: Chang



The jar sites with their range of physical evidence are the only currently known material evidence for the civilisation. The identification of occupation sites for the people who created and used the jar sites remains a mystery. There are contemporary villages or larger

settlements in the vicinity of the jar sites, and research has more recently been undertaken at the Ban Ang Airport (BAA) about 2 kilometres from Site 1 to establish any early connection, or otherwise identify occupation sites for the people who created and originally used the jar sites.

‘This site was initially identified by Dr Thongsay Sayavongkhamdy during his surveys in the 1990s based on the presence of pottery scatters, but also due to the presence of partial stone jars. Two incomplete stone jars can still be found at the site... During conversations with Dr Sayavongkhamdy prior to the 2016 survey he expressed his opinion that the BAA site was an occupation site and that the inhabitants brought partially constructed jars from the Phou Keng quarry site here, where carving was completed prior to final placement of the jars at Site No. 1. This is an attractive theory. Partially completed jars would be less likely to break during transport over the larger distance from Phou Keng (approximately 7kms, in a straight line). This would also allow for a stockpile to be prepared prior to ritual events in which they were used (funerals perhaps)...

Another important question is when do the archaeological remains date to? The ceramics recovered thus far are similar in form and material to those recovered by O’Reilly and Shewan at Jar Site 1, suggesting a similar date of deposition. The presence of the jars also suggests that at least some components of the site date to the time of construction and use of these famous artefacts. At this stage, however, C14 samples directly related to pottery vessel features remain to be dated and so further speculation on the date of the site should be put aside until this result is available.

These finds are the clearest evidence of the potential of the BAA site to reveal significant information about prehistoric life Xieng Khouang.’ (Chang)

One possible connection between the Plain of Jars and other sites may exist because of the portrayal of human figures. Sayavongkhamdy termed such a figure at Site 1 as a ‘frogman’.⁴ Colani described a similar figure at the Na Nong Site (Colani 1935, vol. 1, p. 164 and illustration LVI). Other such portrayals have been found in a rock painting at Pha Taem at the Nam Ou river in Luang Prabang province in Laos, as well as that at Huashan in Guanxi, China.

The Mekong and Nam Ou rivers are known to be conduits of migration since prehistoric times. In 2005, the Middle Mekong Archaeological Project (MMAP) identified 58 archaeological sites along the basins of the three tributaries of the Mekong River north of Luang Prabang.

However, further research is needed, including into dating, to better establish any connection between these sites portraying human figures.

Some jar sites also exist in current-day Luang Prabang, the province immediately to the east of Xiengkhuang, and these are thought to be associated with the same civilisation given their geographic proximity and physical characteristics.

It is worth noting the presence of menhir sites (standing stones) in Hua Pan Province, to the northeast of Xiengkhuang. These sites also relate to funerary practices and, in the case of the Hua Pan sites, are from a period which slightly pre-dates the jar sites but ends before the end of the jar site period, according to Colani and only dated relatively. The menhir sites have been little researched and any possible cultural connections or influences are not yet well understood, but a relationship with the Tam Hang site is mentioned above (Section 2. b.2).

⁴ ‘frogman’ refers to ritual dance performed by Chouang ethnic group (belonging to Kadai-Tai-Lao linguistic family and living in Sip Song Panna, southern China) to invoke God for rains before annual cultivation. The dancers imitate frogs in jumping and gesticulating on traditional music and some others climb on the Cocagne mat.

Sayavongkhamdy hypothesises a possible connection between the Plain of Jars and the peoples of what is now Vietnam. This is based on:

- a bronze sculpture discovered by Colani at the Thao Kham site (1935, vol. 1, pp. 201-203) indicating parallels with Dong Son culture;
- the original position of all pseudo-lids Colani empathized in all jar sites (Colani 1935, vol. 1, p. 152), in particular at San Hin Oum site Colani discovered the original configuration of jars, pseudo-lids and stone blocks to support this pseudo-lid as Colani described (1935, vol. 2 p. 158) – they all are upside down but had been turned over by later people over time; and
- the comparison between bronze drums and pseudo-lids/discs.

In current-day Assam in India, about 1,300 kilometres to the northwest, there are also jar sites which, while displaying some differences, also display considerable similarities and are thought to be from the same general period. While little researched and with considerable mystery remaining about their history, some cultural connection or influence between the peoples of Xiengkhuang and Assam is nonetheless thought to exist.

‘Considering the DNA data along with parallel archaeological evidence, ethnographic analogy, the jars of North Cachar [Assam] perhaps indicate their association with Mon-Khmer group of people who migrated from Southeast Asia with the tradition of making stone jars of mortuary practice.’ (Thakuria 2016)

The jar sites in Luang Prabang and Assam, and the menhir sites are further discussed in the comparative analysis at Section 3.2.

2.b.4 History of Xiengkhuang after the Jar Sites Creation Period to 1975 CE

The later history of Xiengkhuang involved further migrations, the creation of a principality/kingdoms, inclusion in a larger kingdom but tributary relations with Dai Viet, conflict and migrations, invasion and plunder by bandits, French colonial rule, Lao rule, the rise of the Pathet Lao and conflict between rival Lao forces, American military support for Royalist and Hmong forces (the Hmong are not the same as the Mon), a ceasefire and peace agreement to end the war, and the end of the Laos kingdom and creation of the Lao PDR.

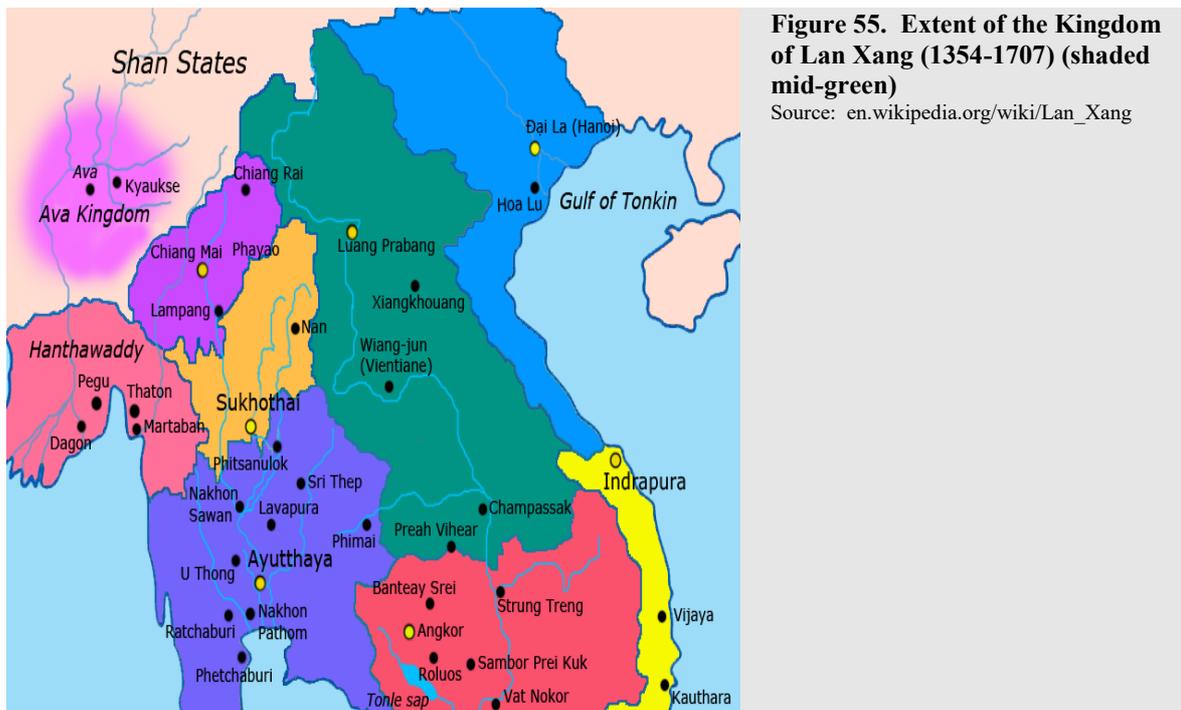
By the 6th century, Mon peoples had coalesced to create the Dvaravati kingdoms. In the north, Haripunjaya (Lamphun) emerged as a rival power to the Dvaravati. By the 8th century the Mon had pushed north to create city states, known as ‘muang’ in Fa Daet (northeast Thailand), Sri Gotapura (Sikhottabong) near modern Tha Khek, Laos, Muang Sua (Luang Prabang) and Chanthabuly Si Sattanakhahud (Vientiane). In the 8th century CE, Sri Gotapura (Sikhottabong) was the strongest of these early city states and controlled trade throughout the middle Mekong region. The city states were loosely bound politically, but were culturally similar and introduced Theravada Buddhism from Sri Lankan missionaries throughout the region.

During the 7th and 8th centuries CE, Vientiane became a trading post for merchants from China and India. While it is not clear whether Xiengkhuang was part of the Lao Khottaboun Kingdom, it is likely that traders from or going to the north would have crossed the Xiengkhuang Plateau. In the 7th century Xiengkhuang was referred to as Muang Maharatanaburirom Phommachakkhati Simahanakkharatakkasela Nakhon Xiang Khuang Rajathani.

The Tai Phuan are a Buddhist Tai-Lao ethnic group that migrated from southern China

probably because of the Mongol threat to southern China as early as 1236. By the late 13th century, they had formed an independent principality on the Xiengkhuang plateau that prospered from the overland trade in metals and forest products with India and China. The capital of the Muang Phuan was the town of Xiengkhuang, now Muang Khun.

In the mid-14th century, Xiengkhuang was incorporated into the Lan Xang Kingdom under Fa Ngum. Upon receiving a message informing him of the Prince's plans for a united kingdom of Lao, Xiengkhuang's Governor sent a diplomatic team to support the unification. The Phuan population were able to retain a high degree of autonomy.



In the 16th century Muang Khun was a fortified religious centre which counted 62 pagodas and stupas covered in riches. Both Luang Prabang and the Vietnamese were seeking to annex the neighbouring Muang Phuan state.

Throughout the time following the period of jar creation and initial use, the jar sites were used by other cultures until the 18th century CE.

The story is well-documented in the Pongsawadan Meuang Puan or the Muang Phuan Chronicles. During the first phase in 1792, the Vientiane ruler was forced by the Siamese to fight the Vietnamese in Xiengkhuang. Thousands of people were resettled under this wave in central Thailand. During the second phase (1834-36) of depopulation at the Plain of Jars, Phuan people were forced to move down to the Mekong Plain and even to Bangkok. This mass imposed exodus followed the defeat of the Vientiane King by the Siamese.

The third phase was related to the invasions of the Haw,⁵ Chinese bandits (Yellow and Black Flag bandits) who plundered Luang Prabang and Xiengkhuang well into the 1880s. The Chinese bandits only objective was to plunder and murder. Three battalions of Siamese eventually restored order and peace. James McCarthy, a British surveyor

⁵ Haw were originally legitimate Muslim traders from China, but the name was transferred to Chinese 'Flag Gangs'. Genovese 2014, p. 32.

travelled through Laos in 1884 and wrote on the impact of the Haw bandits destruction in Luang Prabang and Xiengkhuang,

‘The wats had been wantonly destroyed, and piles of palm-leaf records lay heaped together, which, unless soon looked at, would be lost forever’ (McCarthy 1900, p. 47)

Regarding the Xiengkhuang capital he wrote the following,

‘The pagoda on the hill, the finest in the region, had not escaped. From a distance it looked perfect, but on a near approach rents were found on three sides, almost from pinnacle to the foundation. It was wonderful that the spire, 60 feet high, had not fallen in. The Haw are said to have obtained as much as 7000 rupees’ weight in gold from this pagoda. Fragments of urns, which had contained offerings, lay strewn about, and still showed elegance of form.’ (McCarthy 1900, p. 51)

These raids are also believed to have resulted in damage to some of the jar sites.

The French had formed the French Indochinese Union in 1887, administratively based in Hanoi, and in 1893 Laos was made a Protectorate as part of this Union. The French administration had relatively little impact beyond taxation and corvée duties (intermittent or limited-period unpaid labour) although it brought peace and stability to the region not experienced for two centuries. The census of 1907 shows 585,285 Lao governed by a mere 189 French colonialists. The main source of income for the colonial power was the opium trade.



Figure 56. French colonial exploration mission visiting Jar Site 1 in 1890

Source: Pavie 1919, reproduced in Genovese 2014, p. 35

It was during the French colonial period that the early documentation and archaeological research was undertaken into the jar sites, notably by Madelaine Colani, as discussed below.

This period also saw evidence of early tourism to the jar sites,

‘By the 1920s, Xieng Khouang featured in guidebooks extolling the rugged beauty of Laos and its enigmatic jars, a destination in the “mysterious, fatalistic and inscrutable East”.’ (Genovese 2014, p. 41)

It apparently became common to visit the Plain of Jars as part of a two-day trip from Vietnam on the way to Luang Prabang (Genovese 2014, p. 38).

Concern was also raised in the 1930s about damage to jar sites caused by roadworks (Genovese 2014, p. 75).

The Anti-colonial struggle after Second World War

The main result of the defeat of France in the Second World War was the strengthening of the resistance movement for national liberation in Indo-China. In Laos, the struggle inspired by a spirit of patriotism and freedom, found expression all over the country.

French Indo-China now came under the domination of Japanese forces, who invaded Lao territory from the south in 1941. Japanese forces sent to the north made inroads into Laos in 1945. Meanwhile, French military forces withdrew into the jungles. The Lao people now had to suffer a dual oppression, by the French and the Japanese.

Declaration of Independence of the Lao State

The Japanese during their brief domination over Laos restructured the French administrative machinery. They also urged upon the King of Luang Prabang and his powerful high-ranking officials to declare independence, and redesignated Sisavangvong, the King of Luang Prabang as the King of Laos.

The Impact of the Second World War on the Thai arena led to divisions and conflicts in its political circles and administration. The people of the north-eastern Thailand called on Lao freedom fighters to form a “Seri Lao” movement to join hands with “Seri Thai” in order to get support from the US, later “Seri Lao” was changed to “Lao Isara” (free Lao).

Taking advantages of France’s difficulties in Indo-china, China’s 93rd Nationalist Division, or the Kuomintang, also invaded Laos from the north, nominally to take charge of the surrendering Japanese and simultaneously to occupy the Lao northern provinces of Namtha and Phongsaly. The representatives of the Koumintang arrived in Luang Prabang to seek the approval of King Sisavangvong to declare the independence of the Kingdom of Luang Prabang.

Given the complexity of the situation, the leadership of Lao Isara together with Prince Phetsarat with alliances rejected the proposals of Kuomintang. They were of the view that the question of independence and national unification had to be resolved with the participation of the great powers. The Lao Isara, then the main political movement, in turn submitted a proposal to the King of Luang Prabang, urging him to declare independence and national unification.

King Sisavangvong did not agree with the proposal and stated that Luang Prabang would maintain statuesque as a French Protectorate. The French then asked King Sisavangvong to summon Prince Phetsarat to Luang Prabang and prevent him from making any political move. Under the French’s pressure the King took measures to dismiss Prince Phetsarat from the Viceroy and Premiership.

The People’s Committee was hurriedly set up in Vientiane to elect national representatives to form a government and prepare a draft Constitution.

On 10 October 1945, the Committee requested him to acknowledge the current state of affairs, accept the draft Constitution, dissolve the old government and recognize the new government. In Vientiane on 12 October 1945, the People’s Committee held an official ceremony to announce the independence and freedom of Laos. The declaration of independence and freedom on 12 October 1945 after more than sixty years of colonial domination received the great support of all Lao people and marked a watershed in Lao history

The Constitution of 1947 and Political Developments in Laos

According to a decree issued by King Sisavangvong on 11 October 1946 elections to a 44-member Constitution Drafting Council were held in December 1946. The new Royal Lao Government was formed by the Constitution Drafting Council on 15 June 1947.

The growth of the liberation movement in 1949 led by the Lao Isara leader, Kaysone Phomvihane who converted the people's militia into a regular army in Xieng Houng canton (Kieng Kho district of Houaphanh province). This organised army was called the "Rasavong Brigade", which initially numbered only 25 cadres but soon grew into the Lao's People's Revolutionary Army (LPRA).

The rapid growth of the national liberation movement enabled the newly-organised Lao's People Liberation Army (LPLA) to carry out a relentless fight against the French army in late 1953 and early 1954. In Vietnam, during the corresponding period, the Vietnamese people's struggle for freedom and independence was intensified and the victory of the vietnamese army over the French in the battle of Dien Bien Phu shattered French administration in Indo-china. France was forced to sign an Agreement on Indo-china Affairs in Geneva on 21 July 1954.

In 1957, the first of two coalition governments led by Prince Souvanna Phouma and which included Royalist, Neutralists and Pathet Lao was formed in Vientiane.

Political movements on the Xiengkhuang Plateau

On the Xiengkhuang Plateau in May 1959, the Royalist Army, dissatisfied with the performance of the Neutralists, Battalion No. 1 and Battalion No. 2 Army, cut food supplies in an effort to force the Neutralists armies to join them. The Neutralists however, initially, refused to follow command. In response, the Royalist forces besieged the Battalion No. 2 who were stationed near the Plain of Jars Site 1 using seven infantries and managed to get within 30 metres of the camp. As the situation intensified, the leaders of Battalion No. 2 developed a plan to escape the siege and join the armies to the north. On May 16, a commander of the Battalion No. 2 informed the Royalist Army that his troops accepted the integration of both troops and invitation to participate in the ranking-promotion ceremony on May 19. On the night of 18 May 1959, the commander of the Battalion No. 2 ordered soldiers together with pregnant women, children and sick or wounded people from the nearby village, Ban Ang, to escape undercover of the ceremony preparations through the lines of the Royalists and into the Pathet Lao strongholds.

Political Status of the Liberated Zone of Laos and the bombing on Xiengkhuang

The internal situation during 1962 to 1975 underwent tremendous changes owing to continued military confrontation between various groups. The Central Committee of the Neo Lao Hak Xat held its Second Congress to form the Programme of Action to call for the strengthening of relations between the Neo Lao Hak Xat and neutral forces in the struggle for peace, neutrality, independence, democracy, unity, and prosperity. The Programme of Action also called for respect for the Thorne and religion, strengthening the democratic rights of Lao, respect for the principle of equality between men and women, formation of a unified national government, resistance to foreign aggression, and the implementation of the Geneva Agreement on Indo-China of 1954, the Geneva Agreement on Laos of 1962 and the Tripartite Agreement.

However, the US's decision to launch "a special war" in Laos disrupted these negotiations. Since mid-1964, US fighter planes taking off from the Seventh Fleet and bases in Thailand

and South Vietnam, bombed the Liberated Zone. Now with the war against the Vietnamese the US escalated air attacks against the Lao. Three million tons of US bombs, more than the total number of bombs used in the Second World War, were dropped in Laos and Xiengkhuang was the heaviest bombed.

In the face of such serious US action, the Central Committee of the Neo Lao Hak Xat held aloft the banner of independence and democracy and led the struggle to save the nation. The Central Committee of the Neo Lao Hak Xat also urged all patriots to unite and resolutely fight both the military and political front by building up the necessary forces to protect the Liberated Zone.

Under the leadership of the Lao People's Revolutionary Party and the Neo Lao Hak Xat great successes were achieved in the consolidation and development of the Liberated Zone. The Central Committee of the Party adopted a resolution on the reconstruction of the Liberated Zone which was to provide it with all the characteristics of a state and make it a base for the future of a new nation.

In 1970 Special Forces were forced to withdraw totally from the Plain of Jars (Xieng Khuang Province). In doing so they forced some of the Xiengkhuang population to retreat along with them. Besides its dependence on US economic and military assistance the Vientiane Administration was also under US control in areas such as finance, trade, building of infrastructure and other activities.



Figure 57. Pathet Lao forces at Site 1 during the Second Indochina War

Source: Site 1 visitor centre



Figure 58. Site 1 with war damaged jars centre and right, and bomb crater to left, 2015

Source: Duncan Marshall 2015

Thus, on 27 January 1973, the USA and Viet Nam attended negotiations in Paris on a ceasefire and peace for the former Indochina. A ceasefire and peace agreement was signed in Vientiane on 21 February 1973. This agreement ended the USA involvement in the conflict. On 2 December 1975, a ceasefire between the Royal, Neutralists and Pathet Lao troops was agreed. It marked the end of Laos as a kingdom and the Lao People's Democratic Republic was officially established.

Xiengkhuang suffered heavy aerial bombardment and intense ground battles due to its strategic importance, but moreover this conflict has left a deadly legacy of unexploded ordnance (UXO) which is still being cleared today. As a result of the carpet bombing, thousands of inhabitants died or fled Xiengkhuang. It is estimated that many thousands of people were displaced or air-lifted out of the province during the nine-year bombing campaign.

The impacts of recent history on the Plain of Jars is evidenced in some damaged or displaced jars as a result of the intense aerial bombardment of the province between 1964 and 1973.

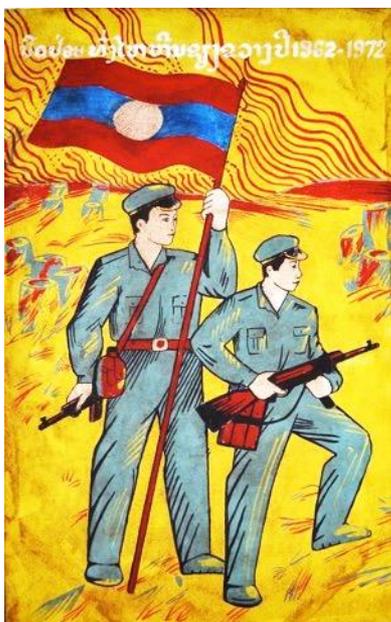


Figure 59. Poster commemorating the Second Indochina War in Laos showing Pathet Lao soldiers with a jar site in the background, titled 'Release of Plain of Jars, Xieng Khouang, 1962-1972'

Source: Image provided by Marion Ravenscroft, authorship/copyright not yet established

2.b.5 Recent History of the Jar Sites – after 1975 CE

While most jar sites have been essentially untouched by more recent human activity, some have been used for farming (for example as chicken pens) and some other sites have become the focus for contemporary religious activities. In the case of one site, Site 52, villagers broke some jars in the period 2000-03 to use the stone for grave covers in nearby cemeteries. This practice ended in 2003.

The jar sites have also been the focus of tourism activities since at least 2007. This included Sites 1, 2, 3 and 21. Site 1 is the major tourist destination, partly because of its large size and partly because it is quite close to the provincial capital, Phonsavan. A major tourism project was undertaken with support from the New Zealand government. This resulted in unexploded ordnance clearance and the development of visitor facilities at these sites, as well as at Site 52. Unexploded ordnance clearance was also undertaken at a small

number of other sites.

The province of Xiengkhuang is one of the most economically disadvantaged regions in the Lao PDR. The majority of its population are subsistence farmers and there is very little industry. This rural existence has ensured that the sites remain relatively untouched.



Figure 60. Site 1 visitor centre developed with New Zealand government support

Source: Duncan Marshall 2015

The main threat of the 20th century however, has come from a lack of awareness of the significance of the Plain of Jars. Centuries of depopulation resulted in a loss of connection to the sites and local inhabitants sourced stone from the sites for foundations, whetstone or grinders.

More recently, improvement of major and secondary roads to and within the province, electricity provision to the capital, districts and main roads since 2003, and mining concessions have, however, led to an influx of economic immigrants, with local people moving closer to the main roads so they have access to basic infrastructure and services, and the beginnings of economic improvement.

The difficulty in accessing sites has also proven to be a natural protection. Since 2005 however, with the increase of road construction, often linked to mining exploration and livestock developments, a number of sites are now located along roads, making them more vulnerable to looting and re-use.

A summary of the current use and recent activity at the nominated components is presented in the following table.

Table 7. Summary of current use and recent activity at nominated components		
Site	Current Use	Recent activity
1	Conservation and tourism	An actively managed heritage site with the primary interpretive/visitor facility for jar sites in the province nearby. The visitor facility was developed after 2007. UXO partially cleared – jar groups and pathways.
2	Conservation and tourism	An actively village managed heritage site with a secondary interpretive/visitor facility nearby. The visitor facility was developed after 2007. UXO partially cleared – jar groups and pathways.
3	Conservation and tourism	An actively village managed heritage site with a secondary interpretive/visitor facility nearby. The visitor facility was developed after 2007. However, only the main jar group is part of the tourism activities and the other groups are not used. UXO

Table 7. Summary of current use and recent activity at nominated components		
Site	Current Use	Recent activity
		partially cleared – jar groups and pathways.
8	Conservation	No recent activity and not used. UXO not cleared apart from pathway.
12	Conservation	No recent activity and not used. UXO partially cleared – jar groups and pathways.
21	Conservation and tourism	An actively managed heritage site with a secondary interpretation/visitor centre nearby, minimal management. UXO partially cleared – jar groups and path.
23	Conservation	No recent activity and not used, with a secondary interpretive/visitor facility nearby. UXO partially cleared – jar groups and pathways.
25	Conservation and current religious worship	This site is located in close proximity to a village and is actively managed. Some religious activities in one jar group. Cattle waterhole (?) excavation adjacent to a few jars. UXO partially cleared – jar groups.
28	Conservation	No recent activity and not used. UXO not cleared.
42	Conservation and tourism	Minor tourism activities/visitation. Some forestry activities in the vicinity. Secondary visitor facility remote from the site, developed after 2007. UXO not cleared.
52	Conservation and tourism	Minor tourism activities/visitation. Visitor hut at village some distance away from site, developed after 2007. UXO partially cleared – jar groups and pathways.

The history of systematic archaeological research into the jar sites extends back to 1931 and is discussed in the following section.

2.b.6 History of Archaeological Research

Archaeological exploration in Laos has been limited due to its rugged and remote topography, a history of twentieth century conflicts, large quantities of unexploded ordnance throughout the country, and local sensitivities to history, village authorities and rural poverty. The little archaeological excavation that has been conducted in the province of Xiengkhuang has concentrated mainly on the Plain of Jars.

The first archaeological explorations of Laos began with French explorers acting under the auspices of the *École française d'Extrême-Orient*, producing a two-volume publication. However, due to wars, it is only since the 1990s that archaeological efforts have begun again in Laos. The first research in the modern period was undertaken by Eiji Nitta who mapped and excavated at Site 1 but only limited data from this research was published. Site 1 was again the subject of research undertaken by Thongsay Sayavongkhamdy in the mid-1990s. Several areas were excavated but this material, too, remains unpublished.

An inventory of the megalithic sites of Laos was initiated by UNESCO in a project led by Samlane Luangaphay and Julie Van Den Bergh creating, for the first time, an extensive database of the megalithic sites and individual jars at some sites. In the late 2000s, further research on the megaliths was undertaken by Rosalia Genovese detailing the history of research and analysing morphological aspects of the megaliths.

Beginning in 2016, a new and collaborative research program commenced involving a team from the Australian National University, University of Melbourne and Lao Ministry of Information, Culture & Tourism. This program will continue until 2019.

French colonial period – EFEO and Colani

Information and some documentation about the jar sites was gathered from early in the period of French colonial administration. This included the first official listing in an inventory of monuments in French Indochina, published in 1926 (Genovese 2014, p. 37).

The key organisation in this period was the *École française d'Extrême-Orient* (EFEO), or French School of Asian Studies, founded in 1898 in Saigon. As part of its work, EFEO undertook research into prehistoric sites in Indochina, including by Madeleine Colani who had trained as a geologist. As part of her work she led the first archaeological expedition to the Plain of Jars in 1931. This included excavations at Jar Site 1.

‘From the outset, Colani entertained the notion that the jars’ contents offered an uninterrupted chronological connection with the ancient people of the Plain of Jars...’

‘In some of the jars, Colani found coloured beads, bones, teeth and ash from cremations, possibly belonging to several individuals of varying ages, due to some wisdom teeth appearing young and without “traces of wear and tear”... The ashes enabled Colani to formulate an early conclusion: “These discoveries leave us in no doubt whatsoever about the funerary function of the jars”’ (Genovese 2014, p. 60)

‘Colani was the first researcher to propose that the Plain of Jars may have been in use across centuries by waves of successive communities, each with their own funerary customs...’ (Genovese 2014, p. 61)

The latter view was much later supported by Eiji Nitta following his excavation at Site 1 in 1994 (Genovese 2014, p. 61).

The material culture reported at Site 1 comprised potsherds or complete pots, terracotta discs, iron, bronze, jewellery or fragments, charcoal, glass beads, carnelian beads, objects in ground stone and pseudo-Roman beads (Colani 1935, vol. 2, p. 37). This material is now in a museum in Hanoi.



Figure 61. Site 1 in 1931
Source: Colani 1935, reproduced in
Genovese 2014, p. 61

Colani undertook a second mission and excavation in 1931, this time to Sites 2 and 3. In addition to noting the presence of jars with a recessed inner rim, not found at Site 1, Colani also found ash from cremations and burnt human bones. Colani also found human bones buried in clay pots at Sites 1 and 3. (Genovese 2014, pp. 63-4)

In reporting her findings in 1932, Colani confirmed the funerary role of the jar sites and referred to the use of the limestone cave at Site 1 for numerous cremations. (Genovese 2014, p. 64)

Colani undertook her third mission to the Plain of Jars in 1932 (Sites 22, 26, 27, 28 and 37, Genovese 2014, pp. 65, 76). At Site 26,

‘she uncovered one of the richest deposits of funerary objects: “in excess of 200 glass beads, bronze bells, five iron bracelets [...] The larger jars measured 2 m or more”. Excavations produced an array of goods, including pots of various sizes, bronze bells... utensils and iron jewellery, stone pendants, plain and decorated sherds, glass beads, fragments of a pseudo-Roman bead and a single carnelian bead.’ (Genovese 2014, p. 66)

Further missions were undertaken in 1933 (Sites 13, 38, possibly 39, 51) and 1940 (Sites 16 and 38). Site 13 yielded a stone axe, potsherds, glass beads, round-bottomed pots, incised bronze ring fragment, iron knives and charcoal, as well as a granite disc with an anthropomorphic figure (see Figure 27 above) (Genovese 2014, p. 67). Site 51 yielded polished stones, round-bottomed and mouth-to-mouth pots, as well as decorated and undecorated potsherds, iron knives and charcoal (Genovese 2014, p. 71).

At Site 38 in 1940, Colani’s excavations,

‘uncovered numerous disc-lids, decorated on the lower side with an animal, generally a mammal, or with a large button occasionally decorated with a head, human or monkey.’ (Colani quoted in Genovese 2014, p. 72)

Colani documented her research in a two-volume publication in 1935, which was the first and remains the only major publication on the jar sites (Colani 1935; Genovese 2014, p. 75). The excavated artefacts are thought to be held by the National Museum of Vietnamese History in Hanoi.

Colani proposed a theory linking central Vietnam, the Plain of Jars and Assam in northeast India through a caravan trade traffic, especially of salt (Genovese 2014, pp. 72-3). In the case of the location of jar sites, Colani wrote,

‘All fields [jar sites] are located along a mountain ridge, dominating the region and affording excellent views.’ (Quoted in Genovese 2014, p. 78)

With regard to the jars themselves and the question about whether they ever had lids of some type, Colani wrote,

‘No lids: were they made of timber or wickerwork lined with hay and fastened by heavy stones? Simple supposition.’ (Quoted in Genovese 2014, p. 75)

However, more recent research identified lids at Sites 42 and 52.

Only limited research has been undertaken on the jar sites since Colani’s work, by Nitta (1996), Sayavongkhamdy & Bellwood (2000), Genovese (2012 and 2014) and most recently by Shewan, O’Reilly & Luangkhoth (2016).

In addition, the UNESCO-Lao Government Safeguarding the Plain of Jars Project led by Van Den Bergh and Luangaphay conducted extensive survey work and limited excavations from 2001 onwards as part of finding and documenting sites in comprehensive GIS database, alongside village-based site management and awareness training, UXO clearance programs, and community based heritage tourism development initiatives (Archaeological Assessments 2002, 2003, 2005a, 2005b, 2005c; Baldock and Van Den Bergh 2009; Rogers 2002; Rogers et al 2003, 2005; Fighting poverty at the Plain of Jars 2011).

This research is briefly described below.

Nitta 1994

The Japanese archaeologist Eiji Nitta undertook research on the Plain of Jars in 1994. The following summary is presented in O'Reilly and others (2016, p. 4).

'Nitta et al. (1996) excavated and mapped Site 1 in 1994, the first research since Colani's. The team excavated around two stone jars. Four trenches were excavated intersecting on a jar labelled 217. Seven pits, all about 20 cm in diameter and 20 cm deep and covered by a flat stone were uncovered around this jar. Unburned human bones and teeth were found in these pits, some were associated with iron knives and glass beads. One of the pits contained a ceramic jar, found about 50 cm from surface. This pit was also covered by a flat stone. The jar measured 60 cm high with a diameter of 25 cm at the mouth. The vessel was decorated with incised lines and spirals and coated in brown resin. The vessel was topped with a lid. The jar contained fragments of skull, femur and humerus and three teeth. Nitta asserts that the top of the pits is concurrent with the placement of the stone jars and so likely are contemporaneous or the stone jars were put in place after the burial activity. He further states that the presence of "cord-marked sherds and clay earrings were found in layers under the burial layer... shows prehistoric habitation or burial activities were done before the construction of the cemetery" (Nitta 1996:16). He suggests that the pit and jar burials belong to the late first millennium AD (Nitta 1996:17).'

Sayavongkhamdy 1990s

Followed his research beginning in the 1980s, the Lao archaeologist Thongsa Sayavongkhamdy excavated multiple test pits at Sites 1, 2 and 3 between 1994-96. He found,

'At the Phon Savan site [Site 1], three different locations were test excavated... Potsherds, miniature pots, stone pendants, iron objects, bronze fragments including bells, glass beads, one stone slab and a large quantity of charcoal were encountered in the cultural layer, which is 30 cm thick in average and lies only a few centimetres beneath the top soil. This layer also contained several heaps of stones (pebble size) which sometimes look like they have been heaped into an irregular pavement. Miniature pots and glass beads seem to have been deposited there as if they had been spread from a digging activity or dropped during emptying the stone jars.

A layer of charcoal is also found running underneath the stone jar, suggesting a burning activity prior to the establishment of the cemetery...

Beneath the cultural were found a buried jar and two burial pits with fragmentary human bone... No bones were found inside [the jar]. One of the burial pits is covered by the stone slab, the bottom part of which seems to have been engraved with schematic human figures representing a naked couple. Human bones and teeth were found in the pit, crushed up into small fragments. The second pit contained two fragmentary skulls mixed up with large numbers of other bones... None of the bones showed sign of cremation. They have been defleshed before their secondary burial.

The second test pit... yielded two pottery vessels which were different from each other and also different from the very jar encountered in the first test pit... No bones were observed inside... Miniature pots, beads, iron and bronze fragments were encountered. A historical (17th-19th century AD) copper weight was also found. A spindle whorl was also uncovered...

Just below the surface [of the third test pit] lies a 25 cm thick layer of sherds of notable density. A series of cylindrical coarse jars were found buried in a group... Miniature pots, beads and metallic objects were totally absent. This assemblage looks rather modern when compared to its counterpart associated with the stone jars, as described previously.

Three samples of phytoliths from the test pits have been analysed by Doreen Bowdery. She concludes: "the assemblage suggests a wet habitat and more varied vegetation occurs at present. Three economic plants, palm, banana and rice were identified..." [suggesting] either use of the

sampled locality as a garden, or habitation in the vicinity by farming groups.

The test pits carried out at the other two sites [Sites 2 and 3]... have yielded similar artefacts and data to those uncovered from the Phon Savan site [Site 1]...

As a preliminary conclusion we can offer the following remarks on Phon Savan. The site was once well watered and perhaps supported rice cultivation. At some point a cemetery was established. The mortuary practice seems to have revolved around the stone jars which might contain the body or the pre-treated bones of the person to whom the jar was dedicated. Selected members of his or her family might have been subsequently interred as secondary burials around the stone jar, either in a burial pit or in a ceramic burial jar. Excavations at Phon Savan by Nitta in 1994 (Nitta 1996) have produced similar evidence.

In Sayavongkhamdy's view, the necropolis was abandoned for perhaps several centuries and later was reused by people who are making cylindrical, resin-coated jars. These people favoured the granite blocks which lie scattered in between stone jars as their funerary monuments. The burial pots under the granite blocks are so distinctive from those excavated around the stone jars that their contemporaneity is unlikely, unless they present two distinct communities which co-existed peacefully and manufactured pots within their own separate traditions. The difference between the pots is more likely to indicate that the granite blocks we used as "substitute" for the stone jars during the later chronological stage, during a period when the "megalithic" cult was fading away.' (Sayavongkhamdy & Bellwood 2000, pp. 106-7)

In terms of the date of Site 1, the authors suggest a radiocarbon date of 920 ± 50 BP, although another date provides 'a hint that burial activity might have commenced as much as 3000 years ago' (Sayavongkhamdy & Bellwood 2000, p. 106).

Sayavongkhamdy focussed on the grave makers which reveal different modes of burial practice. The archaeological materials he retrieved from excavation around stone jars were quite similar to those found by Colani. He also discovered and described the first quarry site at Phoukeng (Site 21), which subsequently led to many more being identified.

Sayavongkhamdy suggests that the civilisation was based on iron mining and iron production for export, that they were Austro-Asiatic (Mon-Khmer) speakers and that the civilisation declined by the 3rd century CE. He hypothesised that the production of megalithic jars had an abrupt ending because of the impact of war on the civilisation, as evidenced by stone jars at different stages of completion at quarries. Subsequently, Sayavongkhamdy believes the sites have been re-used for cemeteries across several time periods.

UNESCO-Lao 1998-2010

The UNESCO-Lao *Safeguarding the Plain of Jars* project, a joint undertaking by Government of Lao PDR and UNESCO, identified and mapped 85 jar sites within the boundary of Xiengkhuang Province, an area of 13,380 hectares, after 2001, of which 58 sites, over 2,000 megalithic stone jars and an additional 800 stone cultural resources were recorded in detail (Fighting poverty at the Plain of Jars 2011). The provincial Plain of Jars team, periodically trained and/or assisted by national and international experts including Julie Van Den Bergh, Samlane Luangaphay, Wisa Wisesjindawat, Paul Box and Pamela Rogers, recorded and stored in a GIS database information on physical attributes of the individual resources, the site locations and state of conservation of the sites and attributes.

The project was a comprehensive, long-term effort to protect the cultural assets of the Plain of Jars and to utilize these assets in a sustainable manner to contribute to the rehabilitation of the Xiengkhuang province. The project worked closely with the national, provincial and district governments. The Lao PDR Government devoted considerable resources to the

project through the allocation of national and provincial staff, and the provision of infrastructure support.

The project worked on the identification of the resources and development of a management database, capacity development so it could be managed locally, and it recognised that sustainable management includes community involvement which was linked to poverty alleviation, and implementation of community-based heritage tourism. This was undertaken in four phases:

Phase I of the project (1998-2000) was dedicated to the development of one of the project's principal management tools – a Geographical Information System (GIS) database for the Plain of Jars. The GIS database provided the basis of a cultural resource management plan for the province of Xiengkhuang, which would facilitate the nomination of the Plain of Jars to the UNESCO World Heritage List. A small team of international advisors trained a provincial staff to collect the data from the villages and entered this first step information into the database.

Phase II of the project (2000-2002) focused on field survey to compile a comprehensive and detailed cultural heritage inventory of all archaeological sites and their component features in the Plain of Jars. This was accomplished through on-site training of a Provincial Department of Information and Culture team in documentation and recording techniques, linked to the GIS database developed during Phase I.

Identification of sites in particular danger or at risk from unexploded ordnance, erosion, development pressures or theft was also included in the Phase II inventory. The phase included ongoing GIS training for the provincial staff. An initial guide-training and tourism project was also undertaken.

Phase III of the project (2002-2005) concentrated on activities to protect the archaeological heritage and to develop the cultural resource assets of the Plain of Jars for the benefit of the local communities. Workshops were conducted at community level to introduce guidelines on the protection, maintenance and first step tourism hospitality and management of the sites.

In addition, baseline socio-economic, heritage and environmental data were collected at seven sites by a specially trained provincial and district level team. These seven sites were to become the focus of the community based heritage management set up during Phase IV, and formed the basis for the Community-based Heritage Tourism Plan.

As well, the data collected annually since 2005 has enabled the local authorities to monitor and provide rapid response to short term and long-term effects of tourism, increase in biodiversity, and community values at the jar sites.

A UXO clearance program was conducted at three of the sites which provided an opportunity, albeit rather unusual, to gain valuable sub-surface data and train the Plain of Jars team in archaeological data retrieval. The team also was instructed in archaeological photography, initial finds conservation, artefact handling and recording and excavation procedures.

During **Phase IV** of the project (2006-2010), local communities were included in the development of management strategies, safeguarding of the heritage resources and accessing the benefits from the site's sustainable development. At the same time the

capacity of the authorities was strengthened to supplement, facilitate and support the efforts of the local communities. In order to achieve this a number of government departments including the Ministry of Foreign Affairs, Ministry of Information and Culture, Ministry of Agriculture and Forestry, National Tourism Association, National Regulatory Authority for UXO Clearance and representatives from Kham, Khoun, Paek, Phaxay, Phoukood, Nonghet, Morkmai and Thathom Districts and the seven target villages Ban Na O, Ban Nakho, Ban Xiengdi, Ban Phai, Ban Nam Hom, Ban Songhak and Ban Phakeo collaborated and discussed appropriate ways forward.

By widening the involvement of numerous government departments, the cooperation of a diverse group of stakeholders at the design and implementation stage of the management plan was sought. This multi-level approach was adopted to ensure sustainability and that the benefits of the community-based heritage management would be directed towards the most impoverished.

Phase IV included UXO clearance of four target sites, guide, village, district and provincial level training and seminars, ongoing GIS training for the Provincial level, development of basic tourism infrastructure, livelihood development and implementation, and information dissemination.

As part of the overall project, seven jar sites were cleared of UXO in two phases (2004/5 and 2007), utilizing an innovative methodology for archaeo-demining that has now become the global standard for removing UXO from archaeological sites without damaging the archaeological remains (Rogers and Van Den Bergh 2005, Annex XI). The sites were cleared to the following specifications: 25 cm depth on paths, 1 metre depth for a perimeter of 5 meters around the jars, and a surface clearance of the remainder of the site area.

This methodology combined archaeological data retrieval with the clearance of UXO in a post-conflict situation. It included a number of training modules for the various groups involved in the clearance program focused on conservation, data retrieval, artefact recognition and initial handling of finds. Excavation and sub-surface clearance were carried out by fully trained Explosive Ordnance Disposal (EOD) technicians who were trained to recognize archaeological materials and deposits after which a trained archaeologist would take over. Removal of UXO for safe disposal off-site was preferred although in some instances this proved impossible. Best practices were developed, tested and improved over the years.

Genovese 2008 – 2011

Rosalia Genovese conducted research for her doctoral dissertation entitled *The Plain of Jars of North Laos, beyond Madeleine Colani*. It was,

‘a study on the extent of jar distribution, quarries and the carving process, on form, surface decoration and regional parallels. It is the result of my fieldwork on the location of the jars and their associated quarries undertaken [in the period 2008-11]. (Genovese 2014, p. 15)

In more detail,

‘Under-researched or undocumented aspects of jar form are discussed, together with a sequence of carving steps based on my observations at quarries and jar sites. An expanded site distribution is analysed in relation to sources of stone and historical routes. The thesis re-contextualizes Colani's work in her time and with new survey and production matter, redefines jar design and iconography, the spatial distribution of sites and their close relationship to the places and processes of manufacture.

Regional comparisons are explored and discussed in relation to megaliths and material culture from archaeological sites in Mainland and Island Southeast Asia, and South Asia.’ (Genovese 2014, p. 3)

Genovese conclusions include:

‘[that her research] has underlined the unique opportunistic use of stone and the intimate relationship of the jars to sources of stone, be they mountain flanks, outcrops or river beds [supporting prior conclusions by the UNESCO-Lao *Safeguarding the Plain of Jars* project]. The topics discussed have illustrated levels of relationship between the Plain of Jars and some of its neighbours in Mainland and Island Southeast Asia. The temporal context and apparent use of the Plain of Jars is discussed as an interchange point. While more information is needed to clarify the function and form of the jars, the thesis establishes a distribution of jar sites and quarries far beyond that investigated by Madeline Colani...

The new evidence [recorded by the UNESCO-Lao *Safeguarding the Plain of Jars* project] presented... expands the distribution of Colani from 26 sites... to 52 sites... to show how the spatial relationship is based on an upland network of exchanges linked to quarries and overland routes. Analysis of the jars themselves indicates a coding through form, particularly in the rim variation, while the irregular association of discs showed no clear correlation to size or rim type.’ (Genovese 2014, pp. 226-7)

Genovese also reaches a number of conclusions about the carving sequence for jars, about production planning and quality control (see also Baldock 2008). She considers whether rim style may have a higher importance than simply as an ornamental or practical feature, the significance of flawed jars and cavity size, the variation in discs, the significance of the proximity of quarries and jar sites, access to sandstone as the predominant material used for jars, as well as the nature of grave goods and tools found at the sites. (Genovese 2014, pp. 229-234)

In addition, while concluding,

‘that the jars functioned as ‘vehicles’, or literally ‘vessels’, to convey and embody mutable meanings connecting man to the World in which he lived.’ (Genovese 2014, p. 235)

Genovese also notes that,

‘The Plain of Jars remains shrouded in mystery through lack of research.’ (Genovese 2014, p. 227)

Plain of Jars Archaeological Research Project (Australian National University, University of Melbourne and Lao Ministry of Information, Culture & Tourism)

The most recent archaeological research at the Plain of Jars has been conducted by the Plain of Jars Archaeological Research Project (PJARP), led by the Australian National University and in conjunction with in conjunction with the University of Melbourne and the Lao Ministry of Information, Culture and Tourism. The team, funded by the Australian Research Council, conducted fieldwork at Site 1 in 2016, including excavations of three trenches which are the first major archaeological dig at the Plain of Jars since the 1930s. Details are provided below.

‘The project seeks to understand the function of the megalithic jars, to examine the geographic extent of the associated culture and to assess the role of the sites in the context of burgeoning inter-regional exchange networks of the period. These aims will be achieved through the application of a range of archaeological and analytical techniques...

Three excavation units were established at site 1... An extensive inventory of jars, boulders and discs was undertaken, and the location of each geo-referenced. The morphology of each jar and the type of stone used has been recorded and every object photographed...

In the first 200 mm of [Unit 1] a substantial number of sandstone chips (n = >100) were discovered, indicating the possible retouching of the large stone jars. This explanation is supported by the discovery of two hammerstones in the units, one adjacent to a stone jar.

Three mortuary contexts were uncovered in unit 1. Human remains were discovered resting atop four limestone boulders below a large sandstone disc. A second and third burial were discovered in association with worn limestone boulders. All the human remains were fragmentary; the secondary burials were comprised of teeth and pieces of long bone [recent analysis of the skeletal remains places the minimum number of individuals (MNI) for unit 1 at 11]. Items of material culture recovered from unit 1 include iron fragments, three spindle whorls, a hammerstone, a whetstone, ceramic vessel sherds and a miniature ceramic vessel. Items of jewellery include a perforated stone pendant and two ceramic ear plugs, an agate bead (mortuary context two), a Indo-Pacific glass bead (mortuary context three) and two carnelian beads (one associated with each of mortuary contexts two and three)...

[Unit 2] revealed a primary burial comprising the remains of two individuals: an adult [female] skull and post-cranial remains, and skull fragments and the mandible of a child [approximately 7-8 years of age]. The adult... was covered with a large, flat limestone slab, with the deceased's face roughly aligned with a perforation through the slab. Material culture from the unit includes iron fragments, a single Indo-Pacific glass bead, a spindle whorl, a hammerstone, ceramic sherds and a miniature ceramic vessel similar to the one recovered from unit 1.

[Unit 3] revealed two mortuary contexts and four potential jar burials... [examination of the buried ceramic jars contents conducted in July 2016 at the Xiengkuang museum revealed that two of the jars contained infant skeletal material]. Mortuary context four consisted of an isolated tooth fragment and a burial jar with incised decoration. The second mortuary context, number six, consisted of isolated human long bones and some teeth. Material culture from the unit includes a whetstone, iron fragments, ceramic sherds, a small bronze object associated with mortuary context six, and three reasonably intact burial jars... and a fourth burial jar in the north baulk positioned directly under a quartz-veined sandstone slab...

Summary of Site 1 excavations

The recently concluded field season has established that the jar field was used for mortuary purposes, with evidence for primary and secondary burials and... buried inhumation jars [containing the remains of infants]. [In total the MNI (Minimum Number of Individuals) is 18 from 9 burial contexts – 7 adults and 11 subadults <15 years of age.] There is no evidence of any occupation at the site, and the period of activity appears, based on the distribution of debitage and artefacts, to have been chronologically limited, although a better understanding of dating should emerge when radiocarbon samples are processed. It is clear that a range of grave markers were used, including sandstone discs, limestone boulders and quartz-veined blocks. The research project will continue until 2019.' (Shewan, O'Reilly & Luangkhoth 2016)

In other words, the excavation revealed three distinct types of burial:

- deposits of a small collection of bones and/or teeth with a large limestone block placed over them;
- infant burials where bones have been placed in buried ceramic vessels; and
- for the first time at one of these sites, a primary burial, where a body was placed in a grave (ANU 2016).

The status of the buried individuals was difficult to determine because of a lack of material objects buried with them, but the researchers hope that genetic analysis might indicate relationships. Isotopic analysis of human dental specimens is in progress. This work will shed light on the settlement behaviour and mobility of the individuals interred at Site 1. Other scientific analyses presently being conducted include geochronology and radiocarbon dating.

It was also concluded that,

‘Although the stone jars remain undated, it is probable that they were created during the Iron Age (c. 600 BC–AD 500) on the basis of associated material culture.’ (Shewan, O’Reilly & Luangkhoth 2016)

Further research was undertaken in November 2016 by PJARP in an effort to establish the presence of occupation sites related to the megalithic jar sites. Excavations led by Nigel Chang of James Cook University (a collaborator on the PJARP) were focussed on the Ban Ang Airport Site (BAA-16) located in close proximity to Site 1. Four small areas of excavation were opened revealing some evidence of possible human activity at the site including ceramic remains similar in nature to those uncovered at Site 1.

In 2017, the PJARP undertook research at Site 52, Site 2 and Site 3.

At Site 52 the team opened eight excavation units. This phase of research also included survey of Site 12 (a quarry site) with documentation of jars and discs numbers and attributes. An additional two jar groups were identified in addition to the four identified in the 2007 UNESCO survey, and four unrecorded quarry sites were documented. These were reported to the Department of Heritage.

During the research, 420 jars and 182 discs/lids were recorded and photographed. As with Site 1, Site 52 would appear to be a mortuary landscape although the preservation of human skeletal material was inhibited by taphonomic conditions such as soil acidity and extensive termite activity. Only one human dental specimen was retrieved from the excavations. It should be noted that numerous pommelled lids were recorded at the site.

At Site 12, 43 jars and 6 discs/lids were recorded, an increase of 9 on the number of jars recorded from the 2007 survey.

At Sites 2 and 3, every feature (jars, discs and boulders) were recorded. For the jars and discs, morphological attributes were recorded and locational data on all features was collected. Ground Penetrating Radar was also deployed at these sites to detect subsurface anomalies. At Site 2, 86 jars were recorded (the 2007 survey counted 93), photographed and documented, and 15 discs. At Site 3, 240 jars (2007 survey counted 247) and 41 discs were recorded, photographed and documented.

These latest survey results have yet to be integrated with the database maintained by the Department of Heritage.

Figure 62. Site 1 excavation in 2016

Source: ANU 2016



Figure 63. Site 1, Unit 2 excavation, primary burial, 2016

Source: Shewan, O'Reilly & Luangkhoth 2016



Figure 64. Site 1, Unit 3 excavation, burial jars, 2016

Source: Shewan, O'Reilly & Luangkhoth 2016





Figure 65. Site 1, Unit 3 excavation, burial jar positioned under a quartz-veined sandstone slab, 2016
Source: Shewan, O'Reilly & Luangkhoth 2016

3. JUSTIFICATION FOR INSCRIPTION

3.1.a Brief synthesis

The Megalithic Jar Sites in Xiengkhuang province of central Laos is a serial property of 15 components. The ancient jar sites contain extensive and remarkable evidence of funerary practices, and are the outstanding evidence of the Iron Age civilization which created the sites.

Most of the funerary sites are located in elevated positions on hills or ridges, although one major site is located on the low hills of a central plain. The sites include 1,325 ancient stone jars as well as numerous associated stone discs, burials and other features. The jars are the dominant and impressive feature of the sites being large in size and carved mostly from sandstone. Some of the jars are massive. In addition, the property includes exceptional sites with the largest concentration of jars, over 400 in one case, representing a very large proportion of the known evidence, as well as a range of smaller sites representing quarry sites or the geographic extent of sites.

The stone jars and disks have been carefully crafted and in some cases, especially disks, they exhibit decorative carving with animal or anthropomorphic figures, concentric circles, circular mouldings or a central knob or loop.

The funerary sites are believed to date from before the Iron Age (between about 500 BCE and 500 CE) into historic times, and are evidence of a substantial and widespread culture which existed in the region. Many details of this culture remain a mystery but the jar sites are its pre-eminent testimony.

Following this initial period, the jar sites were used by other cultures until the 18th century CE, as reflected in the complex archaeological evidence.

3.1.b Criteria under which inscription is proposed (and justification for inscription under these criteria)

The property is nominated under Criterion (iii).

The sites are exceptional testimony to the cultural traditions associated with funerary practices, and to the civilization which created the sites but which disappeared sometime after 500 CE. The megalithic jar sites are impressive because of the size of jars and the technological skill to produce and move the jars from quarry sites to funerary sites, as well as because of the large number of surviving jars spread in groups across a large area of the current province. The sites include important archaeological evidence related to funerary practices, as well as of the material culture of the ancient civilisation, and the locations of the funerary sites are highly suggestive of cultural meaning. The funerary sites are the outstanding surviving evidence of this civilisation. While the use of jars in funerary sites is known in other parts of north-eastern India and Southeast Asia, the density of sites in Xiengkhuang is remarkable.

3.1.c Statement of Integrity

The Megalithic Jar Sites include the attributes necessary to express the Outstanding

Universal Value. The 15 components include 1,325 ancient stone jars as well as numerous associated discs, burials, quarries and other features. These include nine components of the five major sites (Sites 1, 2, 3 – Groups 1 & 3, 3 – Group 2, 3 – Group 4, 3 – Group 5, 3 – Group 7, 42 and 52) which have the largest number of attributes of all the known jar sites in the province (1,186 jars and 198 discs), as well as six smaller components (Sites 8, 12, 21, 23, 25 and 28). The property is of an adequate size to include the sites and their attributes.

The proposed serial property focuses on the five major jar sites, which include, within relatively small areas, a very large proportion of the jars and related evidence found in the province (ie. Sites 1, 2, 3, 42 and 52). In addition, six smaller sites are included to ensure all attributes necessary to express the Outstanding Universal Value are within the property. The smaller sites and the summary reasons for their inclusion are:

- Site 8 – quarry associated with two of the major jar sites, Sites 2 and 3;
- Site 12 – manufacturing site;
- Site 21 – quarry associated with another major jar site, Site 1;
- Site 23 (comprising 3 groups of jars and a quarry, with 27 jars) – a good example of a smaller jar site with quarry, representing the eastern spread of jar sites in the province;
- Site 25 (comprising 2 groups with 35 jars) – a good example of a smaller jar site with reasonable access, representing the northern spread of jar sites in the province; and
- Site 28 (comprising 1 group with 1 jar) – a good example of a smaller jar site with reasonable access, representing the western spread of jar sites in the province.

This series of components includes all of the major jar sites and in total includes 1,325 jars and 215 discs across 11 sites, representing 63% of the total number of known jars in the province (based on data from the Department of Heritage). The range of site types is well represented (ie. jar sites and quarries). A reasonable range of rim styles are represented, with the dominant rim styles in all jar sites being dominant in the suite of selected sites. The series provides a good geographic spread reflecting the overall distribution of jar sites.

In addition, almost all of the jars included in the suite are of sandstone, with a few examples made of conglomerate and breccia. This reflects the predominance of sandstone as the material used in jars overall.

In general terms, the jar sites display a fair to good state of conservation. The jars themselves are reasonably robust and they have survived natural deterioration processes quite well given their age and exposure to the elements. The sites also tend to be remote from settlements and not subject to use, development or significant tourism, all of which contributes to their preservation.

The integrity of the archaeological deposits is high. The deposits at the sites have been recorded at depths between 40 and 100 cm, and few sites have been excavated or have suffered erosion or damage during war.

However, there are a number of factors in the past and currently which have or may result in adverse effects. These include looting, bomb and other war damage, unexploded ordnance, vegetation growth, inappropriate tourist activities including graffiti, as well as inappropriate development in the property or buffer zones, and a lack of active management.

A survey of the condition of jars undertaken at most sites in 2017 indicated that 31% of

jars were intact, 69% were broken and in addition many jars had been dislodged and had fallen over. See Section 4.a for further details.

There have also been a few jars removed from some sites over time (Site 1 – 5 jars removed with 4 returned, Site 25 – 1 jar removed and returned, and Site 2 – 2 jars removed).

3.1.d Statement of Authenticity

The property displays a high level of authenticity. The form, design, materials and location of the jars and discs are all original, noting the effects of age and the damage to some attributes. In most cases, the setting remains as an agricultural or forest landscape, which is believed to be consistent with or at least sympathetic to the original. The archaeological deposits are believed to be little disturbed, with very limited excavation having been undertaken, although war-time bomb damage has had an impact at some sites, and some looting and disturbance by animals or agricultural practices has occurred.

A more detailed analysis of the authenticity of the property is provided below.

Form and design

The stone jars and disks retain their form and design from the period of creation, including those partly formed jars in quarry sites, albeit with some weathering and instances of damage. On the basis of limited archaeological excavation, burial jars and grave goods also retain their original form and design.

It is noted that the basic shape of the stone jars is uniform although regional manufacturing differences are noticed. Evidence in the form of rim executions of jars suggest that the stone jars could have been covered, and stone lids have been recorded at Sites 42 and 52. The stone jars are frequently accompanied by stone disc and stone grave markers. These associated markers are present at most jar sites. Stone grave markers are unworked but some discs have moulded concentric circles on one side and a few are decorated with a human or animal representation (at Sites 1, 2, 12, 42 and 52). The single decorated stone jar at Site 1 has a similar human figure as found on two stone discs at Sites 42 and 52.

Materials

The stone jars, disks, partly formed jars in quarries, other stone grave markers, and archaeological deposits including burial jars and grave goods (based on very limited archaeological excavation) are all materials original to the creation of the sites.

All stone jars are carved out of solid rock, such as sandstone, conglomerate and breccia. The stone was sourced locally, although in one case the quarry (Site 21) is 9 kilometres from the jar site (Site 1). In the sandstone quarry sites, it is noted that the masons have selected a rock source which naturally, due to the direction of the faults lines and natural bedding, lends itself to extracting regular blocks. In other cases, boulders have also been selected for jars (eg. Site 21).

Use and function

The jar sites fully express their original use and function associated with burials, noting that burials have long since stopped at the sites. The quarry sites also express their original

quarry use and function, and quarrying has also ended long ago.

The stone jars can be defined as burials and/or burial associated. Inside some stone jars archaeological investigation has revealed burnt bone fragments and teeth, while within the surface area which surrounds the jars associated small burial pits containing bones and grave goods or ceramic burial jars can be found. Few stone jars have material inside but excavations at Site 1 show that most jars have burials surrounding them.

Techniques

The quarry sites and manufacturing site provide insight into the original techniques used to carve the jars. Stone jars in all stages of manufacture have been recorded and while no tools have ever been found, tool marks can be noticed mainly on the inside of the jars and also on quarry faces.

Location and setting

All of the jar, quarry and manufacturing sites retain their original locations.

With regard to the settings, in most cases the jar sites are set on lower hill slopes, spurs and mountain ridges or saddles. There is no research or evidence to enable conclusions to be drawn about whether the current settings for the jar sites match those which would have existed during the period of jar creation and use, in terms of surrounding land use and vegetation. The exception is Site 1, where modern developments such as an airport, military base and scattered housing have occurred in the setting.

3.1.e Protection and management requirements

The property is protected under the *Law on National Heritage 2013*, a provincial decree and provincial guidelines regarding provincial and village-level protection, management, conservation and support for heritage. The property has a management system which operates at three levels – national, provincial and district/village. At each level, there are key instruments which identify roles and responsibilities, and in some cases specific management activities.

The management system operates through a range of agencies at the various levels, especially the provincial Plain of Jars Heritage Technical Division, with day to day management of most sites being the responsibility of villages in the vicinity of sites, supported by the Division. The national Department of Heritage plays a key technical role in research, conservation, heritage impact assessment and overall monitoring. Coordination is achieved through national and provincial committees.

Long-term management expectations include: enhanced conservation of the sites; ongoing research into the sites; avoidance or mitigation of adverse developments; harmonious tourism development; strengthened community understanding and support; and increased conservation capacity.

3.2 COMPARATIVE ANALYSIS

This nomination proposes that the Outstanding Universal Value of the series of jar sites relates to the sites being exceptional testimony of a civilisation under Criterion (iii). In this context, the focus of the comparative analysis should be the range of testimony of that civilisation, and this is provided in the following section.

However, it may be of additional benefit to provide analyses in a range of other contexts related to megalithic sites and World Heritage, even though these are less relevant to the claimed OUV. These analyses are also provided below.

This analysis is structured to consider:

- a range of broad typological/thematic analyses of the World Heritage List;
- potentially similar properties inscribed on the World Heritage List;
- potentially similar properties on Tentative Lists;
- potentially similar sites in India and Southeast Asia; and
- megalithic sites in Laos, including other sites related to the civilisation.

A conclusion is offered at the end of the section.

3.2.1 Broad typological/thematic analyses of the World Heritage List

One context for the analysis of the Plain of Jars is a typological framework based on categories, such as that proposed by ICOMOS (2004). This framework for an analysis of gaps in the World Heritage List included,

Burial Monuments and Sites:

Sites

Large areas or cultural landscapes with burial mounds, cairns, mausolea, tombs, cenotaphs, cemeteries, etc (ICOMOS 2004, p. 15)

As part of the analysis prepared by ICOMOS, it found that the category ‘Burial sites’ had only 13 properties in the World Heritage List for the Asia/Pacific region, or 4.7% of properties inscribed in the region as at 2003 (ICOMOS 2004, p. 66). None of these 13 properties represented a ‘megalithic jar’ property or simply a ‘jar burial site’.

As at 2016 for the Asia/Pacific region, there were 173 cultural sites and 12 mixed sites inscribed on the World Heritage List. Again, none of them represented a ‘megalithic jar’ property or a ‘jar burial site’.

The 2004 ICOMOS analysis also suggested a chronological-regional framework related to prehistory and history within different regions of the world. This included the ‘Early evolution of man’ related to all regions and a series of periods or ages. The Plain of Jars relates to the ‘Bronze and Iron Age’ periods in this analysis. (ICOMOS 2004, p. 68)

The following table presents an analysis of World Heritage properties at 2013 related to the early evolution of humans. It shows 16 properties in the Bronze and Iron Ages and among these, 5 are megalithic but none of them have megalithic jars. These properties are further analysed in the following section.

Table 8. Analysis of World Heritage Properties at 2013 related to the early evolution of humans (Based on <i>Antequera Dolmens Site</i> , 2015, p. 139)		
Early period/age		Properties inscribed on the World Heritage List (reference numbers) – numbers underlined and bold relate to megaliths
1.	Palaeolithic	10, 17, 85, 130, 147, 158, 167, 179, 181, 287, 310, 434, 447, 449, 593, 606, 659, 670, 739, 833, 866/874, 915, 936, 958, 977, 985, 989, 994, 1021 (Total: 30)
2.	Mesolithic and Neolithic	79, 139, 373, 514, 848, 925, 1006, 1363, 1405 (Total: 9)
3.	Bronze and Iron Ages	<u>130</u> , <u>132</u> , 306, 330, 557, 575, <u>579</u> , <u>833</u> , 849, 886, 954, 968, 1145, 1226, <u>1343</u> , 1363 (Total: 16)

The 2004 ICOMOS analysis also presents another possible framework to consider – a thematic framework. The Plain of Jars could relate to the theme ‘Expressions of Creativity’ and the sub-theme ‘Creating and using monuments - Monumental sculpture, dolmens’ (ICOMOS 2014, pp. 77-8).

The following table presents an analysis of World Heritage properties at 2013 related to the theme of expressions of creativity. None of the identified properties represents megalithic jar sites.

Table 9. Analysis of World Heritage Properties at 2013 related to expressions of creativity (Based on <i>Antequera Dolmens Site</i> , 2015, p. 139)		
II. Expressions of Creativity		Properties inscribed on the World Heritage List (reference numbers) – numbers underlined and bold relate to dolmens
A	Creating and using monuments 15. Monumental sculpture, dolmens	203, 15, 43, 86, 87, 88, 91, 114, <u>139</u> , 149, 157, 201, 208, 239, 252, 263, 277, 307, 326, 330, 370, 441, <u>514</u> , 524, 540, 666, 697, 700, 736, 743, 751, 779, 853, 859, 912, <u>977</u> , 1022 (Total: 37)

These typological/thematic analyses are generally interesting in understanding the representation of megalithic sites in the World Heritage List in various contexts, and in particular the lack of megalithic jar sites. However, the proposed OUV for the Plain of Jars is not based on such typological/thematic qualities, and none of the above examples compare to the Plain of Jars as testimony of the civilisation which created the sites.

3.2.2 Analysis of potentially similar properties inscribed on the World Heritage List

Sixteen properties currently on the World Heritage List have been identified as having potentially similar qualities to the Plain of Jars sites. These qualities are megaliths, with or without early burials/graves/funerary sites. The sites are listed in the following table.

Table 10. Analysis of potentially similar properties inscribed on the World Heritage List

Name of Property (Country)	Brief description (Note: Text in italic and bold are especially relevant to the analysis)	Dates	World Heritage Criteria	Year Inscribed on World Heritage List
Choirokoitia (Cyprus)	<p>Occupied from the 7th to the 5th millennium B.C., the village covers an area of approximately 3 ha at its maximum extent and is one of the most important prehistoric sites in the eastern Mediterranean. It represents the Aceramic Neolithic of Cyprus at its peak, that is the success of the first human occupation of the island by farmers coming from the Near East mainland around the beginning of 9th millennium.</p> <p>The houses belonged to the living, as well as to the dead who were buried in pits beneath the rammed earthen floors. Among the finds such as flint tools, bone tools, stone vessels, vegetal and animal remains, noteworthy are the anthropomorphic figurines in stone (one in clay), which point, together with funerary rituals, to the existence of elaborate beliefs.</p> <p>(whc.unesco.org/en/list/848)</p>	7th to the 5th millennium BCE	(ii)(iii)(iv)	1998
The Megalithic Temples of Malta (Ġgantija, Haġar Qim, Mnajdra, Skorba, Ta' Haġrat and Tarxien) (Malta)	<p>They rank among the earliest free-standing stone buildings in the world and are remarkable for their diversity of form and decoration. Each complex is a unique architectural masterpiece and a witness to an exceptional prehistoric culture. The form and layout of these buildings, as well as the artefacts found within them, suggest they were an important ritual focus of a highly organized society.</p> <p>(whc.unesco.org/en/list/132)</p>	4th millennium BCE and the 3rd millennium BCE	(iv)	1980, extension 1992
Hal Saflieni (Malta)	<p>It is the only known European example of a subterranean 'labyrinth' from about 4,000 B.C. to 2,500 B.C. The Hypogeum is an enormous subterranean structure excavated c. 2500 B.C., using cyclopean rigging to lift huge blocks of coralline limestone. Perhaps originally a sanctuary, it became a necropolis in prehistoric times.</p> <p>(whc.unesco.org/en/list/130)</p>	4000 to 2500 BCE	(iii)	1980
Brú na Bóinne Archaeological Ensemble of the Bend of the Boyne	<p>Three great burial mounds surrounded by about forty satellite passage graves; they constitute a funerary landscape recognised as having great ritual significance. The monuments there had</p>	Prehistoric, later monuments of Iron Age, early	(i)(iii)(iv)	1993

Table 10. Analysis of potentially similar properties inscribed on the World Heritage List

Name of Property (Country)	Brief description (Note: Text in italic and bold are especially relevant to the analysis)	Dates	World Heritage Criteria	Year Inscribed on World Heritage List
(Ireland)	social, economic, religious and <i>funerary</i> functions. (whc.unesco.org/en/list/659)	Christian and medieval periods		
Heart of Neolithic Orkney (United Kingdom)	A well-preserved settlement, a large <i>chambered tomb, two stone circles</i> with surrounding <i>henges</i> , together with a number of associated <i>burial and ceremonial sites</i> . (whc.unesco.org/en/list/514)	Neolithic and Bronze Age, 4000 BCE	(i)(ii)(iii)(iv)	1999
Stonehenge, Avebury and Associated Sites (United Kingdom)*	<i>Circles of menhirs</i> arranged in a pattern whose astronomical significance is still being explored. <i>Ceremonial and mortuary</i> . (whc.unesco.org/en/list/373)	Neolithic, between circa 3700 and 1600 BCE	(i)(ii)(iii)	1986 and minor modification 2008
Archaeological Sites of Bat, Al-Khutm and Al-Ayn (Oman)	The protohistoric archaeological complex of Bat, al-Khutm and al-Ayn represents one of the most complete and well preserved ensembles of settlements and <i>necropolises</i> from the 3rd millennium BCE worldwide. Most of these tombs are small, <i>single-chambered, round tombs</i> with dry masonry walls dating to the beginning of the 3rd millennium BCE. Others are more elaborate, bigger, <i>multi-chambered tombs</i> from the second half of the 3rd millennium BCE. (whc.unesco.org/en/list/434)	from the 3rd millennium BCE	(iii)(iv)	1988
Antequera Dolmens Site (Spain)	Located at the heart of Andalusia in southern Spain, the site comprises three megalithic monuments: the Menga and Viera dolmens and the <i>Tholos</i> of El Romeral, and two natural monuments: the Peña de los Enamorados and El Torcal mountainous formations, which are landmarks within the property. Built during the Neolithic and Bronze Age out of large stone blocks, these monuments form chambers with lintelled roofs or false cupolas. These <i>three tombs, buried beneath their original earth tumuli</i> , are one of the most remarkable architectural works of European prehistory and one of the most important examples of European <i>Megalithism</i> . (whc.unesco.org/en/list/1501)	Neolithic and Bronze Age	(i)(iii)(iv)	2016
Bronze Age Burial Site of Sammallah-Denmäk	This Bronze Age burial site features more than 30 granite burial cairns, providing a unique insight into the <i>funerary practices</i> and social and	Bronze Age	(iii)(iv)	1999

Table 10. Analysis of potentially similar properties inscribed on the World Heritage List

Name of Property (Country)	Brief description (Note: Text in <i>italic</i> and bold are especially relevant to the analysis)	Dates	World Heritage Criteria	Year Inscribed on World Heritage List
(Finland)	religious structures of northern Europe more than three millennia ago. (whc.unesco.org/en/list/579)			
Cultural Sites of Al Ain (Hafit, Hili, Bidaa Bint Saud and Oases Areas) (United Arab Emirates)	The Cultural Sites of Al Ain (Hafit, Hili, Bidaa Bint Saud and Oases Areas) constitute a serial property that testifies to sedentary human occupation of a desert region since the Neolithic period with vestiges of many prehistoric cultures. Remarkable vestiges in the property include <i>circular stone tombs</i> (ca 2500 B.C.), wells and a wide range of adobe constructions: residential buildings, towers, palaces and administrative buildings. Hili moreover features one of the oldest examples of the sophisticated aflaj irrigation system which dates back to the Iron Age. The property provides important testimony to the transition of cultures in the region from hunting and gathering to sedentarization. (whc.unesco.org/en/list/1343)	Neolithic, Circular stone tombs 2500 BCE	(iii)(iv)(v)	2011
Gochang, Hwasun and Ganghwa Dolmen Sites (Republic of Korea)	The three sites contain the highest density and greatest variety of <i>dolmens</i> in Korea, and indeed of any country. <i>Dolmens</i> are <i>megalithic funerary</i> monuments. Usually consisting of two or more undressed stone slabs supporting a huge capstone, it is generally accepted that they were simply <i>burial chambers</i> , erected over the bodies or bones of deceased worthies. (whc.unesco.org/en/list/977)	Neolithic and Bronze Age, from the 1st millennia BCE	(iii)	2000
Stone Circles of Senegambia (Gambia and Senegal)	The site consists of four large groups of <i>stone circles</i> that represent an extraordinary concentration of over 1,000 monuments in a band 100 km wide along some 350 km of the River Gambia. The four groups cover 93 stone circles and numerous <i>tumuli</i> , <i>burial mounds</i> , some of which have been excavated to reveal material that suggest dates between 3rd century BC and 16th century AD. The vast sacred landscape created over more than 1,500 years, reflects a prosperous, highly organized and lasting society. (whc.unesco.org/en/list/1226)	Between 3rd century BCE and 16th century CE	(i)(iii)	2006
San Agustín Archaeological Park	The largest group of religious monuments and <i>megalithic</i> sculptures in South America stands in a wild,	1st to the 8th century CE	(iii)	1995

Table 10. Analysis of potentially similar properties inscribed on the World Heritage List				
Name of Property (Country)	Brief description (Note: Text in <i>italic</i> and bold are especially relevant to the analysis)	Dates	World Heritage Criteria	Year Inscribed on World Heritage List
(Columbia)	<p>spectacular landscape. It is the largest complex of pre-Columbian <i>megalithic funerary monuments and statuary, burial mounds, terraces, funerary structures</i>.</p> <p>The <i>ceremonial</i> sites are at the centre of settlement concentrations and contain <i>large burial mounds</i> connected to one another by terraces, paths, and earthen causeways. All of them are depicting gods or supernatural beings, an expression of the link between deceased ancestors and the supernatural power that marks the institutionalization of power in the region.</p> <p>(whc.unesco.org/en/list/744)</p>			
Pre-Columbian Chiefdom Settlements with Stone Spheres of the Diquís (Costa Rica)	<p>The serial nomination of four archaeological sites located in the Diquís Delta in southern Costa Rica illustrates a collection of unique stone spheres located in chiefdom settlement structures of the Pre-Columbian period. The four sites contain artificial mounds, paved areas and <i>burial sites</i>. Special objects of wonder and admiration are the distinctive Diquís stone spheres, which are rare in their perfection of large-sized (up to 2.57 m diameter) spherical structures but are also distinct for their number and location in their original positions within residential areas.</p> <p>(whc.unesco.org/en/list/1453)</p>	500-1500 CE	(iii)	2014
Rapa Nui National Park (Chile)	<p>Rapa Nui National Park is a protected Chilean wildlife area located in Easter Island, which concentrates the legacy of the Rapa Nui culture. A society of Polynesian origin that settled there c. A.D. 300 established a powerful, imaginative and original tradition of monumental sculpture and architecture, free from any external influence. From the 10th to the 16th century this society built shrines and erected enormous stone figures known as moai, which created an unrivalled cultural landscape that continues to fascinate people throughout the world.</p> <p>(whc.unesco.org/en/list/715)</p>	c.300 CE	(i)(iii)(v)	1995
Konso Cultural Landscape (Ethiopia)	<p>The Konso Cultural Landscape is characterized by extensive dry stone terraces bearing witness to the persistent human struggle to use and harness the</p>	Earlier than 1600 CE	(iii)(v)	2011

Name of Property (Country)	Brief description (Note: Text in <i>italic</i> and bold are especially relevant to the analysis)	Dates	World Heritage Criteria	Year Inscribed on World Heritage List
	<p>hard, dry and rocky environment. The terraces retain the soil from erosion, collect a maximum of water, discharge the excess, and create terraced fields that are used for agriculture. The tradition of erecting generation marking stones, quarried, transported and erected through a <i>ritual</i> process, makes the Konso one of the last <i>megalithic</i> people.</p> <p>The traditional forests are used as <i>burial places</i> for <i>ritual leaders</i> and for <i>medicinal purposes</i>. Wooden anthropomorphic statues are erected as grave markers.</p> <p>(whc.unesco.org/en/list/1333)</p>			

Based on an analysis of these properties, none are megalithic jar sites nor do they compare as testimony to the civilisation which created the Plain of Jars. They are all associated with other cultures and civilisations.

3.2.3 Analysis of potentially similar properties on Tentative Lists

Four properties currently on Tentative Lists have been identified as having potentially similar qualities to the Plain of Jars sites. Again, the qualities are megaliths, with or without early burials/graves/funerary sites. These are listed in the following table.

Name of Property (Country)	Brief description	Dates	Criteria	Date of submission
Archaeological Site of Göbeklitepe (Turkey)	Göbeklitepe was a cult centre, made by mankind and dated to approximately 12,000 years before present. It is composed of approximately 20 round and oval structures, reaching 30 m in diameter. 6 of them have been exposed in excavations and others were identified by surveys in geomagnetic and georadar methods. The results of excavations and surveys showed that Göbeklitepe was a 12,000 years old major meeting centre composed of monumental structures built for ceremonial purposes, instead of spaces of daily life. Monumental structures of Göbeklitepe were deliberately filled with soil by the people of Neolithic period who built them. The last hunters, who had begun to change their lifestyle in this period, had covered and left their old identities, important beliefs of their hunter-	10th and 9th millennia BCE	(i)(ii)(iii)(iv)(vi)	15/04/2011

Table 11. Analysis of potentially similar properties on Tentative Lists

Name of Property (Country)	Brief description	Dates	Criteria	Date of submission
	<p>gatherer lives and symbolic world. Therefore findings have survived without any damage.</p> <p>(whc.unesco.org/en/tentativelists/5612)</p>			
<p>Mousa, Old Scatness and Jarlshof: the Zenith of Iron Age Shetland (in Scotland) (United Kingdom)</p>	<p>Each element of the site contributes significantly to the overall outstanding universal value, clearly defining the evolution of the local civilisations through the Iron Age period. Brochs are the crowning achievement of prehistoric people living in Northern Europe. Dating from around 400-200 BC, they represent complex engineering architectural solutions to creating multi storied towers up to 13 m high, within a treeless landscape. Mousa is the most complete extant example in the world. The Broch and Village at Old Scatness is unique, demonstrating how the broch style developed into the construction of huge single skinned roundhouses and how values changed architecturally and culturally as the village became Pictish. The excavation used cutting edge scientific techniques, overturning current theories eg: the date and origin of brochs. Jarlshof is internationally renowned for encapsulating 4000 years of settlement, in particular the transition from Iron Age/Pictish to Viking periods. There is no comparable rural Viking township in existence, even in the Scandinavian homelands. It represents a time of transformation in culture and lifestyle: a cultural upheaval which strongly influences life today, defining Shetland within the North Atlantic.</p> <p>(whc.unesco.org/en/tentativelists/5677)</p>	<p>c 400-200 BCE</p>	<p>(iii)(iv)</p>	<p>27/01/2012</p>
<p>Carnac Stones (France)</p>	<p>The Carnac stones are a dense collection of more than three thousand standing stones around the French village of Carnac—the largest such collection in the world. The stones were erected between 4500 and 3300 B.C.</p> <p>There is a variety of theories as to the purpose of the stones. Some claim that the stones are aligned astronomically, with the intention of creating an observatory or a calendar system. Others believe that they were actually used as primitive seismic instruments, with the balanced stones acting as earthquake detectors. The Carnac site is also thought to support the controversial idea of the “megalithic yard”, a theoretical common unit of measurement</p>	<p>Between 4500 and 3300 BCE</p>	<p>Not specified</p>	<p>20/09/1996</p>

Table 11. Analysis of potentially similar properties on Tentative Lists				
Name of Property (Country)	Brief description	Dates	Criteria	Date of submission
	that was used to build most megalithic sites. (whc.unesco.org/en/tentativelists/224)			
Talayotic Culture of Minorca (Spain)	1. Tomb of Ses Roques Lises and the enclosure of Sa Comerma de se Garita. 3. Hypogeum of Torre del Ram. 4. Necropolis and Coastal Establishment of Cala Morell. 5. Navetas of Biniac-l'Argentina – Two funereal buildings of a circular ground plan. 6. Naveta of Es Tudons – A funereal building with an extended ground plan in the shape of an upturned boat, with two interior chambers that are accessed via a small door and a narrow corridor. 7. Navetas of Rafal Rubi – Two funeral buildings of an extended ground plan in the shape of upturned boats. 9. Necropolis of Calescoves – It was a necropolis from the 9th century B.C. to the 3rd century B.C. (whc.unesco.org/en/tentativelists/3433)	Between 2500 and 2100 BCE	(i)(iii)(iv)	29/01/2013

Again, based on an analysis of these properties, none are megalithic jar sites nor do they compare as testimony to the civilisation which created the Plain of Jars. They are all associated with other cultures and civilisations.

3.2.4 Comparative analysis of the Plain of Jars with potentially similar sites in India and Southeast Asia

The stone jar sites of the Plain of Jars find parallels with sites in India, Indonesia, Malaysia, Myanmar, Vietnam and the Philippines.

Megalithic jars of Assam, India

Colani reports that in the early 20th century four sites with stone jars were recorded by Mills and Hutton in the Cachar Hills of Northeast India very close to the limit of the Jaintia Hills. Each group is situated on a ridge and the jars are often positioned in parallel lines. The monoliths carry carvings of animal figures, such as frog, fish, elephant, pig etc. and human and symbolic outlines. Four sites are mentioned by Colani, these are Kartong with 50 jars, Kobak (unspecified number), Bolasan with 400 jars and near Derebora, Malangpa and Ndunglo with 42 jars. Inside one of the jars, fragments of burnt cranial bone fragments had been found in the early 20th century; this corresponds with the cremated bones and teeth found inside the stone jars in Lao. In addition to the jar sites, a stone with human representation comparable to the ‘frogman’ was recorded in the same area.

Recently Dr Tilok Thakuria of North-Eastern Hill University and Dr Tiatoshi Jamir of Nagaland University have started resurveying jar sites in Assam and neighbouring provinces and found the number of jars recorded in beginning of 20th century greatly reduced. Local differences in jar shape including size of aperture and cavity depths were

noted. During the survey, local quarries with evidence for jar manufacturing and finishing at locations very close to jar site were noted. (Thakuria and Jamir 2014, p. 37)

Ongoing surveys indicate that further jar sites exist in Assam, namely two new sites discovered in Dima-Hasao district and bordering Assam of Assam in Saiphung reserve forest of Meghalaya (Thakuria, personal communication). The landscape of the jar sites in northeast India shows strong parallels in geography and vegetation with Xiengkhuang. (Jamir, personal communication)

Importantly the Plain of Jars sites form a connection between India and China evidenced in technology and cultural exchanges, such as the ‘frogman’ motive and stone jars and creating what will ultimately be known as Indochina.

While the sites in Assam are significant and, while comparable in many respects with the Plain of Jars, there are also substantial differences. There are suggestions of a similar cultural tradition and cultural transmission, although it is assumed related to different civilisations.

Stone Vats of Indonesia

Stone vats, as they are named by Indonesian archaeologists, have been recorded in the valleys of Besoa, Bada and Napu Valleys, Central Sulawesi (Dwi Yani Yuniawati 2014), in Kayan Mentarang National Park, North Borneo (Arifin and Sellato 2003), Samosir Island, North Sumatra (Schnitger 1939; Simanjuntak 1996) and in Donggo, West Nusa Tenggara (Prasetyo 2000). The stone vats of Indonesia are part of vast megalithic complex including stone statues, menhirs and dolmens.

Local Indonesian archaeologists suggest the stone vats date to 2,000 years ago and record that human bones were found inside the vats, often accompanied by potsherds and fragments of iron knives. By 2014, 67 sites with 120 stone jars and 50 megalithic statues were recorded (Dwi Yani Yuniawati 2014).

Archaeologist Dwi Yani Yuniawati has extensively researched and excavated jar sites and found them to be burial related (Dwi Yani Yuniawati 2001, 2014). In contrast with the Plain of Jars, burials of several individuals can still be excavated from inside the stone jars. For example, Dwi Yani Yuniawati found in Besoa valley bones belonging to no less than 7 and 11 individuals respectively within two stone jars. There is some suggestion that the stone jars may have been the ultimate resting place (secondary burial) after primary burial around the jars (Sukendar 1980) although Dwi Yani Yuniawati found evidence for primary burial inside stone jar at Wineki in 2013 (Dwi Yani Yuniawati 2014).

Similar to Laos, however, overall the jars and surrounding burials were found to be contemporary and stone jars appear to have been worked on site and stone debris surrounds the jars. Pokekea site in the Besoa Valley provided an end date for the jar site to 830 CE based on pollen analysis (Kireis et al 2012) and some DNA research has been conducted which identifies few contemporary communities in Sulawesi as possible descendants of Kalamba people (Dwi Yani Yuniawati 2014).

The human decorative style noted on the associated megaliths and jars in Indonesia is reminiscent of the stone statue excavated from a jar site at Sop Nam Miang in 2010. Often megalithic stones and lid designs represent monkeys, a theme also recorded at Plain of Jars (Kireis et al 2012, p. 215).

The Besoa, Bada and Napu valleys show geographical similarities with Plain of Jars, including elevations, location of jar sites, vegetation and comparable temperate climate, the stone vats of Indonesia however, are associated with other megaliths such as stone statues, menhir and dolmens. The sites tend to be smaller compared to Plain of Jars.

While displaying similarities and some differences, the Indonesian sites appear to relate to different civilisation/s.

Jambi megaliths of Sumatra, Indonesia

Genovese in her study of the Plain of Jars also considered megalith sites in Sumatra,

‘Settlements discovered close to the megaliths have enabled researchers to date the megaliths to the early part of the 12th century CE, and possibly earlier. Optically Stimulated Luminescence (OSL) tests on two potsherds retrieved from the Jambi sites near the megaliths have revealed dates of around 1200 CE.

The Jambi megaliths are much more recent and their even and smooth surfaces are in part due to the shorter period of weathering compared to the jars of north Laos. Their recent manufacture may have provided a technological advantage for the carving of figures.

The Sumatran units are mostly shaped like cones or cylinders, with most of the conical shapes “carved with human images, portrayed in full relief on at least one end”. The human figures they bear have been interpreted as threads of continuity between generations. Aside from other considerations, this is an area of major difference with the Laotian stone jars, which are only in exceptional cases decorated with images of humans or animals.’ (Genovese 2014, p. 223)

In brief, the Sumatran jars seem to date back to the 12th century CE and are therefore less comparable with the prehistoric context of the Lao jar sites. They also relate to a different culture and civilisation.

Stone jars of Malaysia

The Cultured Rainforest Project conducted field work between 2007 and 2009 and recorded 15 stone jars in two sites in Kelabit Highlands, Sarawak, Malaysia in 2007 (Lloyd-Smith et al. 2013). These are Menatoh Long Diit with at least 14 jars, and a single jar at Menatoh Long Kelit.

While cremated human bone was found at Menatoh Long Diit, unburnt human cranial fragments were found at Menatoh Long Kelit. The artefacts found at the base of the stone jars at Long Diit are thought to be historically recent additions and the Long Kelit stone jar has been re-used, possibly moved from its original location and re-raised. A charcoal sample dated to cal. 1510–1960 supports this interpretation. The stone jars and slabs within the megalithic cemeteries have been dated to between 800 and 1400 CE (Lloyd-Smith et al. 2010).

The Malaysian sites are very small, and appear to relate to a different civilisation.

Stone jars of Myanmar

Four sandstone stone jars and an additional small stone urn dating to the 6th century CE are known in Sri Ksetra. They currently on display in the Pyu City museum and carry inscriptions of names of the kings (Sri Deva Mitra Ba, Sri Jatra Tata Ba, Sri Brithū Vikrama Ba and Sri Ditya Vikrama Ba). These stone urns were found buried and were

excavated in 1911-12 outside of Paya Htaung at Sri Ksetra. Another straight-sided stone jar was found within brick structure near Payataung town and is currently housed at Yangon National Museum.

An additional four sandstone water jars dating to the Pyu Period (2nd-6th century CE) are displayed at the museum. The globular shape of the water jars is unlike Lao or urn stone jars, and they were likely used in ritual cleansing.

At the cemetery of Queen Beiktano and her relative, part of the Pyu Cities World Heritage property, two series of three sandstone jars were excavated below ground in 1967-68. The stone jars are constructed of interlocking stone rings and carry an upright rim, no lids were recorded.

The Myanmar sites are also very small, and appear to relate to a different cultural context and civilisation.

Terracotta burials jars of Sa Huyhn, Viet Nam

The Sa Huyhn burial jars, while not made of stone, are certainly very large in size and could thus be identified as similar with the megalithic tradition. Colani had already compared the associated burial goods and tradition of cremation of the Plain of Jars with the Sa Huyhn culture in Central Vietnam, which flourished between 1000 BCE and 200 CE. Archaeological sites have been discovered from the Mekong Delta to just south of the Tonkin region. Sa Huynh sites were rich in locally-worked iron artefacts and show evidence of an extensive trade network with Sa Huynh produced objects found in archaeological sites in Central Thailand, Taiwan (Orchid Island) and the Philippines (Palawan).

These sites relate to a different cultural context and civilisation.

Stone urns of the Philippines

Stone burial jars exist in the Philippines where they were found in connection to secondary burial practices dating to the 6th-7th centuries CE. The stone jars however, are not of megalithic proportion and are associated with caves and rock shelters. It is believed that these may have evolved locally from the anthropomorphic secondary burial 'Maitum' urns dated between 1st-4th centuries CE. The Maitum burial jars are made of ceramic and were associated with metal implements, glass beads and bracelets, shell spoon, scoop, bracelets and pendants, and pottery with incised decoration, foot rings and non-anthropomorphic burial jars.

These sites relate to a different cultural context and civilisation.

3.2.5 Megalithic sites in Laos

In addition to the nominated jar sites in Xiengkhuang Province, there are other jar sites in the province and in the neighbouring Luang Prabang Province. There are also menhir sites in Hua Pan Province. These are discussed in this section.

Other jar sites in Xiengkhuang Province

Overall, there are known to be 2,107 megalithic stone jars (both finished and unfinished),

207 disks and 672 rocks/grave markers clustered in 59 surveyed sites located in Xiengkhuang, and a further 26 sites are known but have yet to be surveyed. It is from this overall collection of 59 surveyed sites that 11 sites have been selected for the nominated series. This selection is discussed in Section 3.1.c.

The 48 surveyed sites not included in this nomination include 780 jars as well as disks and rocks/grave-markers.

These other sites are similar to the nominated jar sites, though they are only of small to moderate size and some are in poor condition. The megalithic jars appear in clusters, ranging from a single or a few jars up to over 400 jars, frequently in a promontory position, on lower foothills or in an upland valley surrounding the central plain. These jar sites are also evidence of the Iron Age mortuary practices.

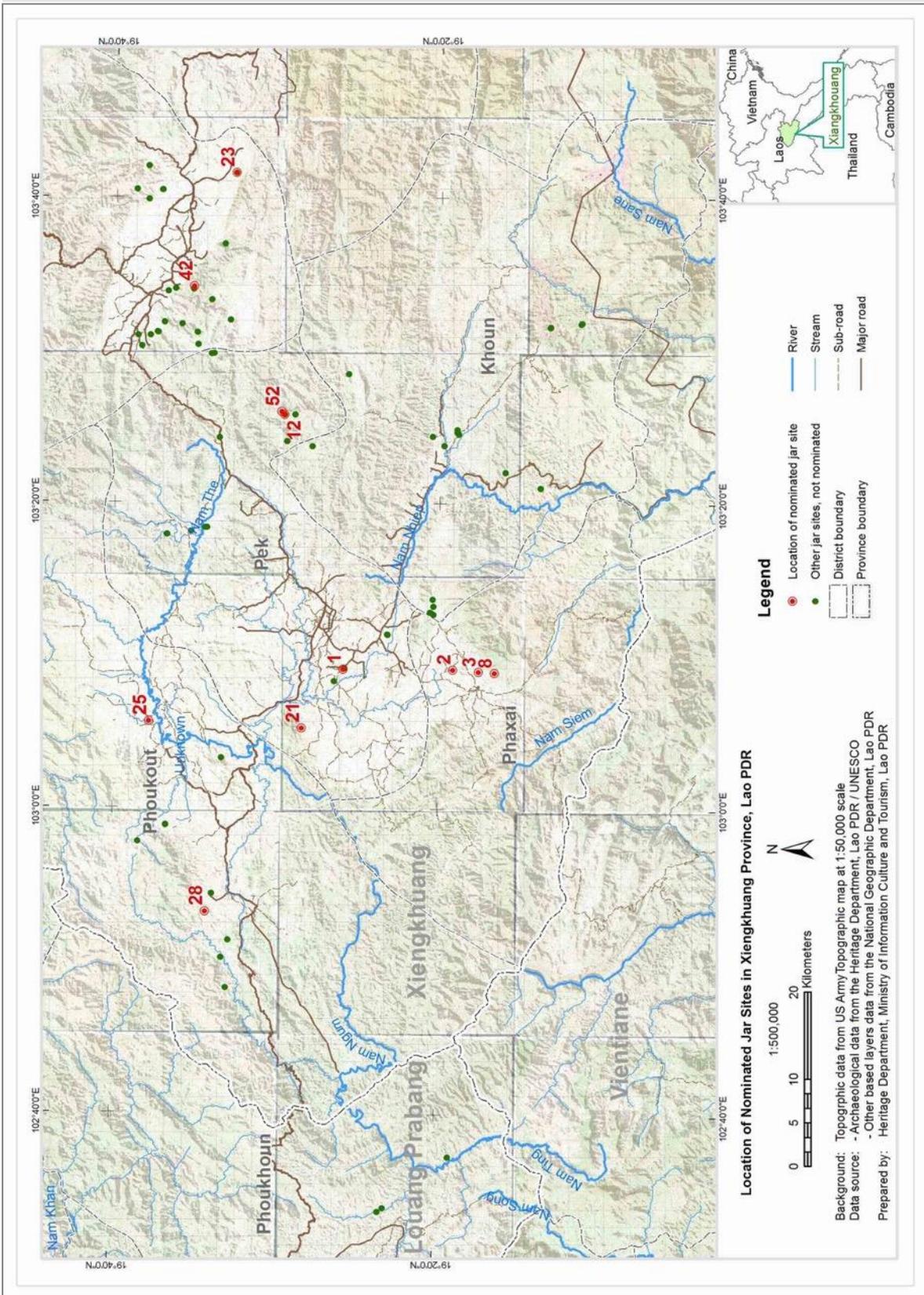
The stone jars are tubular in shape with a bottom at least five times thicker than their wall. The jars are made of sandstone, conglomerate, granite, limestone and limestone breccia, depending on local availability. Other attributes found at these sites include stone discs and stone grave markers. There has been little archaeological research at the sites, but it is assumed that deposits might also be present, possibly including human remains in secondary burials and burial goods. Quarry sites are also included among these sites.

Research into settlements from the period associated with the sites has only begun relatively recently (Chang), and the lifestyle and beliefs of the makers and users of these stone jars remain largely unknown.

Further general information about these sites is provided as part of contextual information in Chapter 2.

These other jar sites have not been included as part of the nomination because they do not meet the rationale for the selection of sites in the series related to the claimed Outstanding Universal Value. In general, these other jar sites are smaller and some are in poor condition. While they are protected in theory, they are generally not actively managed.

Figure 66. Map showing location of Nominated Components and Other Sites not Nominated
 Source: Department of Heritage



Jar sites in Luang Prabang Province

There are approximately 12 jar sites in the district of Phu Khoun in Luang Prabang Province, to the west of Xiengkhuang Province. Survey, inventory and research are still ongoing as all are located in remote and mountainous areas with very poor access. They include more than 60 attributes comprising stone jars, discs and some unidentified stone sculptures in a mushroom shape.

In May 1932 Colani documented a number of jars sites in Phou Khoun District but some locations have not been able to be re-identified because her maps are sketches and the villages she referred to have all disappeared – new villages having been created often in a different location and bearing a new name.

There are differences in workmanship as they are more elaborate and delicate than those of Xiengkhuang. Anthropomorphic and animal carvings (tigers, monkeys) are often found on the discs. In addition, sculptures in a mushroom shape, tentatively referred to as offering tables (Sayavongkhamdy, personal communication 2017), outnumber in ratio those of Xiengkhuang Province. However, none of these sculptures are present within the nominated property.

In 2010 during an archaeological excavation at the Sop Nam Miang site, near Ban Chim, Phu Khoun District, a superb stone sculpture was found under a megalithic jar.



Figure 67. Stone sculpture excavated in 2010 at Sop Nam Miang site
Source: Thongsa Sayavongkhamdy

Phu Khoun is about 26 kilometres west from the border with Xiengkhuang Province and at the least it is reasonable to conclude that there would have been cultural transmission of the tradition using jars. But the proximity is strongly suggests that the jar sites in Luang Prabang Province are from the same civilisation that created the sites in Xiengkhuang Province.

The jar sites in Luang Prabang are generally comparable to those in Xiengkhuang and they are protected under the *Law on National Heritage*. However, they are much smaller than the major sites in Xiengkhuang, some sites recorded by Colani are still not re-identified and the sites have not been the focus of a systematic survey.

Menhirs or Hin Tang in Hua Pan Province

In the national context, only one other group of megalithic sites, namely the ‘Hin Tang of Hua Pan’ or ‘Menhirs of Hua Pan’ can be compared with the Plain of Jars sites. Menhirs are large upright standing stones. Both groups of megalithic sites are prehistoric in time period, megalithic in nature, share similar apparent functions (social, ceremonial and funerary) but diverge significantly in the structures themselves and the funerary rituals. The Menhirs of Hua Pan are believed to predate the monolithic jars by approximately a century, overlapping for a short time sharing some common stone pendants and bronze artefacts, but ending earlier than the jar sites.

The Menhirs of Hua Pan include impressive vaulted tombs, cut from a thick layer of schist, located below the ground surface as the repository of the deceased person lying on a bed with valuable grave goods. The tombs seemed to be visited ritually by family members or a shaman through a small vertical entrance created in the ceiling of the tomb. This entrance was closed by a large stone disc, on average 2 metres in diameter and 20 cm thick. Clusters of menhirs are then positioned next to the discs. A systematic survey undertaken in 2006-07 identified 1,546 stones and 153 discs at 72 sites. The sites are located along a mountain ridge over about 10 kilometres. Hua Pan shares a common border with Xiengkhuang to the southwest.

Human remains were excavated at a single cluster, San Kong Phan, although artefacts without bones were found in other burial chambers. Around the standing stones more coarse and undecorated pottery, bronze artefacts and stone pendants were excavated.

Colani dated the ensemble to the Bronze Age. Little is known beyond these early investigations by Colani. The overall site has been heavily impacted by the construction of a secondary road and evidence of illegal excavation is visible at each cluster. Colani concluded that there is no evidence to link the stone jars and standing stones (Colani 1935, volume II, p. 125). However, Sayavongkhamdy found that similarities between bronze artefacts and stone pendants, suggestive of cultural and economic exchanges between the two cultures.



Figure 68. Menhir site in Hua Pan Province

Source: Samlane Luangaphay

Moreover, in 2007 an archaeological excavation by Sayavongkhamdy and his team discovered one stone pendant in Tam Hang that is similar to 27 other ones that were retrieved by Colani at San Kong Phan (Demeter and others 2010). Colani described them as star medallions, also found in northeast India, with engravings that represent a star or zodiac surrounding its central perforation. The two and perhaps three communities at Hin Tang, Tam Hang and the Plain of Jars might have enjoyed exchanges of goods.

Declared National Heritage in 1987, the Menhirs of Hua Pan has been considered by Lao authorities for possible inclusion on the Tentative List of World Heritage.

The menhir sites reflect a distinctly different cultural tradition related to mortuary practices compared to the jar sites. It also seems at least possible the jar and menhir sites relate to different civilisations, but the research into both is limited and no firm conclusion can be offered at this time.

3.2.6 Conclusion

The comparative analysis considers a wide range of contexts within which to assess the nominated property. The proposed Outstanding Universal Value of the series of jar sites relates to the sites being exceptional testimony of a civilisation. The range of testimony related to that civilisation comprises the nominated property, other jar sites in Xiengkhuang Province as well as jar sites in Luang Prabang Province.

The nominated property clearly represents the exceptional testimony of the civilisation – it includes the five major jar sites, which include, within relatively small areas, a very large proportion of the jars and related evidence found in the province. In addition, six smaller sites are included to ensure the range of sites is represented (ie. jar and quarry sites, as well as sites of different sizes) as well as the geographic spread.

The other jar sites in Xiengkhuang Province are important and broadly comparable, but they are not essential to portray the OUV. In general, these other jar sites are smaller and some are in poor condition. The jar sites in Luang Prabang while also generally comparable to those in Xiengkhuang, they are much smaller than the major sites in Xiengkhuang, some sites are still not re-identified and they have been less researched.

The other megalith sites in Laos are the Menhirs of Hua Pan but these reflect a distinctly different cultural tradition related to mortuary practices, and it also seems at least possible the jar and menhir sites relate to different civilisations. The menhir sites are not comparable.

The megalithic jar sites in northeast India, Indonesia and Malaysia are comparable in many respects with the Plain of Jars, but there are also substantial differences. There are suggestions of a similar cultural tradition and cultural transmission, although they appear to relate to different civilisations.

Other sites considered in Southeast Asia relate to different cultural contexts and civilisation/s, and are not comparable in the context of the proposed OUV.

The World Heritage List and Tentative Lists include a number of properties with similar qualities to the Plain of Jars (eg. megaliths), however none are megalithic jar sites nor do they compare as testimony to the civilisation which created the Plain of Jars.

3.3 PROPOSED STATEMENT OF OUTSTANDING UNIVERSAL VALUE

Brief synthesis

The Megalithic Jar Sites in Xiengkhuang province of central Laos is a serial property of 15 components. The ancient jar sites contain extensive and remarkable evidence of funerary practices, and are the outstanding evidence of the Iron Age civilization which created the sites.

Most of the funerary sites are located in elevated positions on hills or ridges, although one major site is located on the low hills of a central plain. The sites include 1,325 ancient stone jars as well as numerous associated stone discs, secondary burials and other features. The jars are the dominant and impressive feature of the sites being large in size and carved mostly from sandstone. Some of the jars are massive. In addition, the property includes exceptional sites with the largest concentration of jars, over 400 in one case, representing a very large proportion of the known evidence, as well as a range of smaller sites representing quarry sites or the geographic extent of sites.

The stone jars and disks have been carefully crafted and in some cases, especially disks, they exhibit decorative carving with animal or anthropomorphic figures, concentric circles, circular mouldings or a central knob or loop.

The funerary sites are believed to date from before the Iron Age (between about 500 BCE and 500 CE) into historic times, and are evidence of a substantial and widespread culture which existed in the region. Many details of this culture remain a mystery but the jar sites are its pre-eminent testimony.

Following this initial period, the jar sites were used by other cultures until the 18th century CE, as reflected in the complex archaeological evidence.

Criterion (iii): The sites are exceptional testimony to the cultural traditions associated with funerary practices, and to the civilization which created the sites but which disappeared sometime after 500 CE. The megalithic jar sites are impressive because of the size of jars and the technological skill to produce and move the jars from quarry sites to funerary sites, as well as because of the large number of surviving jars, disks and other features spread in groups across a large area of the current province. The sites include important archaeological evidence related to funerary practices, possibly of different eras and cultures, as well as of the material culture of the ancient civilisation which created the jars, and the locations of the funerary sites are highly suggestive of cultural meaning. The funerary sites are the outstanding surviving evidence of this civilisation. While the use of jars in funerary sites is known in other parts of Laos, northeast India and Southeast Asia, the density of sites in Xiengkhuang is remarkable.

Integrity

The Megalithic Jar Sites include the attributes necessary to express the Outstanding Universal Value. The 15 components include 1,325 ancient stone jars as well as numerous associated discs, secondary burials and other features. These include nine components of the five major sites (Sites 1, 2, 3 – Groups 1 & 3, 3 – Group 2, 3 – Group 4, 3 – Group 5, 3 – Group 7, 42 and 52) which have the largest number of attributes of all the known jar sites in the province (1,186 jars and 198 discs), as well as six smaller components (Sites 8, 12, 21, 23, 25 and 28). The property is of an adequate size to include the sites and their

attributes.

There are a number of factors in the past and currently which have or may result in adverse effects. These include looting, bomb and other war damage, unexploded ordnance, vegetation growth, inappropriate tourist activities including graffiti, as well as inappropriate development in the property or buffer zones, and a lack of active management.

Authenticity

The property displays a high level of authenticity. The form, design, materials and location of the jars and discs are all original, noting the effects of age and the damage to some attributes. In most cases, the setting remains as an agricultural or forest landscape, which is believed to be consistent with or at least sympathetic to the original. The archaeological deposits are believed to be little disturbed, with very limited excavation having been undertaken, although some looting and disturbance by animals or agricultural practices has occurred.

Management and protection requirements

The property is protected under the *Law on National Heritage 2013*, a provincial decree and provincial guidelines regarding provincial and village-level protection, management, conservation and support for heritage. The property has a management system which operates at three levels – national, provincial and district/village. At each level, there are key instruments which identify roles and responsibilities, and in some cases specific management activities.

The management system operates through a range of agencies at the various levels, especially the provincial Plain of Jars Heritage Technical Division, with day to day management of most sites being the responsibility of villages in the vicinity of sites, supported by the Division. The national Department of Heritage plays a key technical role in research, conservation, heritage impact assessment and overall monitoring. Coordination is achieved through national and provincial committees.

Long-term management expectations include: enhanced conservation of the sites; ongoing research into the sites; avoidance or mitigation of adverse developments; harmonious tourism development; strengthened community understanding and support; and increased conservation capacity.

4. STATE OF CONSERVATION AND FACTORS AFFECTING THE PROPERTY

4.A PRESENT STATE OF CONSERVATION

Given the great age of the jar sites and many challenging factors over the centuries, the sites are currently in a fair to good state of conservation.

The jars themselves are reasonably robust and they have survived natural deterioration processes quite well given their age and exposure to the elements. The sites also tend to be remote from settlements and not subject to use, development or significant tourism, all of which contributes to their preservation.

A survey of the condition of the jars themselves was undertaken in 2017, except for Site 1, and of the 992 jars surveyed, 31% were intact, 69% were broken, and in addition many jars had been dislodged and had fallen over. In the case of disks, 20% were intact and 80% were broken. The following table provides further details about the survey.

Table 12. Condition of Attributes at 10 Sites in 2017

Site	Jar			Disk			Stone	Total
	Complete	Broken	Total	Complete	Broken	Total		
2	39	54	93	0	14	14	0	107
3	63	178	242	9	29	38	21	279
8	7	5	12	0	0	0	10	22
12	15	17	32	3	3	6	11	49
21	12	22	34	2	0	2	12	48
23	15	12	27	0	0	1	27	55
25	15	18	33	0	8	8	1	42
28	1	0	1	0	0	0	0	1
42	24	89	113	0	10	10	14	137
52	121	283	404	21	85	106	0	510
Total	312	678	991	35	149	177	96	1,250

The integrity of the archaeological deposits is high. The deposits at the sites have been recorded at depths between 40 and 100 cm at Site 1, and few sites have been excavated or have suffered erosion or damage during war.

However, there are a number of factors in the past and currently which have or may result in adverse effects. Looting has been an issue both historically and in the current period, although no activity has been reported at any of the nominated sites in recent decades. The last known example of looting was in 2002-03 at Site 1.

As noted in the history at Section 2.b, bomb and other war related damage has been a factor affecting a few of the nominated sites in the 1960s and 1970s, especially Sites 1, 21 and 25. This has resulted in damage and displacement of some jars, and bomb craters and

trenches resulting in damage to archaeological deposits and the landscape of the sites.



Figure 69. Broken jar near bomb crater (in background) at Site 1

Source: Duncan Marshall 2015



Figure 70. Fallen jars at Site 52

Source: Duncan Marshall 2015

A related factor is unexploded ordnance (UXO) at the sites. The province was heavily bombed during the 1960s-70s, especially with small cluster bombs, and some of these bombs did not explode on impact. Many of the jar groups within nominated sites have been cleared although not the full sites and a few sites have not yet been cleared at all. UXO clearance, while undertaken in a way to be sensitive to the heritage values of the jar sites, can still have an impact on the sites. Additional clearance work is planned regarding Sites 1, 2, 3, 8, 25 and 28.

Vegetation growth at jar sites is a continuing management challenge and can have serious impacts. Trees in particular can grow next to or even within jars, dislodging or damaging the jars. Tree roots no doubt have an impact on potential archaeological deposits as well. Falling trees or branches can also damage jars. Vegetation management within sites is a key responsibility for local villagers or the Provincial Plain of Jars Heritage Technical Division, as identified in a relevant Provincial decree.

There have also been a few jars removed from some sites over time (Site 1 – 4 jars removed, Site 25 – 1 jar removed and Site 2 – 2 jars removed). Future removals will be strictly prohibited.

Water run-off and exposed slopes facilitate erosion and have affected archaeological deposits, and in a few cases the stone jars themselves. This has affected a number of sites, including Sites 1, 2 and 3, and arose in particular because of the impact of grazing cattle. However, fencing has controlled cattle activity and the erosion is no longer a significant problem.



Figure 71. Jar damaged by tree growth at Site 2

Source: Duncan Marshall 2015

While the jars are generally robust, tourist activities can also have impacts, such as occasional minor damage and graffiti. Tourists sometimes climb on jars and step on disks, sometimes resulting in stone chips being broken off. The site with significant tourism activity is Site 1 and there is lesser activity at Sites 2, 3 and 21. Improved guidance for tourists and tour guides is proposed, and enhanced monitoring of tourist activities is planned.

The lack of active management at all sites can affect the state of conservation, especially regarding vegetation management at jar sites. However, enhanced management is proposed under the property management system.

In the case of one site there is some encroachment by agriculture (Site 23), and in two other cases (Sites 1 and 25) there is some impact from existing development in the buffer zone. The encroachment issue has been addressed under the property management system. In the case of Site 1, enhanced landscape screening is proposed and, at Site 25, the existing low-key village development will be carefully monitored and no increase in impact will be permitted.

A major high voltage electricity transmission line is being planned in the vicinity of Site 3. It will be located within the buffer zone and involve large pylons.

A summary of issues for each site is provided in the following table.

Table 13. State of Conservation Issues at each Site	
Site	Issues
Site 1	<ul style="list-style-type: none"> • Bomb/war activity damage. • Jar groups and paths UXO cleared, but not the rest of the site. • Jar removal issue. • Tourist activity issues. • Development in buffer zone.
Site 2	<ul style="list-style-type: none"> • Jar groups and paths UXO cleared, but not the rest of the site. • Farmers using the road through the site, encouraging ongoing erosion. • Vegetation issues. • Jar removal issue. • Tourist activity issues. • Active management issue.
Site 3	<ul style="list-style-type: none"> • Jar groups and paths UXO cleared, but not the rest of the site. • Vegetation issues.

Table 13. State of Conservation Issues at each Site	
Site	Issues
	<ul style="list-style-type: none"> • Tourist activity issues. • Active management issue. • New high voltage transmission line through the buffer zone.
Site 8	<ul style="list-style-type: none"> • Paths UXO cleared, but not the rest of the site. • Vegetation issues. • Active management issue.
Site 12	<ul style="list-style-type: none"> • Jar group and paths UXO cleared, but not the rest of the site. • Active management issue.
Site 21	<ul style="list-style-type: none"> • Jar groups and paths UXO cleared, but not the rest of the site. • Vegetation issues. • Tourist activity issues. • Active management issue.
Site 23	<ul style="list-style-type: none"> • Jar groups and paths UXO cleared, but not the rest of the site. • Vegetation issues. • Active management issue. • Agricultural encroachment in property.
Site 25	<ul style="list-style-type: none"> • War activity damage. • Jar groups UXO cleared but not the rest of the site. • Vegetation issues. • Jar removal issue. • Active management issue. • Agricultural activities in property. • Development in buffer zone.
Site 28	<ul style="list-style-type: none"> • No UXO clearance. • Vegetation issues. • Active management issue.
Site 42	<ul style="list-style-type: none"> • No UXO clearance. • Vegetation issues. • Active management issue.
Site 52	<ul style="list-style-type: none"> • Jar groups and paths UXO cleared, but not the rest of the site. • Vegetation issues. • Active management issue. • Possible destruction of jars by nearby communities. • New road suitable for vehicles within the site.

4.B FACTORS AFFECTING THE PROPERTY

4.b(i) Development Pressures (eg. encroachment, adaptation, agriculture, mining)

The province of Xiengkhuang is one of the most economically disadvantaged regions in the Lao PDR. The provincial government is focussed on increasing economic development and poverty alleviation through the expansion of cropping and establishing Xiengkhuang as a centre for raising cattle for export.

With regard to the nominated jar sites, possible future development pressures which may impact on the property include an increase in agricultural land area and the livestock grazing area, logging, tourism activities, residential expansion, road construction, other infrastructure development (eg. electrical and telecommunications), and mining and mining exploration.

Roadworks at Site 52 in 2017 resulted in damage to or displacement of three jars. This activity was only discovered by the Department of Heritage in late 2017, and investigations are under way to ascertain how these works occurred without proper controls to avoid such damage.

Agricultural and grazing activities in the buffer zone are currently undertaken at a number of sites and are compatible with the protection of OUV. However, these activities are prohibited in the property.

Logging is currently undertaken in the buffer zone of Site 42 and is compatible with the protection of OUV. But it is prohibited within the property except as part of site management to protect OUV. Care is needed to ensure logging does not extend into the property at Site 42, including a clear local understanding of the boundary.



Figure 72. Small scale logging in the buffer zone of Site 42

Source: Duncan Marshall 2016

Tourism is discussed in Section 4.b(iv) below.

While there is some low density and low scale residential development in the buffer zone of a few components which is compatible with the protection of OUV, further development in buffer zones will be strictly controlled through the management system. Such development is also prohibited in the property. This pressure is most likely in the case of Sites 1 and 25.

There are no anticipated changes to or upgrading of existing roads, nor new roads proposed at this time. Even with World Heritage listing, the pressure for increased access is not

likely to extend beyond a few sites – Sites 1, 2, 3 and 21. This pressure will be monitored and any proposals subject to impact assessment. In the case of Site 52, aside from the comments above, there may be pressure to upgrade the track which runs through the site, although there are no current proposals.

There are no current or proposed developments of other infrastructure in the property or buffer zones, apart from the transmission line near Site 3 noted in Section 4.a. In general, such infrastructure may be possible in buffer zones depending on an impact assessment, but is prohibited in the property. Apart from Site 3, Sites 1 and 25 are the most likely to be affected by such development. These matters are subject to controls established in a Provincial decree.

There is no current or proposed mining activity or exploration in the property or buffer zones. Both are prohibited in the property and buffer zones.

All of these activities will be monitored as part of ongoing management.

4.b(ii) Environmental pressures (eg. pollution, climate change, desertification)

The property does not seem to be affected by environmental pressures largely due to its isolated location, low population density in the surrounding areas and lack of industrial development.

4.b(iii) Natural disasters and risk preparedness (earthquakes, floods, fires, etc)

The property appears generally not be threatened by natural disasters.

The physical location of the sites generally on higher ground renders them safe from floods, even as global warming increases this risk in some of the lower lying areas of the province.

The traditional agricultural practice of slash and burn often put the sites in the path of fire, and this practice may affect the stone jars. Elsewhere in Southeast Asia slash and burn agricultural practices have ignited sub-surface deposits of peat and have led to prolonged underground smouldering fires which have had a devastating effect on the region's ecology. The geomorphology of the Plain of Jars does not expose it to the dangers of peat burning and the area is sufficiently elevated to escape the effects of peat fires elsewhere. Fires resulting from slash and burn are now prohibited.

The site does not lie within an earthquake zone.

In this context, no risk preparedness measures have been developed.

4.b(iv) Responsible visitation at World Heritage sites

Status of visitation, patterns of use, concentrations, future plans

Currently, visitors have organised access to Sites 1, 2, 3, 21, 23 and 52. The vast majority of visitors only visit Sites 1, 2, 3 and 21. At 2015, visitor numbers were:

- Site 1 – 38,000 (estimate);
- Site 2 – 5,154;
- Site 3 – 2,756; and
- Site 21 – 5,093.

Further details are provided in the following table.

Table 14. Visitor Numbers at Selected Sites				
Site	Year	Total Visitors	Lao Visitors	Foreign Visitors
Site 1	2012	32,000	25,500	6,500
	2013	29,200	16,400	12,800
	2014	37,300	20,700	16,600
	2015	38,000	24,000	14,000
	Totals	136,500	86,600	49,900
Site 2	2010	4,762	539	4,223
	2011	4,127	684	3,443
	2012	4,923	459	4,464
	2013	4,896	428	4,468
	2014	5,199	756	4,443
	2015	5,154	723	4,431
	Totals	29,061	3,589	25,472
Site 3	2010	4,064	285	3,779
	2011	3,985	249	3,736
	2012	3,581	196	3,385
	2013	3,663	135	3,528
	2014	2,938	243	2,695
	2015	2,756	295	2,461
	Totals	20,987	1,403	19,584
Site 21	2014	4,650	3,900	750
	2015	5,093	4,151	942
	Totals	9,743	8,051	1,692

Site 1 has an interpretation centre staffed by the provincial Plain of Jars Heritage Technical Division, a ticket booth, handicraft stalls on the side of a parking lot, and a gate where visitors take an electric vehicle shuttle to the area with the jars. The Division manages the site, including cleaning the site, cutting grass and managing the tourists. The site has several signs in English and Lao with regulations for the site, and a few stone benches under trees. There are plans to train local guides (both employees of the Division and private sector guides), develop the interpretation centre, install a coffee shop next to the ticket booth, upgrade landscaping and improve the parking lot, but there are no other major infrastructure or development plans.

At Site 2 there is a small information kiosks where tickets are sold but no other facilities.

Site 3 has a small restaurant, ticket booth, information kiosk and parking area on the grounds of a local temple. Site 8 is adjacent to Site 3. There are plans to change access to Site 3 with an upgraded road from the north and to re-locate visitor facilities closer to the site.

Sites 12 and 28 are in isolated locations with no facilities and they do not attract visitors.

Site 21 has a ticket booth, manned by a husband/wife team who have a concession for the area. There is no interpretation at the ticket booth, but some brief directional and regulation signs, ie. *Quarry 1* and *200 m to Secret Tunnel* (the site is also an important national site because of its wartime role). There is a very good path with stairs going to the

top of the mountain, past the quarry areas where half-finished jars can be readily seen. At the top of the mountain is a wartime tunnel and a small natural cave that leads to a scenic viewpoint.

Site 23 has an information kiosk. A private resort was previously built in the vicinity and somewhat blocks the access road to the jar site. It is now only accessible using a poor dirt track. Visitor numbers are not known, but are believed to be very limited.



Figure 73. A commercial tour group visiting Site 2

Source: Duncan Marshall 2015

Site 42 is also in an isolated location with difficult access, but there are simple visitor facilities in the valley below the site. Visitor numbers are believed to be very limited.

Near Site 52 a small community lodge has been constructed to accommodate tourists that visit this mountaintop jar site as part of an overnight trekking tour. It is now accessible by vehicle because the track has been upgraded. Visitor numbers are believed to be very limited.

Projected levels of visitation

Visitor statistics from the past 4–6 years indicate seesawing growth, a loss of 20% from 2013 to 2014 at Site 3 but a growth of 28% at Site 1 during the same period. It is unclear whether this is due to poor record keeping or some other reason.

According to numbers provided by the provincial Department of Information, Culture and Tourism, Site 1 experienced an average annual growth rate of 7% in 2012–15, Site 2 experienced 2% average growth in 2010–15, and Site 3 showed -7% over the same period.

With inscription and the accompanying media coverage and interest in the Plain of Jars, this is likely to generate growth, perhaps at an average of 5–10% annually. However, it is not expected to be dramatic as access to the property is still limited by relatively long distances and difficult conditions – a 6+ hour drive from Vientiane as the capital of Laos, or from Luang Prabang as an existing World Heritage property, or daily 35 minute flights with domestic airlines. Local security and travel safety issues are also far more likely to affect visitation, discouraging visitors.

By way of comparison, Luang Prabang was inscribed as a World Heritage site in 1995. Tourism statistics in the period 2005-16 show:

- a 66% growth in domestic tourists, up to 173,000 in 2016;
- a 352% growth in international tourists, up to 469,000 in 2016;
- a 270% growth in all tourists, up to 643,000 in 2016; and

- annual growth in tourists of between -7% to +19%, with many years in the range 10-14%.

However, this experience is not useful in predicting the future of visitation to the Plain of Jars. Luang Prabang has much better access and visitor facilities compared to the Plain of Jars.

Carrying-capacity of the property

Being a relatively spread-out property, with stone features that can withstand some degree of wear, the carrying-capacity of the property could be as high as 1,000 people a day, if properly managed. However, this level of visitation is only likely at the current major tourist sites. Erosion from footfall and uncontrolled tourist movement would be the biggest risk factor, followed by littering and vandalism to the jars.

Management is especially necessary during weeks of high visitation, currently Hmong New Year and Lao New Year.

However, devising a set path for visitors and posting site guards will help to ameliorate these risk factors. Though visitation is nowhere near these numbers currently, putting these management steps into place within the next five years is recommended.

Forms of deterioration due to visitor pressure and behaviour

Erosion due to foot traffic, litter and vandalism are the greatest risks from high numbers of visitors.

Inappropriate development of visitor management infrastructure (buildings, paths, signs, barriers) could impact on the landscape of the sites and should be carefully designed to be effective but not intrusive.

Visitor/tourism management plan

A provincial tourism strategy exists and is discussed in Section 5.d below, although no specific tourism management plan exists.

Summary comments

Tourism pressure at the property is still minimal. Visitor levels are relatively low and incidences of vandalism and damage due to tourism are rare, albeit increasing.

It will be important to ensure that tourism infrastructure (eg. ticket booths, restaurants, toilets, signage) and private investments/infrastructure (eg. hotels, access roads, restaurants off-site) do not encroach upon and diminish the OUV of the property.

4.b(v) Number of inhabitants within the property and the buffer zone

The population located within the property and buffer zone are as follows:

- | | |
|----------------------|----|
| • Nominated property | 0 |
| • Buffer zone | 24 |
| • Total | 24 |

The people are all located within the buffer zone of Site 1. Plans are being made to re-locate these people outside the buffer zone.

5. PROTECTION AND MANAGEMENT OF THE PROPERTY

It is important to note that the nominated Plain of Jars sites are relatively small areas which are mostly found in remote locations away from population centres and development activity. They are reasonably robust sites and have endured for over 1,000 years. This chapter discusses the protection of the sites, including under the *Law on National Heritage*, and the simple management mechanisms which apply.

5.A OWNERSHIP

The Ministry of Information, Culture and Tourism on behalf of the Government of the Lao PDR is the owner of the entire property in accordance with Articles 3 and 9 of the current *Land Law 2003*.

The property is cultural land in terms of the *Land Law*. ‘Cultural Land’ is defined in Article 33 as a,

‘site bearing evidence of cultural heritage, historical vestiges, archaeological remains, monuments of cults, temples, natural landscape, construction of cultural significance and other places that have been designated by the State as ‘land of Culture and Tourism’ (unofficial translation)

Article 34 of this law stipulates that,

‘The Ministry of Information and Culture is assigned to manage nationwide the ‘Cultural Land’, submit to the Government the regulations concerning its management, protection and development. These regulations (once ratified) apply to individual(s) or organisation(s) which is (are) using the above-mentioned land.’ (unofficial translation)

Buffer zones are also owned by the Government but private use of this land, sympathetic to the Outstanding Universal Value of the sites, is allowed under Provincial Decree 996.

5.B PROTECTIVE DESIGNATION

The property is primarily protected by the:

- *Law on National Heritage 2013* (see Annex L.2); and
- Provincial Governor’s Decree concerning the Management and Conservation of the Plain of Jars World Heritage Sites – No. 996 (see Annex L.4).

The Decree also deals with some management aspects. At the national level, protection is also supported by the Decree of the President of the Lao PDR on the Preservation of Cultural, Historical and Natural Heritage 1997 (see Annex D).

The primary mechanisms are summarised below.

Law on National Heritage 2013

The Law focuses on national heritage but has the following provisions for the management, preservation and conservation of World Heritage sites:

- authorisation of the Ministry of Information, Culture & Tourism is needed to carry

- out repair, rehabilitation and restoration of World Heritage Sites;
- administration/management shall be undertaken by special organisations such as the Committee for National Heritage, local Heritage Committees and a Plain of Jars Heritage Technical Division, the establishment and activities of which shall be separately regulated; and
- the Ministry of Information, Culture & Tourism supervises and encourages the Plain of Jars Heritage Technical Divisions in the implementation of laws, regulations, plans and projects concerning World Heritage sites.

The Law states that areas surrounding archaeological sites merit protection and the detailed determination of each zone will be in specific regulations. Article 45 divides protection areas into four zones:

- Zone 1 is the central area (ie. the jar group areas within the nominated property areas), where the heritage is located, which must be protected in its original circumstances and where no construction is permitted;
- Zone 2 is the area surrounding the central area (ie. around the jar groups and also within the nominated property areas), where some activities are permitted to increase the value of Zone 1, provided that no damage shall be caused to the surrounding area;
- Zone 3 is the buffer zone or protective area (equivalent to the property buffer zones) where construction is permitted to serve Zones 1 and 2 for the accommodation of tourists; and
- Zone 4 is the administrative area where construction is permitted to serve Zones 1, 2 and 3 for urban development and the accommodation of tourists.

The Lao Penal Code details sanctions for offences committed against the Law.

Provincial Governor’s Decree concerning the management and conservation of the Plain of Jars World Heritage Sites – Decree 996

This is the main provincial decree regarding protection of the sites and it also deals with some aspects of management. The decree:

- identifies the location and boundaries of the sites; and
- specifies measures and activities for the property area and buffer zones.

Prohibited activities in the property include:

- dismantling, destroying or removing jars;
- any impact to the subsurface including cultivation, burial, excavation other than archaeological research;
- de-forestation, agricultural activities;
- forestry activities around the jars;
- no livestock (cows, buffalos, goats, pigs, chickens and birds) allowed within the jar sites;
- the use of the site for anything other than sightseeing or educational purposes is not allowed, including picnic, organizing parties or other events;
- construction of buildings, utilities (including electricity, telephone and water supply), or infrastructure;
- construction of electricity poles, telephone reception towers or anything considered to negatively impact the setting of the site;
- no individuals, groups and government sectors to reserve areas as their own property; and

- construction of roads.

5.C MEANS OF IMPLEMENTING PROTECTIVE MEASURES

In general, there is significant overlap between protective and management measures, and the discussion at Section 5.E is also relevant. This section provides an overall summary about implementing protective measures.

Implementation involves the different levels of government and the community – national, provincial, district and village.

Coordination of activities is achieved by the following mechanisms:

- the National Committee for World Heritage in Laos provides national level coordination, this includes a link to the province (see Annex F); and
- the Xiengkhuang Heritage Steering Committee provides provincial level coordination of provincial, district and village level activities (Annex E).

Conservation activities, as well as research and overall monitoring, are carried out by the Department of Heritage in accordance with the *Law on National Heritage 2013* (see Annex L.2). The Department has prepared a 5-year action plan for the sites addressing project work, but not recurrent activities (Annex L.10), and an archaeological research plan (Annex L.11).

In terms of national funding, a budget plan is separately submitted to the national government and needs to be adopted by the National Assembly. After approval, the Ministry of Finance transfers funding to the Ministry of Information, Culture & Tourism (national) and to the Governor of Xiengkhuang.

Day-to-day protection and management of the sites is the responsibility of the relevant local villages or, in the case of Site 1, the provincial Plain of Jars Heritage Technical Division. This work is in accordance with the relevant decree and guideline documents (see Annex L.8, discussed in Section 5.e). It is overseen by the Plain of Jars Heritage Technical Division, which itself is supervised by the provincial Department of Information, Culture & Tourism, all working in accordance with provincial guidelines (Annex L.7).

General awareness raising for villages is undertaken by the provincial Department, and the Plain of Jars Heritage Technical Division undertakes training regarding site protection and management activities in accordance with the relevant decree and guideline documents.

In the case of UXO clearance, a protocol has been developed and agreed to guide clearance work in archaeologically sensitive locations (Annex L.13).

5.D EXISTING PLANS RELATED TO MUNICIPALITY AND REGION IN WHICH THE PROPOSED PROPERTY IS LOCATED (EG. REGIONAL OR LOCAL PLAN, CONSERVATION PLAN, TOURISM DEVELOPMENT PLAN)

The relevant existing plans are:

- Provincial Strategy for the Department of Information, Culture and Tourism 2016 – 2020;
- Xiengkhuang Provincial Development Plans;
- Xiengkhuang Special Economic Zone Plan;
- Xiengkhuang Tourism Development Plan; and
- Destination Management Plan (DMP), November 2016.

Provincial Strategy for the Department of Information, Culture and Tourism 2016 – 2020

This strategy includes the following matters relevant to the nominated property:

- A 2.08 billion Kip project to survey and register stone jars and cultural heritage sites in Xiengkhuang Province, including UXO clearance, maps of jar sites, dissemination of the heritage management law, production of brochures and posters on management and protection, and formulating rules and administrative systems for the jar sites.
- Strengthening the fence around Site 1.
- Linking Site 1 and the adjacent giant Buddha site with a better paved road.
- Expanding the parking lot and acquiring two electric vehicles for Site 1.
- Writing a history of the Plain of Jars, define the heritage area, and draft the nomination dossier for World Heritage.
- Improving Site 21 with rest areas, landscaping and electricity.
- Laying a dual layer asphalt road between Sites 1 and 2.
- Tourism Promotion and Planning Strategy for Xiengkhuang Province, 2016 – 2020, in particular the upcoming campaign – *2018 Visit Laos Tourism*.

It should be noted the funds for all of these projects have not yet been guaranteed. See Annex K.

Xiengkhuang Provincial Development Plans

The development focus of the province will be on agricultural diversification, construction of processing plants and tourism; and as a second priority the province will concentrate on mining (and exploration) and production of construction material. In order to achieve these goals, the province will develop its infrastructure and thus optimise its strategic location in the region and links to domestic and international markets.

The infrastructure development includes urban areas, accommodation, electricity, water supply, irrigation, post and telecommunication systems, and aims to provide facilities for processing of agricultural products, tourism, market access, increased information and improved services.

A number of roads are planned for construction. The roads will allow for increased tourism by road. It is also the intention of the Province to upgrade the current airport to international standard by 2020.

In the short term, regular flights between Vientiane, Xiengkhuang and Luang Prabang are proposed to capitalise on existing tourism in Luang Prabang and to create a triangle between these three major tourism destinations.

The completion of 6 hydropower development projects are proposed. One of the projects will involve a penstock constructed in or near the buffer zone of Site 42.

The overall plan does not include a reference to the Plain of Jars management by the Province.

Xiengkhuang Special Economic Zone Plan

This zone has been created to the west and south of Site 1. The zone has a number of areas including:

- Administrative Area – for provincial administrative offices and facilities;
- Commercial and Services Area – including market, shopping, restaurants and hotels;
- Nature Tourism Area – including tourism facilities;
- Cultural Heritage Area – including Site 1;
- Industrial Area;
- Agriculture and Farm Area – which borders the Cultural Heritage Area to the east and north;
- Transport and Warehouse Complex;
- Education and Sports Area;
- Public Health Area;
- Residential Area; and
- Parks Area;

The overall plan of the zone is provided below, along with a more detailed plan including Site 1.

Figure 74. Xiengkhuang Special Economic Zone Plan – Cultural Heritage Area including Site 1 highlighted (blue dashed ellipse)

Source: Xiengkhuang Provincial Government

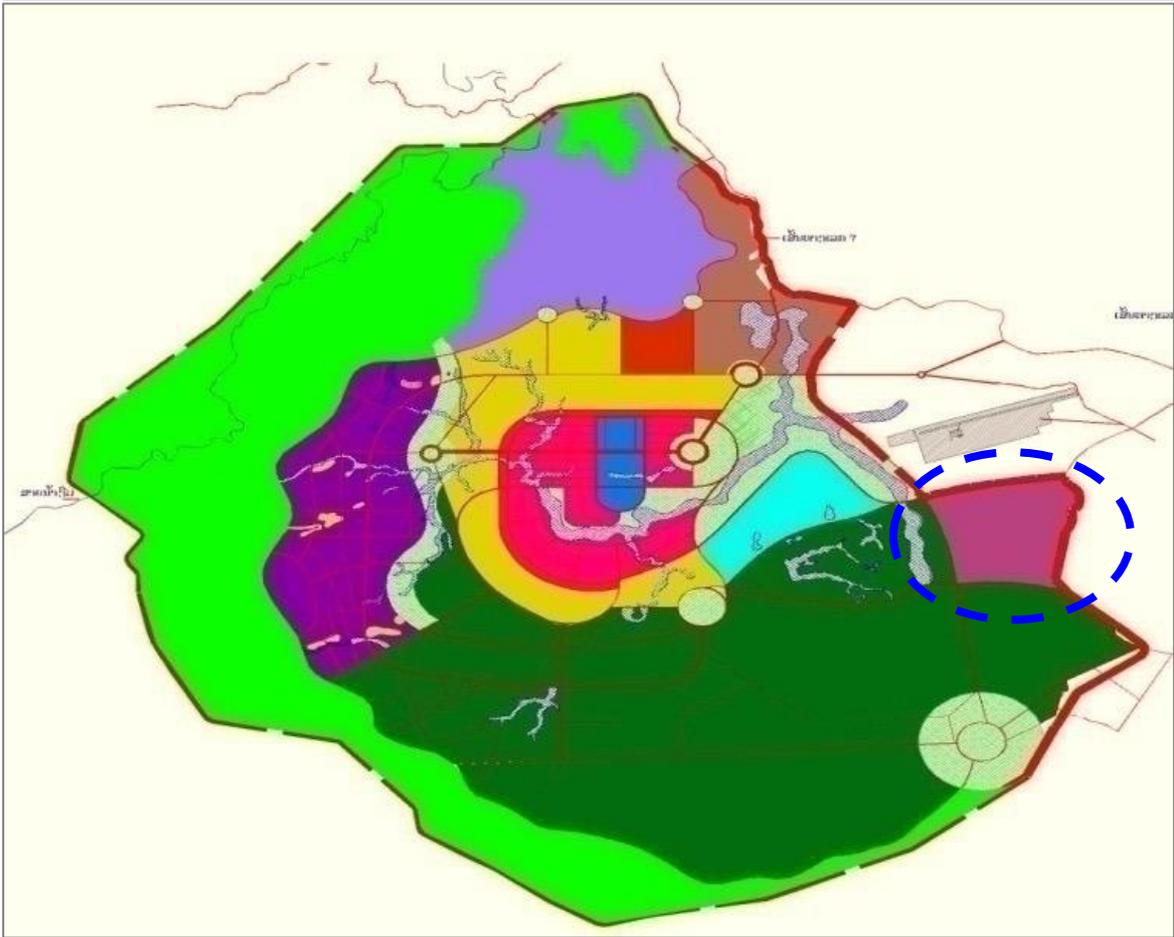
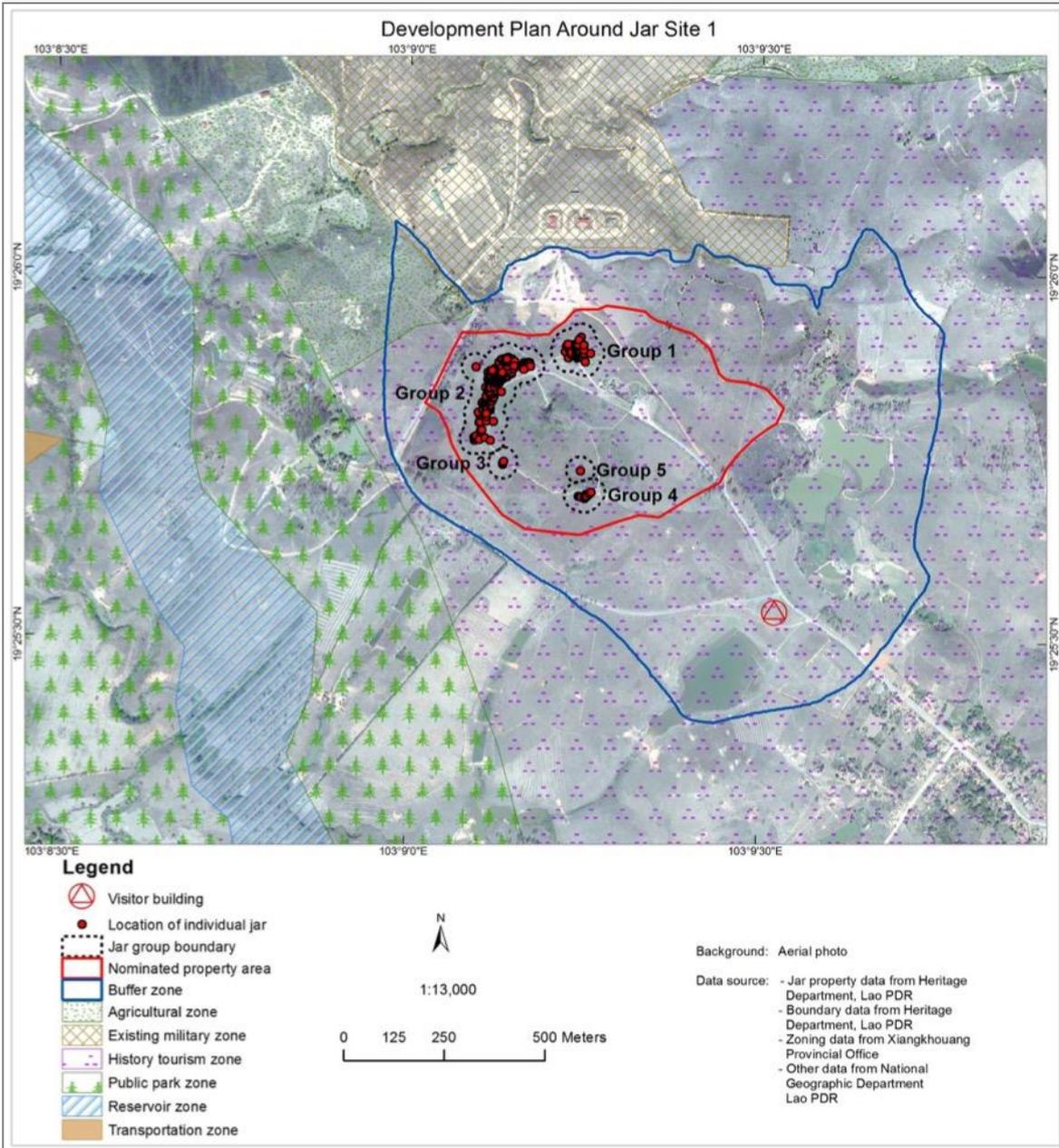


Figure 75. Planning Zones around Site 1

Source: Department of Heritage



Xiengkhuang Tourism Development Plan

The objectives of the tourism development are to accelerate the development of natural, cultural and historical sites alongside the Plain of Jars; to develop tourism with aim to alleviate poverty and promote community-based tourism activities, and the protection of natural, cultural and historical heritage. The aims will be achieved by improving the existing tourism attractions and services, and developing new destinations in order to attract tourists from the World Heritage town of Luang Prabang. The Department of Information, Culture and Tourism will formulate a marketing strategy for the Plain of Jars and other sites and will seek the support of private investors to implement the marketing.

The Information, Culture & Tourism office of Muong Kham District aims to improve the hot spring area, restaurants and accommodation in that district. The aim is to extend visitors stay in the district and develop one to two ecotourism products near Site 23.

Phaxay District will focus on the development of Sites 2 and 3 as World Heritage sites. It will seek appropriate channels to develop tourism activities at the sites and promote village handicrafts. The Information, Culture & Tourism office will support communities with potential for home stay or tourism activities to aid in poverty alleviation. There will also be encouragement for private sector investment to develop tourism accommodation, restaurants and service areas.

Phoukoot District will place a focus on heritage and nature tourism. It aims to re-survey natural and heritage tourism sites, and improve tourism services standards at Nong Tang and Tham Pha cave.

Destination Management Plan (DMP), November 2016

The DMP is for Paek, Khoun and Kham Districts within Xiengkhuang Province, Lao PDR. It contains an Action Plan aimed at improving these Districts as destinations for domestic, regional and international visitors. The DMP was written by the Destination Management Network (DMN) which is composed of government agencies (DICT XHK, Tourism, Heritage and Museum Units, Tourist Police, Public Works and Transportation, and Governor's Cabinet from different Districts) as well as representatives of the private sector (eg. travel agencies, hotels, restaurants and handicraft shops). See Annex J.

The DMP is a high level strategic plan which provides broad direction. It relates to some of the sites included in the nominated property (Sites 1, 2, 3 and 21), but not all. The most relevant action plan (No. 4) states,

‘Continue to improve the visitor experience and facilities at the main Plain of Jars sites (1, 2, 3 and [21] ‘Phou Keng’). This includes development and management of facilities, on-site and online interpretation, integration of commercial operations (handicrafts, cafes, tours, retail) and engagement between visitors and researchers (such as the Australian National University, ANU, archaeology project at Plain of Jars Site 1).’

The action plan deals with a variety of issues such as: attractions and activities, marketing and information, infrastructure and transport, training and skill development and planning, policy and regulations, and improvements of linkages with other provinces of Laos, ASEAN Countries and the rest of the world.

5.E PROPERTY MANAGEMENT PLAN OR OTHER MANAGEMENT SYSTEM

The Plain of Jars property has a management system. This operates at three levels – national, provincial and district/village. At each level and overall, there are key instruments which identify roles and responsibilities, and in some cases specific management activities. These instruments, operating under the protective mechanisms discussed in Section 5.b, are as follows:

- overall plans and technical guidelines:
 - Action Plan for 2018-23, defining specific future actions for the property (Annex L.10);
 - Archaeological Research Plan, to guide future research (Annex L.11);
 - Conservation Guidelines, to guide conservation activities at the property (Annex L.12);
 - Archaeo-demining Protocol, to guide the removal of unexploded ordnance (Annex L.13);
 - Heritage Impact Assessment Guidelines, to assess proposed actions which might impact the property (Annex L.14);
- provincial:
 - provincial decree on the management and conservation of the property, No. 996, including measures and activities for the property and buffer zones (Annex L.4);
 - provincial decree regarding funding for the property, No. 995 (Annex L.5);
 - departmental decree creating and defining the role of the Plain of Jars Heritage Technical Division, No. 870, as the primary manager at the provincial level (Annex L.6);
 - provincial guidelines addressing a range of management activities which are the responsibility of the Provincial Government (Annex L.7);
- district/village:
 - site guidelines for use by villages responsible for specific sites, identifying active management measures and prohibited actions at each site (Annex L.8); and
 - village contracts to ensure agreement to implement site guidelines (Annex L.9).

Additional brief details about some instruments are provided in Section 7.b below and as noted, they are also annexed.

The system operates within a structure involving a range of stakeholders. The four primary management stakeholders are:

- Department of Heritage (national) – the primary technical adviser for the Plain of Jars, directly responsible for conservation and research, provides oversight of the provincial Department of ICT and conservation guidance to the provincial Plain of Jars Heritage Technical Division;
- Department of ICT (provincial) – responsible for the Plain of Jars Heritage Technical Division, undertakes village awareness raising activities;
- Plain of Jars Heritage Technical Division (provincial) – primary management role, guidance to district and village levels, responsible for monitoring and infrastructure/major works at the sites, also responsible for day to day maintenance, management and reporting regarding Site 1; and
- villages – responsible for day to day maintenance, management and reporting for all other sites.

At the national level, there are two other stakeholders:

- the National Committee for World Heritage in Laos – generally responsible for high level coordination and decisions regarding World Heritage in Laos (appointed by a Prime Minister’s decree (Annex F) and with a secretariat appointed by a Ministerial decree (Annex G)); and
- the Minister for ICT (national) – responsible for the Department of Heritage.

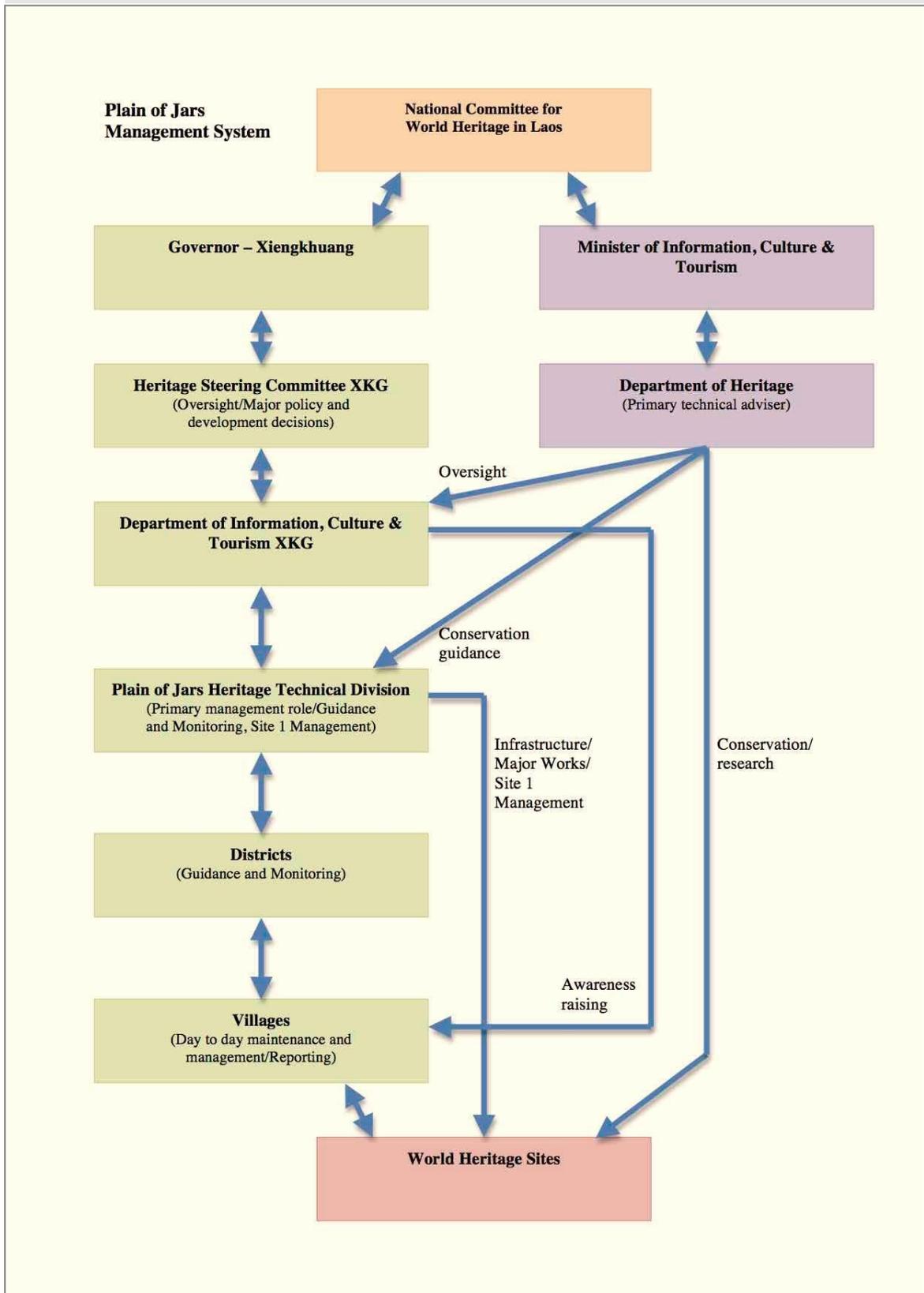
At the provincial level, there are several other stakeholders:

- The Governor of Xiengkhuang province – overall responsibility for provincial activities related to the Plain of Jars;
- Heritage Steering Committee – provides oversight regarding the Plain of Jars, takes major policy and development decisions (created by a provincial decree (Annex E)); and
- district administration – responsible for guidance and monitoring of villages, in some cases replacing the village role.

The management system structure is summarised in the following figure.

Figure 76. Management System for the Plain of Jars

Source: Department of Heritage



5.F SOURCES AND LEVELS OF FINANCE

The current and future funding for the property is summarised in the following table.

Funding Source	Amount
Plain of Jars Heritage Technical Division annual budget from Provincial Government until 2020	K150M (US\$18,100)
Department of Heritage project funding for 2016-20 (non-salary)	K1,500M (US\$181,000)

The funding of the Plain of Jars Heritage Technical Division is a minimum guaranteed amount and could be higher depending on ticket sales, in which case the Division would receive 40% of ticket sales.

After 2020, 40% of income from ticket fees to visit the sites will be divided as follows:

- 40% for the Plain of Jars Heritage Technical Division;
- 25% to support villages in their management role;
- 20% to District administrations for support for the sites, including monitoring; and
- 15% for a province-wide heritage fund.

Refer to the Provincial Governor's Decree, Safeguarding the Plain of Jars – Approval of the provincial budget, revenues from the ticket sales at the Plain of Jars sites – No. 995 (Annex L.5).

As an indication, total ticket sales for Site 1 is about US\$73,000 and non-salary expenses are about US\$14,000. Site 1 attracts the most income of all sites by far.

Donors are another possible source of funding for activities at the Plain of Jars. A major source of donor support has been the New Zealand Aid programme. Recent and current projects have included:

- improvements at Site 1 related to the visitor centre, amenities and landscaping – US\$85,000;
- preparation of a comprehensive heritage interpretation strategy for Xiengkhuang – US\$11,000;
- contributions to the World Heritage nomination project – US\$6,300;
- complete renewal of the Xiengkhuang Provincial Museum including a new exhibition covering prehistory/the Plain of Jars, Tai Phuan Kingdom, Indochina wars, and Xiengkhuang's ethnic diversity, and new store rooms and laboratories – US\$225,000 plus Australian funding of about US\$12,000;
- directional signage for tourist attractions in Xiengkhuang, including Plain of Jars sites 1, 2 and 3 – US\$10,000;
- on-site heritage interpretation panels – US\$16,000; and
- production of short films for the museum, and possibly other purposes, on the Plain of Jars, cultural diversity, War period, present day period – US\$10,000.

These amounts do not include coordination and administrative overheads.

There is no currently anticipated future donor funding, although this remains a possibility,

especially for project work, tourism infrastructure and research.

5.G SOURCES OF EXPERTISE AND TRAINING IN CONSERVATION AND MANAGEMENT TECHNIQUES

Expertise in conservation and management exists within the Department of Heritage at the national level, including its Archaeological Division. It also exists at the Provincial level within the Department of Information, Culture and Tourism, and the Plain of Jars Heritage Technical Division. The following table provides details.

With regard to training, there are no dedicated training positions. However, experts at the national and Provincial levels undertake some training activities for other staff or stakeholders on an occasional basis, as the need arises.

Expertise	Number of Experts			
	Department of Heritage (National)	DoH Archaeological Division (National)	Xiengkhuang ICT (Provincial)	Plain of Jars Heritage Technical Division (Provincial)
Archaeologist	1	7	1	1
Architect	1	1		
Surveyor	1	1		
Art Historian	3			
Cultural management	2			
Curator				1
Artist			1	
Historian	7	4		
Administration	2	2		1
Accounting	2		5	
Tourism	2	1	6	
Chemical	1			
Engineering	2			
Environment management	1			
Art literature	3		3	
English Pedagogical	1		6	2
Primary Teacher			1	1

5.H VISITOR FACILITIES AND INFRASTRUCTURE

A summary of visitor facilities and infrastructure at the various components of the property is presented in the following table.

Site	Visitor facilities and infrastructure
Site 1	Has an interpretation centre and ticket booth, handicraft stalls on the side of a large parking lot, and a gate where visitors take an electric vehicle shuttle to the area with the jars. The site has several signs in English and Lao with regulations for the site, and a few stone benches under trees. There are plans to develop a coffee shop next to the ticket booth, but no other major infrastructure or development plans.
Site 2	Has a small information kiosk where tickets are sold but no other facilities. A bitumen road is being planned for the site. Detailed plans are not yet available.
Site 3	Has a small restaurant, ticket booth, information kiosk and parking area on the temple grounds. It is planned to change the location of facilities at Site 3 and upgrade an access road from the north to a bitumen finish. This will include a new building closer to the site. Detailed plans are not yet available.
Site 8	As for Site 3.
Site 12	No facilities or infrastructure.
Site 21	Has a ticket booth, manned by a husband/wife team who have a concession for the area. There is no interpretation at the ticket booth, but some brief directional and regulation signs, ie. <i>Quarry 1</i> and <i>200 m to Secret Tunnel</i> . There is a very good path with stairs going to the top of the mountain, past the quarry areas where several half-finished jars can be seen. At the top of the mountain is the wartime tunnel and a small natural cave that leads to a scenic viewpoint. A tourism development project is being planned for this site. Detailed plans are not yet available.
Site 23	Simple interpretive signage.
Site 25	Has a small information kiosk where tickets are sold but no other facilities.
Site 28	No facilities or infrastructure.
Site 42	No facilities or infrastructure, although there is a small tourist facility in the valley below.
Site 52	Has a small community lodge to accommodate tourists that visit this mountaintop jar site as part of an overnight trekking tour. It is now accessible by vehicle.

5.I POLICIES AND PROGRAMMES RELATED TO THE PRESENTATION AND PROMOTION OF THE PROPERTY

The major activity to present the property occurs through the interpretation provided at the visitor centre at Site 1. This includes extensive displays related to the Plain of Jars. However, the interpretation is focused on Site 1 and the whole range of jar sites in the province. It is not specific to the OUV of the property nor does it present the property specifically.

Secondary interpretive panels are also provided at Sites 2, 3 and 23.

As discussed under Section 5.F above, the New Zealand Aid programme has been supporting a number of activities to improve the presentation and promotion of the property including improvements at the Site 1 visitor centre, renewal of the provincial museum including a display related to the Plain of Jars, directional signage, on-site

interpretation panels, and a short film.



Figure 77. Installing new directional signs in Xiengkhuang

Source: Rik Ponne 2017

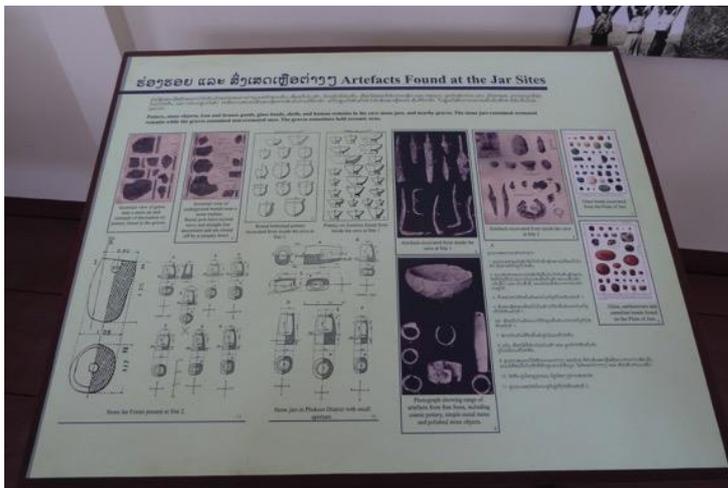


Figure 78. Interpretation panel in the visitor centre at Site 1

Source: Duncan Marshall 2015

Plain of Jars site 2



Other mysteries about the stone jars concern their creation and transport to their present locations. No tools remain at the sites, and Site 2's quarry is located 2 km away. How did the population move these jars during ancient times?



Found atop twin hills overlooking a valley, Site 2 hosts a disc decorated with a humanoid figure surrounded by circles that would face the ground over a grave. White pottery shards uncovered here resemble ceramics linked to a

2,000-year-old culture that also created megalithic burials in Vietnam called Sa Huyhn. Were these 2 civilisations connected

A French colonial-era road cuts the site in half, causing erosion to the hill and displac some jars.



Although bombs from the wars did not destroy any jars, bullet holes and other damage occurred. Craters have scarred the area.

Located at the hill's base, Nakho villagers farm and continue to produce traditional handicrafts. Women weave, and men make baskets and bamboo toys. Hire a local guide to take you on an easy trek between Sites 2 and 3.



Plain of Jars Site 2
 Number of Jars: 93
 Materials: Sandstone
 Number of Discs: 14
 Longest jar: 323 cm

Figure 79. New interpretive signage for Site 2

Source: Department of Information, Culture and Tourism

Otherwise, interpretation is provided by private tour guides. The content and quality of such interpretation is not known, it is not monitored and there is no current accreditation, although such training and accreditation was provided in 2009 as part of the UNESCO-Lao *Safeguarding the Plain of Jars* project.

Presentation and promotion policies and programs are generally identified in the following documents:

- Provincial Strategy for the Department of Information, Culture and Tourism, 2016 – 2020;
- Tourism Promotion and Planning Strategy for Xieng Khouang Province, 2016 – 2020;
- Xiengkhuang Tourism Development Plan;
- Heritage Interpretation Strategy and Plan 2016; and
- Destination Management Plan (DMP), November 2016.

The Provincial Strategy for the Department of Information, Culture and Tourism includes the following matters relevant to the nominated property:

- expanding the car parking area at Site 1;
- changing/improving access roads at Sites 2 and 3; and
- improving Site 21 with rest areas, landscaping and electricity.

It should be noted that funds for all of these projects have not yet been guaranteed, nor detailed plans prepared.

The Destination Management Plan is for Paek, Khoun and Kham Districts within the Xiengkhuang Province. It contains an Action Plan aimed at improving these Districts as destinations for domestic, regional and international visitors. The plan includes a high level strategic action to improve the visitor experience and facilities at the main sites (1, 2, 3 and 21),

For the future, it is anticipated that tourism efforts will continue to focus on Sites 1, 2, 3 and 21.

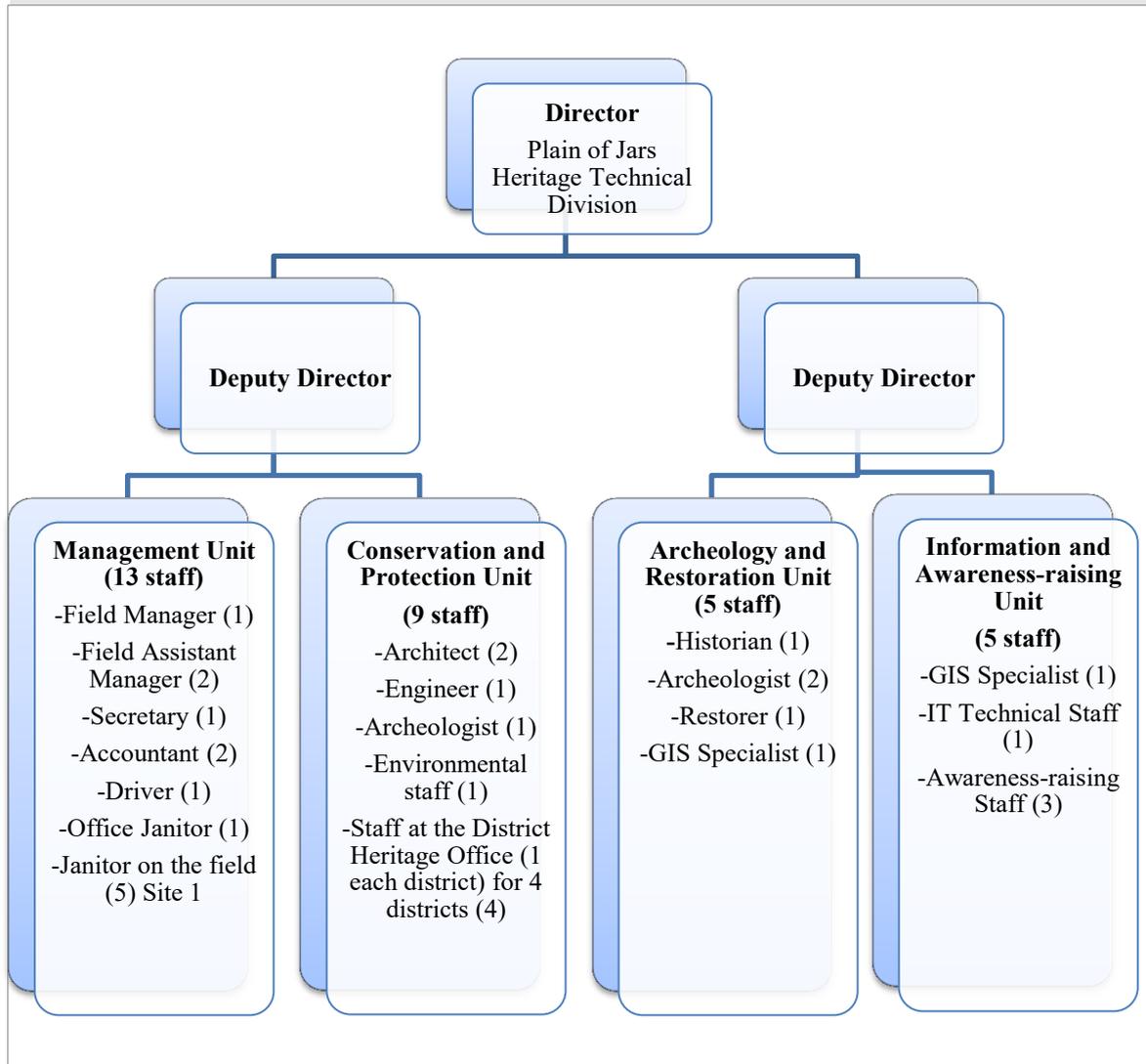
5.J STAFFING LEVELS AND EXPERTISE (PROFESSIONAL, TECHNICAL, MAINTENANCE)

The *Law on National Heritage 2013*, Article 81 specifies that a separate office should be established to administer a World Heritage property. The Plain of Jars Heritage Technical Division will be recognised as a technical organisation under the Ministry of Information, Culture and Tourism's Department of Heritage, and will have the status as a sub-department under the Department of Information, Culture & Tourism of Xiengkhuang Province. The Division, which will be located in Xiengkhouang will be guided by Ministry of Information, Culture and Tourism's Department of Heritage on a national level, and will be supported by District Departments of Information and Culture and villagers at the local level. The Provincial Heritage Steering Committee will oversee the Division's activities.

A summary of the future staffing of the Division is provided below.

Figure 80. Organisation Structure of Proposed Plain of Jars Heritage Technical Division

Source: Department of Heritage



The Division will have an implementation role in conservation, management and projects, and in the promotion of the values of the Plain of Jars. It will execute the plans and regulations. The Division also will have the responsibility to promulgate information and undertake training at District and village levels.

The Provincial Department of Information, Culture & Tourism will oversee the management of the Division.

6. MONITORING

6.A KEY INDICATORS FOR MEASURING STATE OF CONSERVATION

A simple range of indicators are proposed related to both the actual state of conservation of the property as well as its management. In some cases, the management indicators may relate to actual or potential state of conservation issues. The indicators are presented in the following table.

Table 18. Key Indicators		
Indicator	Frequency of Monitoring	Responsibility for Monitoring
<i>State of Conservation</i>		
Condition of jars, disks, lids, grave markers, archaeological deposits, quarry and other attributes at each site. Factors to be considered: <ul style="list-style-type: none"> natural deterioration increase in broken jars or other damage increase in fallen jars surface disturbance, including looting or UXO explosions vegetation impacts removal of jars or other attributes erosion impacts graffiti or other tourism impacts 	Weekly (Site 1) Weekly (other sites) Monthly Every 6 months	DICT XKG Village HTD XKG HD
Condition of the general environment within sites, including: <ul style="list-style-type: none"> grass cover and tree growth in vicinity of jars or other attributes erosion uses and activities agricultural encroachment, grazing, logging, road construction, residential expansion or other building activity, infrastructure works, mining or exploration burning for agriculture 	Weekly (Site 1) Weekly (other sites) Monthly Every 6 months	DICT XKG Village HTD XKG HD
Condition of the general environment within buffer zones, including <ul style="list-style-type: none"> erosion uses and activities agricultural activities, grazing, logging, road construction, residential expansion or other building activity, infrastructure works, mining or exploration 	Weekly (Site 1) Weekly (other sites) Monthly Every 6 months	DICT XKG Village HTD XKG HD
Number of sites/attributes benefitting from conservation activity	Yearly	HD
Number of sites/attributes damaged by or in danger from any activity	Every 6 months	HTD XKG HD
<i>Management</i>		
Condition of site facilities such as fences, roads and paths, where existing	Weekly (Site 1) Weekly (other sites) Monthly Every 6 months	DICT XKG Village HTD XKG HD
Condition of visitor information facilities including buildings, displays and signs, where existing	Monthly Every 6 months	HTD XKG HD
Condition of visitor facilities including shelters and toilets,	Weekly (Site 1)	DICT XKG

Table 18. Key Indicators		
Indicator	Frequency of Monitoring	Responsibility for Monitoring
where existing	Weekly (other sites) Monthly Every 6 months	Village HTD XKG HD
Number of visitors including school children from Laos	Weekly (Site 1) Weekly (other sites) Monthly Every 6 months	DICT XKG Village HTD XKG HD
Number of visitors from overseas	Weekly (Site 1) Weekly (other sites) Monthly Every 6 months	DICT XKG Village HTD XKG HD
Number of guided tours	Weekly (Site 1) Weekly (other sites) Monthly Every 6 months	DICT XKG Village HTD XKG HD
Quality of visitor experience in relation to World Heritage	6 monthly	HTD XKG HD
Income generated by ticketing and other activities	Weekly (Site 1) Weekly (other sites) Monthly Every 6 months	DICT XKG Village HTD XKG HD
Number of media or other publications (eg. articles, documentaries, academic papers)	Yearly	HTD XKG HD
Progress with detailed documentation of sites	Yearly	HTD XKG HD
Number of research projects undertaken	Yearly	HD
Number of development, infrastructure or other projects undertaken in the property or buffer zone with/without impact assessment	6 monthly	HTD XKG HD
Number of training activities carried out, the level of training and the number of people trained	Yearly	DICT XKG HTD XKG HD
<p><i>Notes</i> HTD XKG = Plain of Jars Heritage Technical Division Xiengkhuang DICT XKG = Department of Information, Culture & Information in Xiengkhuang HD = Department of Heritage (national)</p>		

6.B ADMINISTRATIVE ARRANGEMENTS FOR MONITORING PROPERTY

Arrangements for monitoring the property will be shared between village, provincial and national levels. The general arrangements are,

- Plain of Jars Heritage Technical Division (for Site 1)/village level (for other sites) – local level monitoring of the day to day situation and reporting to the provincial level. In reality, some of this work may be undertaken at the district level, especially by Information, Culture & Tourism of the relevant district;
- provincial level (Plain of Jars Heritage Technical Division, Xiengkhuang Province) – medium term monitoring (eg. monthly) across a wide range of matters, especially management issues and oversight of village level monitoring; and
- national level (Department of Heritage) – longer term monitoring (eg. every 6 months) across a wide range of matters, particular responsibility for conservation activities and oversight of provincial level monitoring.

Details of the specific responsibilities for and frequency of monitoring are provided in Section 6.a above.

In addition, a number of other authorities or bodies will play a role in monitoring the property. These are:

- National Committee for World Heritage in Laos – national level oversight of World Heritage in Laos;
- Minister for Information, Culture and Tourism (national) – national level oversight of Department of Heritage;
- Governor, Xiengkhuang Province – provincial level oversight of Heritage Steering Committee Xiengkhuang;
- Heritage Steering Committee Xiengkhuang – provincial level oversight of provincial, district and village activities related to World Heritage; and
- Department of Information, Culture & Tourism in Xiengkhuang – provincial level oversight of Plain of Jars Heritage Technical Division, as well as a direct role monitoring awareness raising activities at the village level. The Department will also play a more direct role in monitoring for Site 1 given its management through the Plain of Jars Heritage Technical Division of the site.

Responsibilities for monitoring are detailed in the national, provincial and village level management guidelines, as well as in relevant decrees establishing the committees noted above (see Section 7.b).

The Department of Heritage will be responsible for the preparation of Periodic Reports as required under the *Operational Guidelines* to the World Heritage Convention.

6.C RESULTS OF PREVIOUS REPORTING EXERCISES

There has been a range of reporting on the state of conservation of the Plain of Jars sites since 1884.

However, the most relevant and comprehensive is that undertaken in 2017 as part of a survey project undertaken by the Department of Heritage in coordination with the Department of Information, Culture and Tourism of Xiengkhuang Province and local authorities. This survey dealt with 10 jars sites (Sites 2, 3, 8, 12, 21, 23, 25, 28, 42 and 52). The results of this survey are noted in Section 4.a.

In addition, the 2001 survey by the UNESCO-Lao *Safeguarding the Plain of Jars* project assessed the condition of jars at Site 1.

The details of these surveys are contained in the inventory for the sites (see Section 7.c).

7. DOCUMENTATION

7.A PHOTOGRAPHS AND AUDIOVISUAL IMAGE INVENTORY AND AUTHORIZATION FORM

The completed inventory and authorisation form is below. Contact sheets of the images provided are at Annex C.

Table 19. Audiovisual Image Inventory and Authorisation Form

ID No.	Format (slide/print/video)	Caption	Date of Photo (mo/yr)	Photographer/director of the video	Copyright owner (if different than photographer/director of video)	Contact details of copy right owner (Name, address, tel/fax, and email)	Non-exclusive cession of rights
1	Slide/Print	<i>A group of megalithic jars in Site 2, Ban Na Kho Village, Phaxay District.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	11/Nov/2015	Kamonrat Chayamarit	Department of Heritage	Mr Thongbay Phothisane Director-General, Ministry of Information, Culture and Tourism P.O. Box 122, Setthathirath Road, Vientiane Capital +856 21 315 451 Thongbay.photisan2017@gmail.com	Yes
2	Slide/Print	<i>A group of megalithic jars in Site 2, Ban Na Kho Village, Phaxay District.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	11/Nov/2015	Kamonrat Chayamarit	Department of Heritage	Same as above	Yes
3	Slide/Print	<i>A group of megalithic jars in Site 2, Ban Na Kho Village, Phaxay District.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Feb/2016	Department of Heritage	Department of Heritage	Same as above	Yes
4	Slide/Print	<i>A group of megalithic jars in Site 2, Ban Na Kho Village, Phaxay District.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Feb/2016	Department of Heritage	Department of Heritage	Same as above	Yes
5	Slide/Print	<i>A group of megalithic jars in Site 2, Ban Na Kho Village, Phaxay District.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Feb/2016	Department of Heritage	Department of Heritage	Same as above	Yes
6	Slide/Print	<i>One of the biggest jars in Site 1, in Ban Ang Village, Paek District.</i>	Nov/2015	Department of Heritage	Department of Heritage	Same as above	Yes

Table 19. Audiovisual Image Inventory and Authorisation Form

ID No.	Format (slide/print/video)	Caption	Date of Photo (mo/yr)	Photographer/director of the video	Copyright owner (if different than photographer/director of video)	Contact details of copy right owner (Name, address, tel/fax, and email)	Non-exclusive cession of rights
		<i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>					
7	Slide/Print	<i>Landscape of the jar site in Site 1, in Ban Ang Village, Paek District</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Nov/2015	Department of Heritage	Department of Heritage	Same as above	Yes
8	Slide/Print	<i>Human bas-relief carved on the exterior representing a human standing and raising arms at Site 1.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Nov/2015	Department of Heritage	Department of Heritage	Same as above	Yes
9	Slide/Print	<i>Jars groups in Site 1 at Ban Ang Village in dry season.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Nov/2015	Department of Heritage	Department of Heritage	Same as above	Yes
10	Slide/Print	<i>Jars groups in Site 1 at Ban Ang Village in dry season.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Feb/2017	Department of Heritage	Department of Heritage	Same as above	Yes
11	Slide/Print	<i>A jar in Site 1, Ban Ang Village.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Nov/2015	Kamonrat Chayamarit	Department of Heritage	Same as above	Yes
12	Slide/Print	<i>The natural lime stone cave at Site 1 has an opening to the northwest and two human-made holes in the ceiling of the</i>	Nov/2015	Manithaphone Mahaxay	Department of Heritage	Same as above	Yes

Table 19. Audiovisual Image Inventory and Authorisation Form

ID No.	Format (slide/print/video)	Caption	Date of Photo (mo/yr)	Photographer/director of the video	Copyright owner (if different than photographer/director of video)	Contact details of copy right owner (Name, address, tel/fax, and email)	Non-exclusive cession of rights
		<i>cave.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>					
13	Slide/Print	<i>Inside the lime stone cave at Plain of Jars Site 1.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Nov/2015	Department of Heritage	Department of Heritage	Same as above	Yes
14	Slide/Print	<i>A group of megalithic jars scattered on the top of the mountains in Site 3, Ban Xiengdi, Phaxay District.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	June/2016	Department of Heritage	Department of Heritage	Same as above	Yes
15	Slide/Print	<i>A group of megalithic jars scattered on the top of the mountains in Site 3, Ban Xiengdi, Phaxay District.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	June/2016	Department of Heritage	Department of Heritage	Same as above	Yes
16	Slide/Print	<i>A group of megalithic jars scattered on the top of the mountains in Site 3, Ban Xiengdi, Phaxay District.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	14/Nov/2015	Department of Heritage	Department of Heritage	Same as above	Yes
17	Slide/Print	<i>A group of megalithic jars scattered on the top of the mountains in Site 3, Ban Xiengdi, Phaxay District.</i>	14/Nov/2015	Department of Heritage	Department of Heritage	Same as above	Yes

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		<i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>					
18	Slide/Print	<i>A group of megalithic jars scattered on the top of the mountains in Site 3, Ban Xiengdi, Phaxay District.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	June/2016	Department of Heritage	Department of Heritage	Same as above	Yes
19	Slide/Print	<i>A group of megalithic jars scattered on the top of the mountains in Site 3, Ban Xiengdi, Phaxay District.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Feb/2017	Department of Heritage	Department of Heritage	Same as above	Yes
20	Slide/Print	<i>A group of megalithic jars scattered on the top of the mountains in Site 3, Ban Xiengdi, Phaxay District.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Nov/2015	Department of Heritage	Department of Heritage	Same as above	Yes
21	Slide/Print	<i>A group of megalithic jars scattered on the top of the mountains in Site 3, Ban Xiengdi, Phaxay District.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Feb/2017	Department of Heritage	Department of Heritage	Same as above	Yes
22	Slide/Print	<i>A group of megalithic jars scattered on the top of the mountains in Site 3, Ban Xiengdi, Phaxay District. One of the most visited sites.</i>	Jun/2017	Department of Heritage	Department of Heritage	Same as above	Yes

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		<i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>					
23	Slide/Print	<i>Broken jar in Site 3 at Ban Xiengdi, Phaxay District. One of the most visited sites. Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Nov/2015	Kamonrat Chayamarit	Department of Heritage	Same as above	Yes
24	Slide/Print	<i>Site 3, Fencing of jars group at Ban Xiengdi. Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	14/Nov/2015	Department of Heritage	Department of Heritage	Same as above	Yes
25	Slide/Print	<i>A jars group in Site 2 with the view. Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Feb/2017	Department of Heritage	Department of Heritage	Same as above	Yes
26	Slide/Print	<i>View from Site 2 at Ban Na Kho. Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Feb/2017	Department of Heritage	Department of Heritage	Same as above	Yes
27	Slide/Print	<i>A jar standing on the top of the mountain in Site 25 at Ban Songhak. The site has expensive views over the surrounding Phoukood plain. Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	13/Nov/2015	Department of Heritage	Department of Heritage	Same as above	Yes

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28	Slide/Print	<i>A jars group in Site 25 at Ban Songhak. Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Nov/2015	Kamonrat Chayamarit	Department of Heritage	Same as above	Yes
29	Slide/Print	<i>A single jar in Site 28 located at the mountain ridge saddle near Ban Nakhuan Village. Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Nov/2015	Department of Heritage	Department of Heritage	Same as above	Yes
30	Slide/Print	<i>A jar in Site 52 at Ban Phakeo. Site 52 is a remote site with no facilities. Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	June/2016	Department of Heritage	Department of Heritage	Same as above	Yes
31	Slide/Print	<i>Jars groups in Site 52 at Ban Phakeo. Site 52 is a remote site with no facilities. Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Feb/2017	Department of Heritage	Department of Heritage	Same as above	Yes
32	Slide/Print	<i>Jars groups in Site 52 at Ban Phakeo. Site 52 is a remote site with no facilities. Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Nov/2015	Kamonrat Chayamarit	Department of Heritage	Same as above	Yes
33	Slide/Print	<i>Jars groups in Site 52 at Ban Phakeo. Site 52 is a remote site with no facilities. Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Jun/2016	Department of Heritage	Department of Heritage	Same as above	Yes
34	Slide/Print	<i>A decorated stone disk at Site 52, Ban Phakeo.</i>	Feb/2017	Department of Heritage	Department of Heritage	Same as above	Yes

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		<i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>					
35	Slide/Print	<i>A decorated stone disk at Site 52, Ban Phakeo.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Feb/2017	Department of Heritage	Department of Heritage	Same as above	Yes
36	Slide/Print	<i>Stone disks at Site 52 with knob and hole.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	11/Nov/2015	Department of Heritage	Department of Heritage	Same as above	Yes
37	Slide/Print	<i>A stone disc at Site 52.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	11/Nov/2015	Department of Heritage	Department of Heritage	Same as above	Yes
38	Slide/Print	<i>Well carved jars remaining in Site 52 at Ban Phakeo.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Feb/2017	Department of Heritage	Department of Heritage	Same as above	Yes
39	Slide/Print	<i>Well carved jars remaining in Site 52 at Ban Phakeo.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Feb/2017	Department of Heritage	Department of Heritage	Same as above	Yes
40	Slide/Print	<i>Jars groups in Site 52 at Ban Phakeo.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Feb/2017	Department of Heritage	Department of Heritage	Same as above	Yes
41	Slide/Print	<i>Jars groups in Site 52 at Ban Phakeo.</i>	Feb/2017	Department of	Department of	Same as above	Yes

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		<i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>		Heritage	Heritage		
42	Slide/Print	<i>A jar covered by vegetation in Site 52 at Ban Phakeo. Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Feb/2017	Department of Heritage	Department of Heritage	Same as above	Yes
43	Slide/Print	<i>A jar well carved in Site 52 at Ban Phakeo. Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Feb/2017	Department of Heritage	Department of Heritage	Same as above	Yes
44	Slide/Print	<i>A jar under the sun in Site 52 at Ban Phakeo. Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Feb/2017	Department of Heritage	Department of Heritage	Same as above	Yes
45	Slide/Print	<i>Part of jars groups in Site 42 in Phou Xang. The jars and discs have been carved out of fine red sandstone. Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Mar/2016	Department of Heritage	Department of Heritage	Same as above	Yes
46	Slide/Print	<i>Part of jars groups in Site 42 in Phou Xang. The jars and discs have been carved out of fine red sandstone. Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Mar/2016	Department of Heritage	Department of Heritage	Same as above	Yes
47	Slide/Print	<i>Part of jars groups in Site 42 in Phou Xang. The jars and discs have been</i>	Mar/2016	Department of Heritage	Department of Heritage	Same as above	Yes

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		<i>carved out of fine red sandstone</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>					
48	Slide/Print	<i>Part of jars groups in Site 42 in Phou Xang. The jars and discs have been carved out of fine red sandstone.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Mar/2016	Department of Heritage	Department of Heritage	Same as above	Yes
49	Slide/Print	<i>Unfinished carved jars at the quarry site in Site 21 at Ban Khangnongluang. Site 21 – Phoukeng is the largest recorded quarry site.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Nov/2015	Manithaphone Mahaxay	Department of Heritage	Same as above	Yes
50	Slide/Print	<i>Unfinished carved jars at the quarry site in Site 21 at Ban Khangnongluang. Site 21 – Phoukeng is the largest recorded quarry site.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Nov/2015	Kamonrat Chayamarit	Department of Heritage	Same as above	Yes
51	Slide/Print	<i>A well carved jar in Site 21 Phoukeng at Ban Khangnongluang.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Mar/2016	Department of Heritage	Department of Heritage	Same as above	Yes
52	Slide/Print	<i>An unfinished jar in Site 21 Phoukeng at Ban Khangnongluang. Site 21 is the</i>	Nov/2015	Kamonrat Chayamarit	Department of Heritage	Same as above	Yes

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		<i>largest recorded quarry site.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>					
53	Slide/Print	<i>All stone jars are carved out of solid rocks such as limestone.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Mar/2016	Department of Heritage	Department of Heritage	Same as above	Yes
54	Slide/Print	<i>Broken pieces of jar.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Mar/2016	Department of Heritage	Department of Heritage	Same as above	Yes
55	Slide/Print	<i>Some broken jars in Site 52 at Ban Phakeo.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Nov/2015	Department of Heritage	Department of Heritage	Same as above	Yes
56	Slide/Print	<i>Visitor Centre at Site 1.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Nov/2015	Department of Heritage	Department of Heritage	Same as above	Yes
57	Slide/Print	<i>Some parts of the exhibition at Visitor Centre at Site 1.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Nov/2015	Department of Heritage	Department of Heritage	Same as above	Yes
58	Slide/Print	<i>An old photo displayed at the exhibition at Visitor Centre at Site 1.</i> <i>Megalithic Jars Sites in Xieng Khuang –</i>	Nov/2015	Department of Heritage	Department of Heritage	Same as above	Yes

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		<i>Plain of Jars, Lao PDR</i>					
59	Slide/Print	<i>History of the Plain of Jars displayed at the exhibition at the Visitor Centre at Site 1.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Nov/2015	Department of Heritage	Department of Heritage	Same as above	Yes
60	Slide/Print	<i>The Theory of the Plain of Jars displayed at the exhibition at the Visitor Centre at Site 1.</i> <i>Megalithic Jars Sites in Xieng Khuang – Plain of Jars, Lao PDR</i>	Nov/2015	Department of Heritage	Department of Heritage	Same as above	Yes

7.B TEXTS RELATING TO PROTECTIVE DESIGNATION, COPIES OF PROPERTY MANAGEMENT PLANS OR DOCUMENTED MANAGEMENT SYSTEMS AND EXTRACTS OF OTHER PLANS RELEVANT TO THE PROPERTY

This section identifies and briefly describes a range of important texts relevant to the property. The texts are annexed, as noted.

The documented management system can be found in Volume 4, and includes some of the key documents below most relevant to management.

Law on National Heritage 2013

The Law governs the protection and management of the entire national heritage in Lao PDR. The Law has the provisions for the management, protection, conservation, maintenance and restoration of all the national cultural and historical heritage. Only available in Lao. See Annex L.2.

Decree of the President of the Lao PDR on the Preservation of Cultural, Historical and Natural Heritage 1997

The Decree outlines the regulations and measures for the management, conservation, preservation and use of the national heritage, including for the upgrading of movable and immovable assets with historical, cultural, or natural value into national heritage.

The Plain of Jars is mentioned in Article 6 under immovable national heritage. Article 6 identifies the heritage which may not be moved. The removal of jars from the site is thus strictly forbidden.

The Decree includes the clause that says national heritage management authority is assigned to the Ministry of Information and Culture, the Province, Municipality and Special Zone Information and Culture Services, the District Information and Culture Offices and Village Administrative Authorities. To ensure the efficient management, conservation and preservation of the national heritage, an agency may be established to provide consultations or opinions on such activities.

The Decree forbids the construction of buildings, restaurants or entertainment premises within the archaeological site of national value. MoICT may authorize exceptions. Archaeological investigation can only be undertaken with the permission and under the auspices of MoICT. All archaeological material belongs to the State. Accidental finds should be reported to the Department of Information, Culture and Tourism within three days; the finder will not be allowed to keep the objects, but will be appropriately compensated.

See Annex D.

Proposed Ministerial Decree, Order on the Protection of the Plain of Jars upon Inscription as a World Heritage Site

This proposed decree sets out the principles, regulations and mechanism of the National Committee for World Heritage, which has authorities and responsibilities in protecting and conserving the Plain of Jars World Heritage site after nomination and inscription of the

property as a World Heritage Site. See Annex L.3.

Provincial Governor’s Decree concerning the Management and Conservation of the Plain of Jars World Heritage Sites – No. 996

This is the main provincial decree regarding the sites. The decree:

- identifies the location and boundaries of the sites; and
- specifies measures and activities for the property area and buffer zones.

See Annex L.4.

Provincial Governor’s Decree, Safeguarding the Plain of Jars – Approval of the provincial budget, revenues from the ticket sales at the Plain of Jars sites – No. 995

Defines the provincial budget for the Plain of Jars based on ticket sales. See Annex L.5.

Department of ICT Decree, Establishment and Operations of Plain of Jars Heritage Technical Division – No. 870

This decree provides for the establishment and operations of the provincial Plain of Jars Heritage Technical Division, also known as the Plain of Jars Heritage Technical Division. It defines the location of the Division within the Department, its roles and responsibilities, structure, resourcing, principles and procedures. In particular, the decree defines in some detail the roles and responsibilities of the units within the Division.

See Annex L.6.

Decree on the Appointment of the Heritage Steering Committee in Xiengkhuang No. 208 dated 02/03/2016

The Decree defines the members of the Heritage Steering Committee being chaired by the Deputy Governor, and the roles and duties of the Committee to supervise on the protection, conservation of cultural, historical and natural heritage of Xiengkhuang. The Decree also assigns the Secretariat of the Committee and its duties and responsibilities. See Annex E.

Decree of Prime Minister on Appointment of Lao National Committee for World Heritage January 2017

The role of the Lao National Committee for the World Heritage for the implementation of the Megalithic Jar sites of Xiengkhuang Province – Plain of Jars is to supervise, follow up and monitor the management of the sites as well as to evaluate the performances, achievements, weaknesses, strengthens and challenges in supervising the management of the World Heritage sites in Lao PDR. See Annex F.

Decision of Minister President of Lao National Committee for World Heritage on Appointment of Lao National Secretariat Committee for World Heritage March 2017

The Secretariat of the Lao National Committee for World Heritage is to perform the tasks assigned by the Committee and to function effectively under the leadership of the Committee. See Annex G.

Prime Minister’s Decree on the roles and responsibilities of the Department of Heritage, MoICT 2017

The Decree will define the roles and responsibilities of the Department of Heritage in relation to the protection of the World Heritage sites including the Megalithic Jar Sites – Plain of Jars. See Annex H.

Heritage Impact Assessment Guidelines

Heritage Impact Assessment is a system designed to monitor and act on proposed development and infrastructure projects which may affect the Outstanding Universal Value of World Heritage Properties. The main objective of the Heritage Impact Assessment Guidelines in the case of the Megalithic Jar Sites of Xiengkhuang Province – Plain of Jars is to safeguard the property’s integrity. See Annex L.14.

7.C FORM AND DATE OF MOST RECENT RECORDS OR INVENTORY OF PROPERTY

A comprehensive site survey of 10 jars sites (Sites 2, 3, 8, 12, 21, 23, 25, 28, 42 and 52) was undertaken in June 2017 to collect data to enable an updated inventory to be prepared of key attributes – jars, disks and stones. This was undertaken by the Department of Heritage in coordination with the Department of Information, Culture and Tourism of Xiengkhuang Province and local authorities.

In the case of Site 1, this was surveyed in 2001 and an inventory prepared in 2003. This remains the most up to date inventory for this site.

Through this survey work, the existing or updated inventory includes key information on jars, disks and stones, including geo-coordinates of each. The inventory is maintained as a series of Excel files and a photographic database for each site.

Samples of survey forms used in the 2017 survey and the inventory are provided in Annex B. In addition, a sample of a jar catalogue is also provided, this being a product developed using the site inventory and photographic database.

The archaeological research work undertaken at Sites 1, 12 and 52 in 2016-17 by the Australian National University and University of Melbourne will also provide updated inventory data. However, this information has not yet been finalised by the research team and provided to the Department of Heritage. When it is available, the formal inventory held by the Department will be updated as appropriate.

7.D ADDRESS WHERE INVENTORY, RECORDS AND ARCHIVES ARE HELD

Copies of the inventory will be held at two offices.

Department of Information, Culture and Tourism, Xiengkhuang
Phonsavan
Xiengkhuang
Lao PDR

Department of Heritage
Ministry of Information, Culture and Tourism
PO Box 122 Sethathirath Road
Vientiane capital city
Lao PDR

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8.D OFFICIAL WEB ADDRESS

There is no current official website for the Plain of Jars.

9. SIGNATURE ON BEHALF OF THE STATE PARTY

Signed (on behalf of State Party)

Full Name

H.E Thongloun Sisoulith

Title

Prime Minister of Lao PDR

Date

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