

On The State of Conservation,
Site limits and buffer zones
Of The Libyan Cultural Heritage Sites































The State of Conservation, site limits and Buffer zones of Libyan Cultural Heritage Sites



## The Libyan Department of Antiquities

## STATE PARTY REPORT

The State of Conservation, site limits and buffer zones

Of

Libyan Cultural Heritage Sites

(The State of Libya)

For Submission by January 2018



## **Table of Contents**

STATE OF CONSERVATION	3
THE ARCHAEOLOGICAL SITE OF LEPTIS MAGNA	4
THE ARCHAEOLOGICAL SITE OF SABRATHA	10
THE ROCK-ART SITES OF TADRART ACACUS	14
THE OLD TOWN OF GHADAMÈS	18
BUFFER ZONES OF WORLD HERITAGE SITES AND TI USED TO DEFINE THE BORDERS OF THE ARCHAEOI	
World Heritage Site of Leptis Magna	23
World Heritage Site of Sabratha	23
World Heritage Site of Cyrene	24
World Heritage Site of Tadrart Acacus	24
World Heritage Site the town of Ghadamès	24
STRATEGY FOR THE PROTECTION OF WORLD HERI	TAGE SITES 26
DECOMMENDATIONS	20





Introduction:

This report is prepared based upon communications with the UNESCO World Heritage Centre, the Libyan delegation to UNESCO, and the recommendations of the Libyan delegation attending the 41<sup>st</sup> World Heritage Convention in Krakow (July 2017), and upon the Presidential Council decree no. 930 for the year 2017 concerning the formation of a committee to deal with the recommendations of the Libyan delegation at the above mentioned convention.

The report was prepared based on: field visits conducted by the Presidential Committee to the World Heritage Sites, the participation of local authorities and stakeholders, foreign archaeological missions working in Libya and local experts.

This report is an English summary of a detailed and comprehensive report prepared and submitted in Arabic to the UNESCO World Heritage Committee regarding the World Heritage Sites in Libya.

Attached file: containing Maps of Sites, limits and buffer zones





## State of Conservation of the Archaeological Site of Leptis Magna

The Department of Antiquities, Libya (DOA).

Libya

District of Khoms

**N** 32o 38' 17.48" **E** 14o 17' 25.65"

Date of Inscription: 1982

Criteria: (i)(ii)(iii)

**Ref:** 183

## **Executive Summary:**

This report provides an evaluation of the state of conservation of the archaeological site of Leptis Magna and addresses the questions posed by the WHC.

Leptis Magna is one of the most spectacular and unspoiled Roman ruins in the Mediterranean. It was founded by the Phoenicians and was later claimed by the Carthaginians. Its natural harbour, at the mouth of the Wadi Labdah, facilitated the city's growth as a major Mediterranean and trans-Saharan trade centre. It was also a market for agricultural production in the fertile coastland region.

Leptis Magna was enlarged and embellished by Septimius Severus, who was born there and later became emperor. Leptis' eventual decline was caused by increasing insecurity on the frontiers, culminating in a disastrous incursion by the Austuriani tribes in 360s, the later Vandal invasion in the fifth century CE, and the growing economic difficulties in the Roman Empire. After the Arab conquest of 642, the status of Leptis, as an urban centre, effectively ceased and it fell into ruin.

Despite the political, security and economic problems that the country has faced since 2011, which could be considered a threat to the archaeological site, there have been no cases of damage or serious violations. This is due to the measures taken by the Department of Antiquities in collaboration with Tourist Police and the locals. The Department of Antiquities Survey Unit makes regular visits to monitor the site and its historic environment. The lack of conservation and periodic maintenance, due to the lack of funding, has been the main cause of the deterioration at the site.

The site itself is fully accessible to the public. However, the museums have been closed and most of the contents stored in safe places away from the museums.

This report finds that the current state of conservation of the site is satisfactory but could be improved with the help of more funding and political stability.

Regarding the impact of human and other environmental threats, the situation of the site has improved in the last two years, due to an increase in the number of trained staff. We can confirm that the overgrowth of vegetation, animal grazing and vandalism has been reduced. As for sand drift and the unauthorized discharge of domestic waste water, we have been working with the local authority to solve these problems.





## Impact of human and environmental threats:

## • Vegetation management:

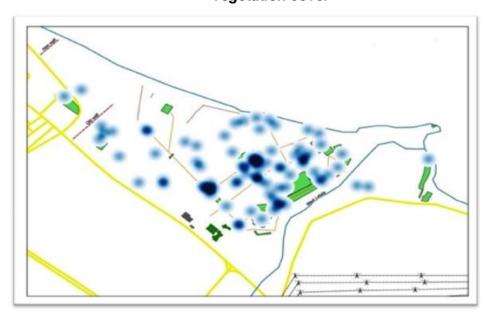
The vegetation was allowed to grow on unexcavated areas of the site in order to prevent soil erosion and to protect wild life. We would welcome the advice of experts in this field to manage this aspect of site maintenance in the future.

The site has some weed problem and weed risk but removing the vegetation needs to be balanced against the threat of soil erosion. Parts of the site have been obscured by the growth of tall shrubs. These shrubs and grass has been removed from time to time but not at regular intervals. Careful management of vegetation is needed to keep the site visible and safe. Funding is required.





Vegetation cover



Vegetation covers density (in blue colour)





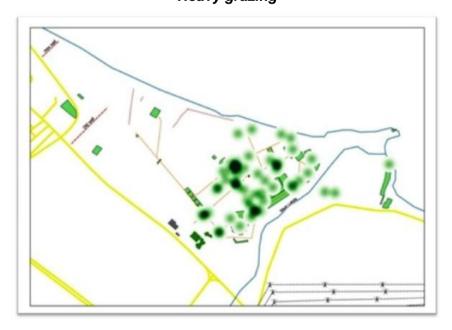
### • Grazing:

Grazing can be a useful tool for archaeological site management. It ensures, among other possible objectives, that a site remains visible and accessible at little net cost. However, heavy grazing can cause rapid changes to ground surfaces especially in winter and can damage surface features such as mosaics, paved surfaces and walls.

Grazing should be carried out for particular site management objectives, and strictly controlled. The site managers should be advised by experts in the best practice for this type of site maintenance.



Heavy grazing



Heavy grazing density in green colour)





#### Sand drift:

Sand drift is part of the story of Leptis Magna and, in fact, by the 10<sup>th</sup> century the city of Leptis Magna had been forgotten and was completely covered by sand. Shifting sands along the coast will gradually reclaim parts of the site if we do not clear it regularly. The Department of Antiquities is in a constant battle with the shifting sand especially in the area of the Hunting Baths and the harbour.

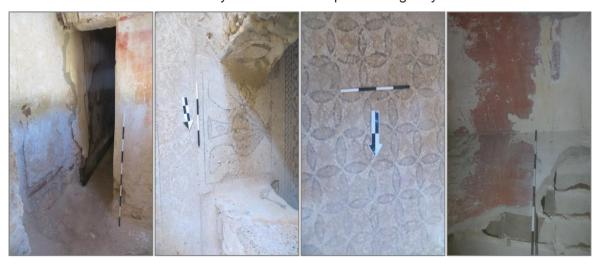
The lack of sand moving machinery has made it difficult to keep the problem under control.



Sand drift, the Hunting Baths

### Weather effects:

Leptis Magna is built from good quality hard limestone but it is vulnerable to accelerated weathering from physical, chemical, and biological forces. These are due to direct exposure to sunlight (temperature etc.), wind, rain, weather damage (moisture, wind, sand, acid rain, etc.), and salts. Without regular monitoring and conservation the deterioration will accelerate. An assessment by conservation experts is urgently needed.



Weather effects, in Leptis Magna





## Flooding of the Wadi Lebdah:

Since 1987 there have been no serious incidents of flooding of Wadi Lebdah. Impact of human activity: Recently the channel of Wadi Erassaf (west end of the city) which drains rainwater into the sea was polluted with an unauthorised discharge of domestic wastewater.



Domestic wastewater discharge West of Leptis Magna

## • Negative human impact

Damage caused by local vandals has included the defacing of monuments, graffiti and the lighting of fires. Increased security is needed for this site. This is particularly urgent because of the size of the site.



Damage in the Basilica



The State of Conservation, site limits and Buffer zones of Libyan Cultural Heritage Sites

Armed conflict:

Since the outbreak of the revolution in 2011 and the subsequent civil war the site has not suffer any damage as a result of armed conflict. It has been protected by the Department of Antiquities (DOA) employees, the local people and the Tourist Police.

## Protection and Conservation Measures.

## Archaeological survey and documentation.

- During the year of 2013 all the archaeological objects in the site stores were documented.
- May 2016 a DOA survey team conducted a survey and condition assessment of the exposed architectural elements within the site boundaries.
- During 2016 a DOA survey team documented and prepared an archive of photographs within the department of photography at Leptis Magna.
- September 2017 a DOA survey team conducted a survey and assessment work. The resulting report was submitted to DOA as proposal to define the site boundaries.
- November 2017 a DOA documented 2000 portable archaeological objects within the archaeological zone.

#### Conservation and maintenance works.

- During the first half of 2014 repairs took place in part of the Cardo which had collapsed due to a build-up of sand behind it.
- During 2014 a team of conservators completed the restoration of one of the doorways of the Cardo leading to the Punic market. They replaced the eroded sandstone with solid limestone blocks and fixed them using brass rods.
- During 2014 the stones used as measures in the Punic Market were restored and replaced in their original positions by a team of conservators.
- During 2016 part of the Decumanus and the Severan Forum were renovated.
- In 2017 the city's perimeter fence was renovated, the main streets thoroughly cleaned and the Hunting Baths were locked to prevent sand creeping into the building. A simple renovation was undertaken of the partial collapsed part of the Decumanus near the Oea Gate.

### Other work:

- In 2012 parts of the site had vegetation removed and were cleaned.
- The content of Classical, Mosaics Museums and the stores were moved to a more secure location.
- In 2016 the Flavian Temple was cleaned
- In 2017, the channel of the Wadi Labdah in the Flavian Temple area was cleaned and obstructions were removed in order to prevent future flooding.





## State of Conservation of the Archaeological Site of Sabratha The Department of Antiquities, Libya (DOA).

Libya

District of Zawia **N** 32° 48′ 18.63″ **E** 12° 29′ 05.90″

Date of Inscription: 1982

Criteria: (iii) Ref: 184

## **Executive Summary:**

The archaeological site of Sabratha is located on the Mediterranean coast about 70 km west of Tripoli. It began life as a Carthaginian trading post, and by the 4th century BC was an important terminus and port for trans-Saharan trade. The town suffered major damage from an earthquake (around 65-70 AD), providing the impetus for a complete Roman re-development. This was undertaken by Marcus Aurelius and his son Commodus, who took the opportunity to clear some remaining parts of the old Punic city to make way for imposing new public buildings.

The Roman monuments seen at the site today are from this period of Roman re-development which continued into the late 2nd century AD. Most of the Roman city was however destroyed by earthquakes in 306-10 AD and again in 365 AD, after which it was taken over by Byzantine Christians, and later occupied by Vandals. The magnificent Roman theatre, Sabratha's main monument and the largest such building in Africa, was excavated and re-built by Italian archaeologists in the 1930s.

On 21 September 2017 UNESCO was informed, by several sources, that military action was intensifying within and around the site. In view of this situation, the Director-General of UNESCO at the time, Irina Bokova, called on all parties to cease violence and ensure the protection of Libyan heritage. As a result of the conflict, the site suffered noticeable damage from the use of firearms within the historical area. The damage could be easily repaired once funds become available.

In October 2017 documentation and assessment work was carried out at Sabratha World Heritage Site. The assessment concluded that the site had been damaged by the use of weapons during the conflict that took place in the area during that summer.

The site is now fully protected by the Tourist Police and the DoA with the help of the local Authorities and civil society organisations.

The Museums are closed and their collections have been documented and made safe from external loss or damage.

Limited but regular first aid conservation has been carried out on various areas of the site especially mosaic floors. These had been exposed to damage due to maritime weather. The growth of vegetation on the site has been efficiently controlled in most areas of the site.

Monuments close to the sea are threatened by the encroachments of the sea and are in need of walls for protection.





## Impact of human and environmental threats

## • The impact of the sea ,high humidity and salt:

Due to the location of the city on the Mediterranean coast, and its fragile construction materials, the buildings of the city are exposed to erosion, fragmentation and cracking. This is particularly true for archaeological elements adjacent to the beach, such as the Sea Baths, the street of the oil presses and the Temple of Isis.



Erosion at the Temple of Isis (top) and the Theatre

#### Sand drift:

Sand drift is not a particular cause for concern. The beaches here are rocky and so there is not so much sand as at Leptis and the rocks help to prevent it encroaching on to the site.

#### • Vegetation management:

For large parts of the city, vegetation is not a major source of concern since the plants have shallow roots. However, in areas that contain mosaic floors (the Office Baths); plants are having a damaging effect, causing the mosaic floors to swell and fragment.



Vegetation threat to mosaic floors at the Office Baths





• Negative human impact and vandalism:

The city of Sabratha, like other cities and archaeological sites, is a destination for local visitors and tourists. As a result of this activity, there has been some damage caused by vandalism, such as writing on the walls of ancient buildings. Other damage has been caused by the movement of tourists in the site, in particular, walking on the mosaic floors and architectural elements.

## Urban expansion:

The southern and eastern parts of the site have been subject to urban expansion and construction. Local residents have claimed ownership of the land within the boundaries of the archaeological area. The DOA in collaboration with the local authority is currently dealing with this situation.

#### • Armed conflict:

In September 2017, some of the city's monuments suffered minor damage due to the use of weapons. Different calibre weapons caused damage to: the Theatre facade; the roof of storeroom for inscriptions, which collapsed. In addition to the accumulation of the remnants of the conflict close to the Temple of Liber Pater and Punic Mausoleum B, and some other architectural elements suffered minor bullet damage.





Armed conflict damage (left: Theatre, left: storeroom)



Remnants of the armed conflict

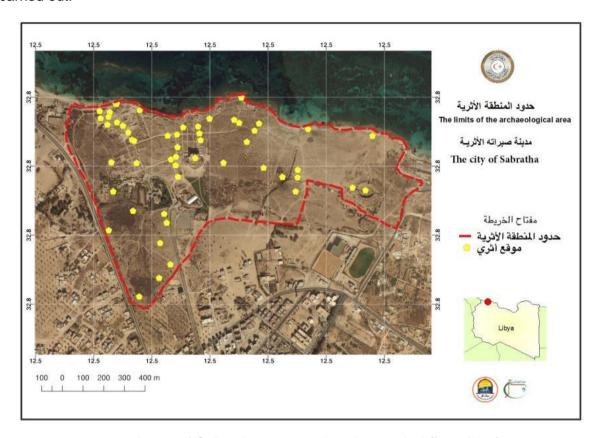


The State of Conservation, site limits and Buffer zones of Libyan Cultural Heritage Sites

### Protection and conservation measures.

Archaeological survey and documentation.

In October 2017: survey and recording of monuments damaged in the conflict were carried out.



Areas of Sabratha surveyed and recorded (in yellow)

### Conservation and maintenance work:

- January 2013: Vegetation was removed to reduce its impact on the architectural elements. Certain parts of the site were also cleaned. These areas include: the western area of the theatre; the Punic Mausoleum including the cleaning of mosaics pavements; the Byzantine gate and the Byzantine wall; the Roman ruins (from the Byzantine wall to the sea); the residential area adjacent to the main street. In addition an old metal fence which had surrounded the theatre was removed.
- June 2017: Maintenance and restoration work was carried out on the theatre including: the restoration of the front face of the theatre; the top floors (second and third); maintenance of the cracked roofs; replacement of the doors of the back rooms of the theatre (used as stores); painting of the wooden floor of the stage with wood oil; restoration of the interior walls which had been damaged by moisture.

#### Other work:

In 2015: the transportation to a secure storage facility of the content of the Classical and Punic Museums.





## State of Conservation of the Rock-Art Sites of Tadrart Acacus

The Department of Antiquities, Libya (DOA).



Fezzan

**N** 24° 53′ 43.57″ **E** 10° 27′ 35.13″

Date of Inscription: 1985

Criteria: (iii) Ref: 287

## **Executive Summary:**

On the borders of Tassili N'Ajjer in Algeria lies the Acacus mountain range where the rock-art sites of Tadrart Acacus reflect the way of life of different Saharan civilizations. It contains some of the world's greatest works of art. The rock art includes thousands of paintings and engravings that date back to 12,000 B.C. This incredible open-air gallery tells the story of the changes in the environment of the region and hence the wildlife and civilization over several millennia.

The oldest phase of the art belongs to the Wild Fauna period (10,000-6000 B.C.) and has large illustrations of animals such as giraffes, elephants, hippos, and rhinos. From the numerous phases of this art we have learned about the diverse cultural traditions, their ancient origins and their relationship to the landscape they inhabited.

## Impact of human and environmental threats:

Rock art is in peril because of development pressures, graffiti/vandalism, poor tourist management and natural impacts.

### • Natural impact:

The main agent in rock weathering is caused by cycles of wetting and drying which affects the salt within the stone, causes direct stone erosion and pigment loss from water flow, as well as humidity affecting the microclimate in caves.

### • Human-related impact:

Graffiti, vandalism, looting and theft. Direct damage has been caused to the rock art and rock surfaces by graffiti produced by vandals. In addition, thieves have both attempted to and succeeded in removing panels of the rock art. For example, some rock paintings were vandalized in 2009 by a Libyan former employee of a foreign tour company who sprayed over several paintings in retaliation for having been dismissed. In this incident, where black and silver spray-paint was used, 10 sites, in two different areas of Tadrart Acacus, were damaged. 5 of the sites were situated in the north- eastern edge of Acacus in the Awiss area and it is surroundings. The other 5 sites are located 40 km to south of that area, along the Wadi Senddar. The extent of the damage from acts of vandalism varied from one area to another. In some areas the damaged painting exceeded 95% of the total.



The State of Conservation, site limits and Buffer zones of Libyan Cultural Heritage Sites

The absence of effective management, lack of adequate security conditions, access difficulty and the vastness of the area on which the rock art is located, makes it difficult to manage and police.

## Table showing the results of inspection visit by DOA to the Acacus in summer 2017

No.	Site	Damage	
1	Jabal Adhad -جبل أضاد	Weather and sand erosion	
2	قهر ملة - Qahr Mleh	Defaced inscription	
3	Enqli - إنلقي	Some of them have been scrapped (partly), and many of these drawings have been weathered.	
4	Teen Lalan - ייַט עעני	Graffiti damage	
5	تين الشيخ - Tin Sheikh	Sprayed with silver colour paint, 80% of the engravings affected.	
6	تین تینا نیون- Teen Tina neon	Heavily sprayed with black paint, 90% of the engravings affected.	
7	Arch of Tin Lebeau - قوس تین لیبو	Weather and sand erosion	
8	1 أضو هن - Edho Hen1	Heavily disfigured (95%)	
9	2 أضو هن - Edho Hen1	Total disfiguration	
10	1 واد <i>ي</i> تاسبط - Tasbet Valley 1	No damage	
11	2 وادي تاسبط - Tasbet Valley 2	Heavily disfigured with two layers of paint spray one silver and one black (on the top). It was also affected by weather and sand erosion. 90% of the engravings have been affected. They are in need of urgent attention.	
12	تین تورها - Teen Torha	In excellent condition, but showing signs of weather and sand erosion	

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The State of Conservation, site limits and Buffer zones of Libyan Cultural Heritage Sites

## Examples of damage from some of the sites



Damage to the site of Enqli



Damage in the Teen Lalan



Damage to Tin Sheikh



Damage to Teen Tina neon



The State of Conservation, site limits and Buffer zones of Libyan Cultural Heritage Sites





Damage to Edho Hen1





Damage to Tasbet Valley

## Action taken

- Inspections to monitor changes.
- Restoration of fences around some of the sites.
- Establishment and maintenance of contact with civil society organizations active in Acacus area.





State of Conservation of the Old Town of Ghadamès

The Department of Antiquities, Libya (DOA).

Libya

**N** 30° 08′ 00.44″ **E** 09° 29′ 50.30″

Date of Inscription: 1986

Criteria: (v) Ref: 362

## **Executive Summary:**

Ghadamès, known as 'the pearl of the desert', stands in an oasis. It is one of the oldest pre-Saharan cities with evidence of occupation going back to the Paleolithic period.

In the year 19 BC, during the reign of Augustus Octavius, the Proconsul Cornelius Balbus invaded Ghadamès. Seven centuries later it was invaded by the Arabs.

According to historical records, the oasis attained high status as one of the busiest caravan trade centres in the Libyan Sahara, with caravan routes connecting it with the Fezzan, Sub-Saharan Africa, Algeria, Tunisia and the northern parts of Libya.

Its situation near a water source in the middle of a desert would have made it an important spot for anyone seeking to settle in the area. One of the main features of the old town is the fact that it is built entirely out of mud and is completely covered, except for small ventilation holes found at intervals along the streets.

Its domestic architecture is characterized by a vertical division of functions: the ground floor was used to store supplies; the next floor was for the family; above these were overhanging covered alleys creating a network of passageways; and, at the top, open-air terraces reserved for the women to move from one house to another and from one area to the other.

This design is well suited to the climate of the Sahara. The mud houses keep the houses cool in the summer and warm in the winter.

The walls of the old city are made of thick mud (mixed with straw), which has the ability to breathe through the natural microscopic cavities present in the clay structure.

During the country's 2011 revolution, the director general of UNESCO called on the Libyan authorities to protect Ghadamès.

The site is now safe and secure, thanks to the awareness of the citizens Ghadamès of their cultural heritage. The buildings in the old city are old and require constant maintenance.

There has been little research on the buildings in the old city of Ghadamès despite the importance of this cultural heritage.





## Impact of human and environmental threats:

#### Rain:

Eleven locations were damaged as a result of the heavy rain that hit the city during December 2017. The damage caused cracks and the collapse of parts of the walls of some houses, damage to the city's streets, and its public facilities. As a result of the way the city is constructed, these collapsed walls and the cracks that have appeared, will affect other buildings. It is expected that during summer months the rise in temperature will cause the walls, which had been saturated by the rain, to fragment and collapse.

No damage due to human activity has been reported. This is mainly due to the awareness of the inhabitants of Ghadamès of the historical and cultural importance of their city. Local residents contribute to the preservation and revival of their city.



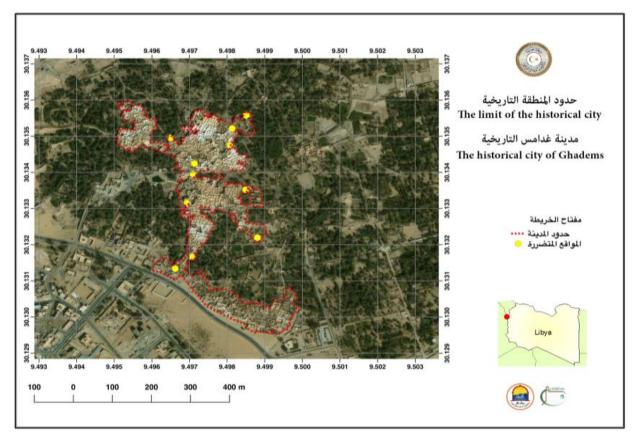
Examples of damage due to heavy rain in December 2017



The State of Conservation, site limits and Buffer zones of Libyan Cultural Heritage Sites

Protection and conservation measures.

- Archaeological survey and recording.
  - December 2017: The DOA conducted a survey and an assessment of the town in general. The town's major elements such as houses, alleys and public facilities are in good condition. Eleven sites were damaged due to heavy rainfall.



The locations in Ghadamès historical area which have been damaged (in yellow)

## Conservation and maintenance work

- In 2007 the city undertook maintenance and restoration work with the support of the Ministry of Tourism and the United Nations Development Programme (UNDP).
- The Development Board of the city of Ghadamès carried out maintenance and restoration work on a number of houses in the city during the period from 2010 to 2013. However, there has been no maintenance and restoration after this period due to a lack of support and funding.





Buffer zones of World Heritage sites

And the means of defining the archaeological borders.

## **Definition methodology**

The Libyan World Heritage Sites were inscribed between 1982 and 1986. Due to the absence of maps and documents concerning these sites, the World Heritage Committee recommended that the sites should be mapped and recorded according to a unified methodology. This was in order to define the limits of the sites and their buffer zones.

The methodology is desk-based initially and was followed by filed visits when possible (visits were conducted to Sabratha, Leptis Magna and Ghadamès). It involves collecting all information on the Libyan World Heritage Sites from available documents. These sources include aerial photographs, urban planning studies, and archaeological research. The sources are both from the Libyan state and foreign sources and include documents from universities that have conducted archaeological surveys and excavations, offices and branches of the Urban Planning Department and local and civil society.

By studying these documents, making comparisons, studying the boundaries of urban plans with the World Heritage Sites, and identifying protected areas under decisions adopted or proposed by the Libyan State, the general framework for demarcation has been established according to the following determinants:

- Preserving the exceptional Universal Outstanding Values of these sites.
- The known archaeological sites and monuments are well documented.
- Undiscovered or unexplored areas within the boundaries of the World Heritage Sites are to be protected
- The relationship between the urban area and the archaeological area are distinguished using documentation of planning appropriations, obligations and private property.
- Asserting the ownership by the Libyan state of the archaeological areas.

It is worth mentioning that there were discrepancies between the violations reported by UNISAT (2011-2016) and the finds of the committee preparing the site limits and the buffer zones (in 2017), as shown in the following table.



The State of Conservation, site limits and Buffer zones of Libyan Cultural Heritage Sites

New construction 2011-2016	World HS		
	Leptis Magna	Sabratha	Cyrene
Reported by UNISAT	580	620	1,839
Existing within the archaeological site boarder	0	2	25
Existing within the archaeological site buffer zone	85	31	1,729
Total existing violations	85	33	1,757*

<sup>\*58</sup> buildings exist within the urban master plan for the year 2000, which is not considered a violation accordingly



The State of Conservation, site limits and Buffer zones of Libyan Cultural Heritage Sites

## World Heritage Site of Leptis Magna

Following the review of the following studies and proposals:

- Urban planning studies (second planning period 1980 2000).
- Urban planning studies (3rd planning period 2006-2030).
- The proposal of the Department of Antiquities and the Engineering Advisory Office for Utilities (2010).
- Proposal of the Rome Tre University

And after conducting a field visit to the site with the local authorities of the municipality of al-Khoms; with the participation of researchers, specialists and expertise on the city; civil society, and with the support of the branch of the Department of Urban Planning in al-Khoms municipality, it was agreed to define the boundaries of the archaeological area and buffer zone as shown in the file for maps attached to this report, approved by the Department of Antiquities and the Urban Planning Authority.

## World Heritage Site of Sabratha

Following the review of the following studies and proposals:

- Urban planning studies (second planning period 1980 2000).
- Urban planning studies (3rd planning period 2006-2030).
- The proposal of the Department of Antiquities and the Engineering Advisory Office for Utilities (2010).
- The proposal of the Italian Universities of Macerata and Palermo.
- Local authorities proposal in Sabratha.

And after conducting a field visit to the site with the local authorities of the municipality and with the participation of researchers, specialists and expertise on the city; civil society, and with the support of the branch of the Department of Urban Planning in Sabratha, it was agreed to define the boundaries of the archaeological area and buffer zone as shown in the file for maps attached to this report, approved by the Department of Antiquities and the Urban Planning Authority.



The State of Conservation, site limits and Buffer zones of Libyan Cultural Heritage Sites

## World Heritage Site of Cyrene

Following the review of the following studies and proposals:

- Urban planning studies (second planning period 1980 2000).
- Urban planning studies (3rd planning period 2006-2030).
- Proposal submitted by the researcher Francois Sock (2005).
- The proposal of the Department of Antiquities and the Engineering Advisory Office for Utilities (2009).
- Proposal of the archaeological mission of Chieti University working in Cyrene.

Through the study of all the proposals and recommendations contained in the study of the archaeological mission of Chieti University, the definition of the boundaries of the archaeological area and its buffer zone, as shown in the map file attached to this report adopted by the Department of Antiquities and the Urban Planning Department.

## World Heritage Site of Tadrart Acacus

Considering the vast area of Tadrart Acacus, more than 5,000 km2, containing thousands of rock art sites from carvings and paintings, the consideration of declaring the area a National park (archaeological-natural reserve) is becoming more urgent than ever. In this regard, the DOA will rely on the studies prepared by the University of Rome I- Sapienza. Contact has been made with Professor Savino de Lernia, head of the archaeological Libyan-Italian Joint Mission in the Acacus, to arrange for a meeting in Tunis to discuss the protection of this region.

## World Heritage Site the town of Ghadamès

Following the review of the following studies and proposals:

- Urban planning studies (second planning period 1980 2000).
- Urban planning studies (3rd planning period 2006-2030).
- The Proposal of the Engineering Advisory Office for Utilities, and Cartier company (2009).

After conducting a field visit to the city of Ghadamès, with the municipality and the Development and Management Board of the city of Ghadamès; and with the participation of researchers and civil society, in addition to the Office of Urban Planning Ghadamès, it was agreed that the protection zone should be delineated, the proposal of the Engineering Consulting Office and the French Cartier Company was evaluated on the ground. It was found

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The State of Conservation, site limits and Buffer zones of Libyan Cultural Heritage Sites

that the protection area was maintained and adopted according to the map file attached to this report approved by the Department of Antiquities and the Urban Planning Department, which emphasizes the protection of the town of Ghadamès (central region, barrier and protection zones), where the area was divided into (4) main areas with (7) sub-areas each with specific rules allowing:

- Protecting the old town and the historical palm groves, to preserve its authenticity, while making it practical and easy to reach.
- Protecting the interesting scenery seen from the road to Ghadamès.
- Protect the interesting scenery seen from the road that passes in front of the Turkish castle and the wide road that runs parallel to the view of the old town.
- Protect the remaining three interesting scenes from the ring road towards the desert areas.
- Protection of archaeological remains (from the Roman era) which are currently located inside the new town.
- Building adequate facilities (hotels) for visitors that do not contradict the decoration of the old town.



The State of Conservation, site limits and Buffer zones of Libyan Cultural Heritage Sites

## Target Strategy for the Protection of World Heritage Sites

This strategy aims to protect the world heritage sites in the near and long term. It is currently in the process of implementation, based on Presidential Decree No. 1355/2017, to be implemented through the Engineering Consulting Office of utilities, ECOU under the supervision of the Department of Antiquities. Two hundred and thirty thousand (230,000) Libyan dinars are allocated for making the necessary studies and plans to fulfil this strategy which is based on the following eight (8) pillars:

### 1. Protection from human factors.

The purpose of this pillar is to limit human encroachment, including the preparation of precise detailed maps of the boundaries of the heritage properties and their buffer zones, preparation of a master plan and engineering design for the surveillance and electronic protection of heritage properties and their buffer zones, and fire fighting within the areas of heritage and buffer zones

In addition, to increase the efficiency and capability of the tourist police force charged with protecting and guarding heritage sites.

### 2. Protection from natural factors.

The aim of this pillar is to reduce the impact of natural factors through the implementation of projects related to the preparation of studies to manage the vegetation cover of heritage properties and to prepare the necessary studies to protect the sites near the coast from the effects of sand.

In addition, to the preparation of 3D views of the monuments and other archaeological features, the production of three-dimensional digital images to prepare maps and drawings necessary for the implementation of maintenance and restoration as well as the construction of a database for maintenance, restoration work, and documentation as a reference for the preparation of programs and plans for the periodic maintenance of heritage properties.

## 3. Tourism

The purpose of this pillar is to protect the world heritage sites by making them attractive sites for tourism. This will be through the implementation of projects set out in the general plan for the establishment of the necessary services and facilities, in the buffer zones, to create a tourism and cultural heritage industry as part of the protection of the sites. In addition, the preparation of green areas, within the heritage properties and their buffer zones, the preparation of a transport infrastructure to connect the areas of heritage property with the urban centres. In addition the preparation of a plan to revive region of the Acacus, in order to promote its protection and conservation. This will be achieved by the establishment of





sustainable development projects in the region. A series of lectures and seminars on World Heritage sites will be held to create awareness. The private sector will be involved in the management, operation and delivery of tourism services and advertising campaigns.

## 4. Attracting and developing human resources.

The purpose of this pillar is to protect the World Heritage Sites by providing specialized human resources through the following projects:

- Establishment, at the archaeological site of Leptis Magna, of a special training institute and the formation of professional teams to carry out restoration and maintenance work.
- Establishing training courses for existing human cadres to raise their level of competence and teach them new skills in their fields.

## 5. Strengthening infrastructure and environment.

The purpose of this pillar is to protect the world heritage sites, their infrastructure, their buffer zones and the environment by preparing studies, drawing up plans and implementing projects related to:

- Study the water supply situation; Develop a plan for the collection of rainwater, wastewater and recycling it;
- Develop a plan for lighting; Develop means of taking advantage of solar energy;
- Study the problem of garbage; and prepare a plan for the management of solid waste, and the like.

## 6. Recording and monitoring archaeological sites

The purpose of this pillar is to protect the World Heritage Sites by establishing a system for documenting, recording and monitoring heritage properties through the implementation of projects related to archaeological research, excavation and digital documentation of heritage properties.

## 7. Supporting the environment.

The aim of this pillar is to protect the World Heritage Sites by building a partnership between the public and private sectors and providing a sustainable environment, by amending certain laws, regulations and instructions on the protection of antiquities. To rehabilitate existing buildings, and obtaining financial support through media campaigns.



The State of Conservation, site limits and Buffer zones of Libyan Cultural Heritage Sites

#### 8. Administration.

The aim of this pillar is to develop medium and long-term, urgent, and follow-up programs, to update them periodically, to organize the work of the administration and to supervise the implementation of a policy for the various stages of the conservation of heritage properties.

## Recommendations

This report concludes with a number of recommendations that could contribute significantly to the implementation of strategic programs for the protection and preservation of heritage properties in the five World Heritage Sites.

These recommendations are:

- 1. To consider the data, information, photographs and maps contained in the report as an update of the data for the inscription of these sites on the World Heritage List.
- 2. To invite international organizations to provide technical and material assistance for the conservation and protection of World Heritage sites in Libya.
  - Assist in digital documentation and registration.
  - Assist in provision of technical and scientific advice, whether from experts (individuals) or institutions for the protection of heritage
  - Assist in provision of training for Libyan archaeologists in the preparation of scientific reports
  - Assist in provision of repair and maintenance materials, monitoring and monitoring devices
  - Support Libyan security personnel through training and rehabilitation programs related to aspects of protection and securing the sites.
  - Assist in the recovery of stolen antiquities and limiting illegal trafficking of Libyan antiquities.

The boundaries of the archaeological area and buffer zone maps are attached to this report,

End of report