



**WORKSHOP ON THE CONSERVATION AND
MANAGEMENT OF THE PROPOSED JEBEL OUEMAT
PROTECTED AREA (EGYPT, LIBYA AND SUDAN)**

Tripoli-Kufra-Jebel Ouenat, 27 March - 5 April 2004

Technical Report



May 2004

Funded by the Italian Ministry of Foreign Affairs



ACKNOWLEDGMENTS

The Heinrich-Barth Foundation has provided its scientific advice throughout the planning and implementation of the Workshop



The Libyan Department of Archaeology has covered part of the local costs and ensured the entire logistics for the sessions in Tripoli and the visit to Jebel Ouenat



The Workshop has been possible thanks to a financial contribution from the Italian Ministry of Foreign Affairs through a Trust-Fund with the World Heritage Centre of UNESCO



The World Heritage Centre wishes to express its deep thanks to the People's Committee for Tourism, to the Department of Archaeology, to the Shaabyat Al Kufrah and to the Permanent Delegation of the Libyan Arab Jamahiriya to UNESCO.

In particular, the World Heritage Centre wishes to express its thanks for their invaluable help to H.E. Dr. Mukhtar Elost, Ambassador and Permanent Delegate of the Libyan Arab Jamahiriya to UNESCO, to the Secretary for Tourism of the Libyan General People's Committee, H.E. Mr Amar Al-Mabrouk Al-Litaif, to the Libyan Department of Archaeology and all its staff and, specially, to the President of the Department of Archaeology, Dr Ali Emhmed Al-Khadouri, to the Director of the Museums, Dr Mohamed Fakroun, to the special advisor to the Department of Archaeology, Dr Giuma Anag and to Mr Mustafa Turjman of the Department of Archaeology.

Moreover, The World Heritage Centre wishes to express its gratitude for their hospitality and precious cooperation to Mr Abd Elraheem Hweesh, Secretary of the Secretariat for Housing and Utilities sector, Shaabyat Al Kufrah, to Colonel Salah Zarrouk, Military Governor of the area of Al-Kufrah and Mr Mohsen Youness Sultan, Department of Tourism, Al-Kufrah.

The World Heritage Centre wishes to warmly thank all the experts who have contributed the Workshop in their personal capacities.

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FOREWORD

The Convention for the Protection of the World Cultural and Natural Heritage, adopted by the General conference of UNESCO in 1972, is, with its 177 States parties, a unique international instrument for the safeguarding of the most important sites of our planet. Through the Convention, heritage properties deemed to be of “outstanding universal value” are inscribed, upon proposal by the countries where they are located, on a special register called the World Heritage List.

The World Heritage Committee, the inter-governmental body administering the Convention, has repeatedly stressed the need for a balanced and credible List, truly representative of the great variety and diversity of the world’s cultural and natural heritage. Currently, in fact, a number of significant stages and processes in human history, entire civilizations, cultural landscapes and natural phenomena particular of certain regions are not adequately represented on the World Heritage List, especially when the sites more characteristically embodying these civilizations are not “monumental”.

Among these less represented sites is certainly the desert landscape of the Sahara and the cultures that have developed in it over the millennia. This part of the world has played a crucial role, since the Lower Pleistocene, especially, during that particularly important phase, between 12,000 and 7,000 BP, when favourable climatic conditions enabled the development of the first African pastoral societies. At the end of this last sub-pluvial phase, around 7000 BP, the somewhat abrupt and severe desiccation of the Sahara and the consequent movements of people towards the more moist areas of the Nile Valley and the Sub-Saharan areas set in motion the processes which led the development of the Egyptian civilization and the great African migrations. The Sahara, however, remained an important crossroad of cultures through the establishment of several trading routes between the Sub-Saharan Africa and the Mediterranean, some of which exist and are still used to this day.

Of this extraordinary phase in human history are sometimes conserved a variety of physical testimonies, such as rock art, remains of settlements, burials and stations along caravan routes. At the same time, the landscape of the desert, with its exceptional natural characteristics and extreme environment, besides possessing an undisputed scenic beauty, remains as a testimony of the great achievements of humankind in his continuous struggle for adaptation and survival.

Because of its remoteness and fragility, however, this precious heritage is often endangered by a variety of threats, including the growing tourism business, poaching, oil and mine exploitation, etc. The lack of an adequate conservation policy for sites which sometimes lie thousands of kilometres from the capital cities and across the borders of two or more countries, only add to the challenge of preserving this extraordinary patrimony of humanity.

As one of the most prominent features of the Eastern Sahara, combining outstanding geological, ecological and archaeological values, the **Jebel Ouenat**, at the border between Egypt, Libya and Sudan, appears to embody the above-mentioned characteristics, both in terms of significance and conservation issues. The World Heritage Centre, acting upon the recommendation of a concerned individual, launched

therefore an initiative to mobilise the regional and international expertise and sensitize the three concerned countries on the need to further document and protect the exceptional heritage of Jebel Ouenat¹.

The most appropriate way of starting such an endeavour seemed to be the organization of a Planning Workshop, made possible through the financial support of the Italian Government and the generous hospitality and organization of the Libyan authorities.

The objectives of the Workshop, which lasted for one week and included a three-day visit to the site of Jebel Ouenat, were two-fold:

- Assessment of the values and conditions of the Jebel Ouenat; and
- Validation of the feasibility of a tri-national initiative for the development of appropriate protection mechanisms and the possible future nomination of the site for its inclusion, as a trans-boundary property among Egypt, Libya and Sudan, in the World Heritage List.

The present Technical Report, illustrating the findings of the Workshop, wishes to constitute the basis for future work leading to the effective protection of the Jebel Ouenat, its inclusion on the Tentative List of the three countries and possibly, when adequate protection measures are in place, the joint submission of the proposed Jebel Ouenat Protected Area as a trans-boundary site for inscription on the World Heritage List. Such "Proposed Protected Area", to be considered as tentative and subject to change, has been defined based on value and management considerations and is one of the outcome of the Workshop (see fig. 2, page 12).

It is important to mention that, for reasons independent from the will of the participants in the Workshop, it was not possible to visit the Egyptian Sector of the Jebel Ouenat. An inspection to this side of the Massif would be highly desirable and could provide important additional information to better understand and assess the cultural and natural values of the proposed Protected Area.

Important notice

The structure adopted for the report (including the identification of possible criteria of outstanding universal value from the *Operational Guidelines*) is approximately based on the format of the Nomination File for the inscription of a property on the World Heritage List. However, the Report should be seen at this early stage as a planning exercise where the conceptual framework of the World Heritage Convention has served as a methodological tool to provide a common terminology among the participants and ensure the application of appropriate scientific and conservation standards to the whole initiative. In this respect, the authors of this Report acknowledge that extensive further research and the development of a coherent and effective protection system, in close coordination among the three concerned countries, would be required before consideration can be given to an actual

¹ The name of this site, meaning "Mountain of the springs" in Arabic, has been written in English in several ways. For the purpose of the present Technical report, it has been decided to use OUEENAT following the spelling used by its first visitor and explorer in 1923, Hassanein Bey, who was Egyptian, educated in England and coming from Libya.

Nomination. The present Report as a whole should be understood as a scientific and technical document, which does not represent the official position of the three concerned countries or of UNESCO vis-à-vis the World Heritage present and possible future status of the Jebel Ouenat.

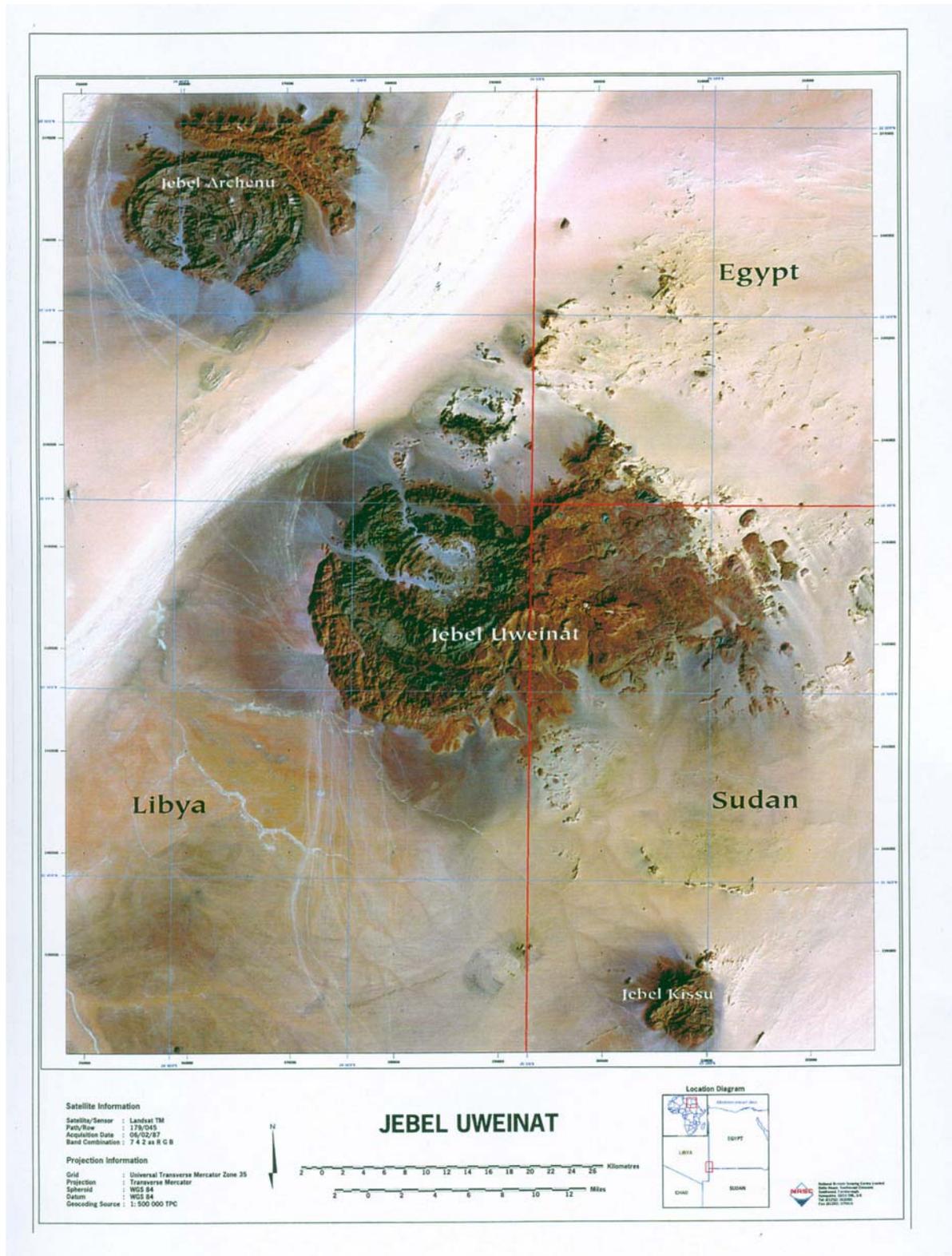


Fig.1. Satellite image of the Jebel Ouenat area. In red, the borders among Egypt, Libya and Sudan.

1. INTRODUCTION

The Report is divided into three sections dealing respectively with the description and significance of the site, the factors affecting its state of conservation and the protection system (current and proposed). Each section was initially drafted by a working group, and then discussed and amended in a plenary session with the rest of the participants.

A. Group One (Description and Significance of the Site) included Saad Abdulla Abu Hagar (Libya), Attia Radwan (Egypt), Frank Darius, Stefan Kröpelin, Rudolph Kuper (Heinrich Barth Institut) and Giovanni Boccardi (World Heritage Centre).

B. Group Two (Factors Affecting the Property) was constituted by Ibrahim Salhen Twhani (Libya), Savino di Lernia (University of Rome) and Mizuko Ugo (World Heritage Centre), while

C. Group Three (Protection of the Property) comprised Giuma Anag (Libya), Ahmed Salama (Egypt) and Thomas Sheppard (UK).

2. DESCRIPTION AND SIGNIFICANCE OF THE SITE

Although a significant amount of information on the natural and cultural features of the Jebel Ouenat is available from old travel accounts, scientific as well as tourist reports and ever more accurate satellite images, the participants agreed that the knowledge of the site is not yet sufficient to enable its comprehensive description.

The description, possible criteria of outstanding universal value and statement of significance provided below, therefore, must be intended as tentative and pending confirmation from further studies and the occurrence of more physical evidence on the ground.

Finally, it is important to recall that, due to administrative constraints, the participants in the Workshop were not able to visit the Egyptian side of the Jebel Ouenat area. An inspection of the Egyptian sector of the Jebel Ouenat is therefore strongly desirable to complete the information gathered by the mission.

2.1 Description of the property

Geography

Jebel Arkenu, Jebel Ouenat and Jebel Kissu – although “discovered” only in 1923 - are the most prominent and highest features of the entire Eastern Sahara, lying in the border zone of Libya, Egypt and Sudan. The northwest - southeast aligned mountains (and neighbouring less elevated structures) owe their existence to ancient plate-

tectonic movement and locally stable “hot spots”, which are melting spots below the lithosphere (mantle plumes), persistent for tens of millions of years (see fig.1, page 6).

Jebel Ouenat is located exactly on the junction of the border lines and stands out like an island from the surrounding plains. At the same time, it marks the centre of the Earth’s largest hyper-arid region. Geologically and morphologically, the mountain consists of two different parts. The western part, entirely lying on Libyan territory, includes the largest and best exposed of the so-called ring complexes, representing the eroded remnants of a large granite dome with a diameter of 24 km formed about 50 million years ago according to some sources. It essentially consists of rocks ranging in composition from granites to syenites. Weathering of these plutonic rocks resulted in the formation of gigantic boulder-like forms, tens of meters in diameter, that create the spectacular scenery of the western side of Jebel Ouenat. The inner parts being less resistant to erosion than the outer ones, the core of the ring complex has been exposed providing an amphitheatre-like landscape, and leading to the formation of the two major valleys, Karkur Idriss and Karkur Ibrahim, that are only divided by a small watershed from each other and that drain the interior towards the northwest.

The eastern part of Jebel Ouenat (named Hassanein plateau) lies on Sudanese and Egyptian territory, and consists of a large block of palaeozoic to mesozoic sandstone propped against the granite uplift to the west. It comprises the highest peak of the entire mountain reaching about 1930 m above sea level. Three minor plateaus superpose the main plateau, which in the south is limited by a huge vertical cliff dropping over 500 m. The plateau is dissected by several canyon-like valleys. The largest one, Karkur Talh, winds for some 25 km through the sandstone to finally open to the vast sandy plains flanking the mountain to the northeast. A shorter valley, Karkur Murr, drains the plateau to the south.

A most curious geological feature, strikingly figuring as a bright patch on satellite imagery, occurs on the less dissected part of the sandstone plateau. It is a deep circular depression with vertical cliff-like walls, about 350 metres in diameter and covered by sand. It is not clear yet whether it is an ancient impact crater. Research is also needed to investigate its bottom which is most promising as a unique sedimentary archive for palaeoclimatic studies.

The altitude of Jebel Ouenat attracts some precipitation from the clouds that occasionally reach this hypercontinental position. Even if decades may pass without rainfall - the last one was recorded in September 1998 -, it is sufficient to support the permanent springs at Ain Zueia and Ain Dua, the rock pool of Ain el Brins in Karkur Murr, and the vegetation and wildlife in the larger valleys.

Jebel Arkenu lies on Libyan territory, about 20 km to the northwest of Jebel Ouenat and beyond a large dune field called “Arkenu dune” that was formed between and aerodynamically diverted by the two mountains. The oval structure has a diameter of 25 km and resembles in several aspects to Jebel Ouenat, excepting its lesser altitude of about 1440 m a.s.l. The mountain also includes two geological and morphological units. Its more extended southwestern part consists of a ring complex that apparently is about 10 million years older than the one at Jebel Ouenat. The broken interior part, which also features the impressive giant rock scenery, is drained to the south by one major valley. The northeastern part is composed of strongly eroded remnants of

sandstone partly overlying the periphery of the granite dome. Much of this part of the mountain remains unsurveyed. Owing to its lesser height, the mountain attracts significantly less rainfall than Ouenat, resulting in only one impermanent spring at the head of the main valley and comparatively sparse vegetation.

Jebel Kissu is situated on Sudanese territory, 25 km to the southeast of Jebel Ouenat. Its steeply rising morphology with the peak reaching approx. 1730 m a.s.l. makes it a spectacular land mark recognized from far distances. Very little is known on the origin, age and structure of the mountain, which has remained one of the least explored sites of the entire Sahara to the present day. According to scarce geological observations, the spectrum of rocks is extremely varied.

Ecology

The area of the three mountains harbours 87 known phanerogamic plant species, which also marks it as a "hot spot" of biodiversity, regarding the highly impoverished flora of the surrounding extreme desert. The biotic richness is partly due to the diverse habitat conditions within this highly dissected massif, but also to its geographical position at the border line of contrasting floristic regions, showing influences of both the northern *Holarctis* and the African *Palaeotropis* from the south.

The prevailing ecological conditions are characterized, among others, by the extreme aridity and the harsh temperature regime. Rainfall, hardly exceeding 10 mm per year at the base level of the mountains, coming aseasonal, in irregular intervals and with very large inter-annual variability, imposes a severe stress to all organisms without access to permanent groundwater. In addition, although situated as far south as latitude 22°, there is a high risk of frost occurrence during wintertime, which limit the distribution of certain sensitive species of tropical origin. This is even more accentuated at higher altitudes, where the average temperature is several degrees lower and the temperature amplitudes are higher than in the surrounding plains.

The distribution of both, the life forms as well as the represented plant families within the flora, indicates the special adaptations to the prevailing climatic conditions. A high proportion of the flora belongs to the type "potential annuals", also called "plurisaisonnières", plants with a very variable life cycle depending on the available water resources. The Saharan element constitutes an important part within the flora and shows an increasing influence at higher altitudes. The link to the tropical African flora, however, dominates the vegetation of Jebel Ouenat, especially the East African element originating from the Somalia-Masai regional centre of endemism. The influence of the Mediterranean and the Irano-Turanian floras on the Jebel Ouenat flora is rather weak. In general, the species richness in relation to the area is by a factor three higher in Jebel Ouenat than in the Ennedi, a mountain range situated app. 600 km south of Ouenat already at the northern fringes of the Sahel.

The vegetation of Ouenat has been surveyed and classified into several communities or types depending on substrate, altitude and presence of open water. In contrast no detailed study has yet been carried through on the fauna, nor on ecosystem characteristics such as the food webs and plant-animal interactions in the region of Jebel Ouenat. It has been observed, however, that about half of the plant species are regularly browsed by animals, while many others show adaptations against herbivory

(spines, latex, etc.). A fairly high number of Gazelles (mainly *Gazella dorcas*) and Moufflons (*Ammotragus lervia*) have been noted in the late 1960ies.

The present state of these populations is unknown. Information on the productivity of desert plants, especially of shrubs and trees in extreme arid environments such as Jebel Ouenat, is lacking. Visualising the increasing pressure by human activities upon this region in the next future, research on that topic would expand our knowledge and could guarantee sustainable land use such as eco-tourism even under desert conditions. However, the available botanical evidences suggest that Jebel Ouenat has unique ecological and floristic features, which remained mostly intact and undisturbed by man until today.

Archaeology

In his book describing the first visit to Jebel Ouenat in 1923, Ahmed Hassanein Bey gives a detailed account on his discoveries of rock engravings, examples of which are also shown in photographs. Many of the later exploration reports from the area added considerably to the knowledge about prehistoric paintings and engravings in different parts of the mountain, but only two scientific monographs have been published so far: one presenting the results of the Frobenius-Expeditions of 1933/35 (Rhotert 1952), the other the documentation done during the Belgian mission of 1968-69 (Van Noten 1978). But still today evidence is growing, predominately from the upper regions of the mountain (mainly discovered by tourists and published in the internet) and confirming Jebel Ouenat's first rank among the art centres of Africa. In numbers, only by the Belgian mission more than 4000 pictures are mentioned, so the total number must be much higher.

Due to the different technical preconditions offered by the respective geological structures of the mountain, in its Western part only paintings occur, while in the Eastern sandstone region also engravings can be found. While paintings predominantly are preserved on the ceilings and walls of shelters built by spectacular granite boulders, engravings mainly occur on open rock surfaces. Pictures of hunting scenes and cattle are to be found as well as people with iron weapons. In opposition to this, paintings mainly seem to reflect the cattle period. Stylistic differences and the spectrum of themes are considerably wide. They range from naturalistic and schematic representations to geometric and symbolic figures, thus suggesting an extended range of time and people. The same is true for the topics depicted, representing impressive single figures besides vivid scenes of peaceful and antagonistic action, promising insight into the daily life of past societies as well as into their spiritual world. But most of the pictures are still awaiting detailed documentation as a base for statistical analysis and appropriate interpretation.

Concerning the chronological framework for the long lasting development of subsequent occupation phases - as to transfer from adjacent areas like the Gilf Kebir and suggested by the evidence from rock art, - spanning from early Holocene hunter gatherers over cattle herders and iron age people to caravan traders, an essential deficiency is marked by the lack of archaeological excavations carried out up to now. This includes the missing of archaeo-botanical, -zoological and -geological evidence necessary for reconstructing the respective environmental conditions that determined the human way of life. Archaeological remains, however, such as stone artefacts and

pottery, have been mentioned in several reports, (in the late 1930s competitions in collecting grinding stones are said to have taken place among British soldiers!) and meanwhile also from the upper regions prehistoric settlement structures have been recorded. During the present visit respective observations were quite scarce, because of the shortage of time and obviously also due to the fact that, near to the well known rock art sites, artefacts have already been looted and that on the wadi floors and in the foreland they are covered by sedimentation processes.

Area considered in this report

The area considered in this report takes into account the common or partly supplementary geological history of the three mountains Arkenu, Ouenat and Kissu and also the role that the surrounding plains will have played for the presumably semi-nomadic people who created the rock art. Chapter 2 and 3 below, which define the potential outstanding universal value and the factors affecting the state of conservation of the site, provide the rational for the delimitation of the perimeter of a proposed "Protected Area". The area in question measures ca. 100 x 90 kilometres and is situated between N 21°30' and 22°25' and E 24°30' and 25°20'. Out of the total area of 9,000 square kilometres, 5,400 km² fall to the share of Libya, 1,964 km² of Sudan and 1,636 km² of Egypt (see fig.2, page 12).

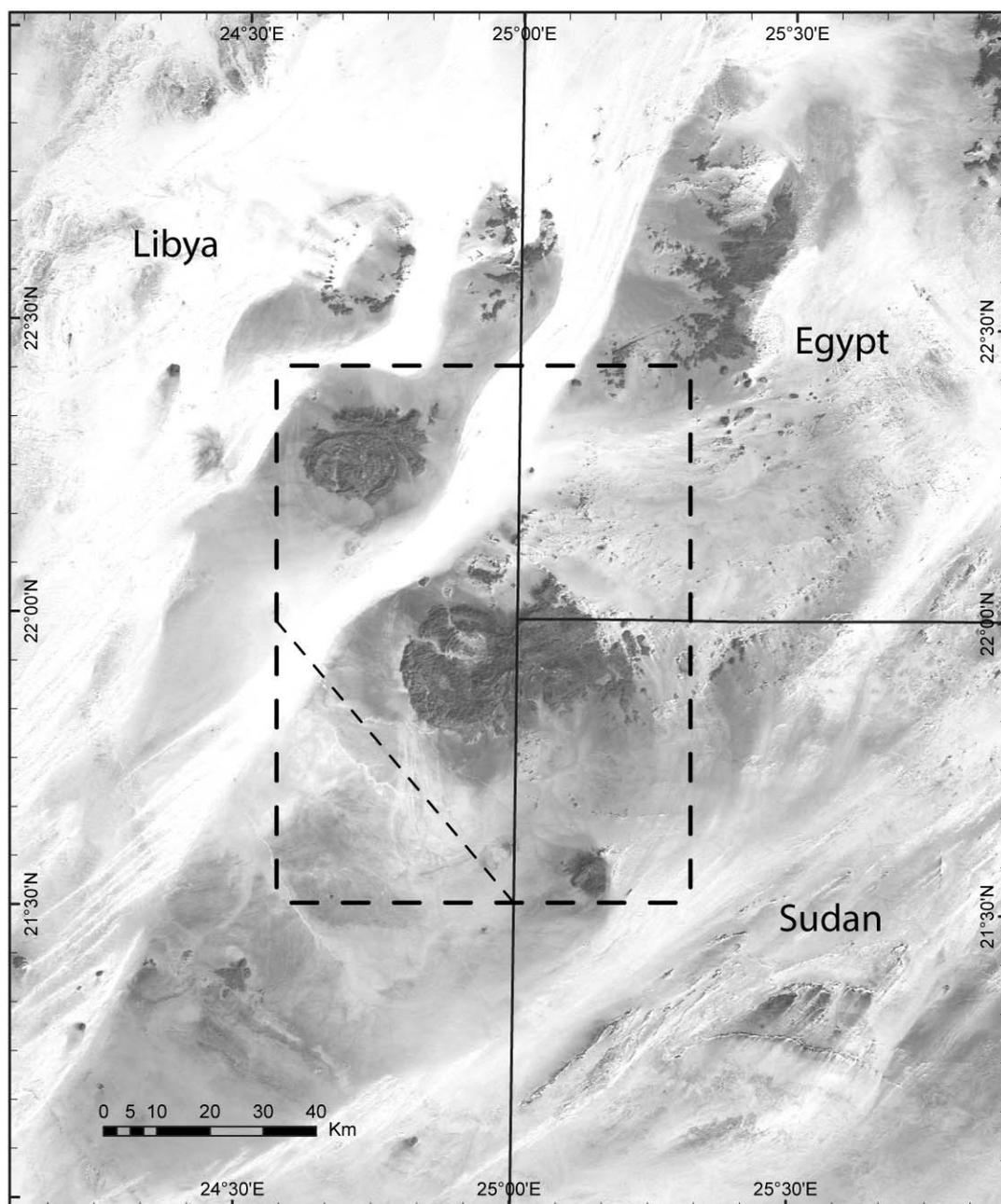


Fig.2. The Jebel Ouenat Proposed Protected Area.

2.2 Potential World Heritage criteria that might apply to the property and why

As explained above, the participants used the criteria for Outstanding Universal Value set in the *Operational Guidelines for the Implementation of the Convention* as a conceptual and scientific framework to identify and assess the cultural and natural heritage values of the Jebel Ouenat. Through the process of selecting and justifying the use of certain criteria, it was also possible to determine the perimeter of a possible protected area.

After visiting the site and based on the knowledge of its heritage, the participants agreed that the following criteria could, pending confirmation from further studies and research, be retained for a possible future Nomination for inscription on the World Heritage List, or at least for preparing and submitting to the World Heritage Centre a Tentative List application from the three countries. The selected criteria are:

Criterion (iii)

The Jebel Ouenat bears an exceptional testimony to a civilisation, which has disappeared, with particular reference to the very numerous rock art sites representing African cattle pastoralism, displayed through a particularly rich concentration and variety of styles. Following the actual state of prehistoric research, cattle pastoralism, still today the most important subsistence strategy in the arid parts of Africa (making up 40 % of the continent's surface), has developed from the area that is now the Eastern Sahara. The different stages of this development – from cattle domestication to complex structured pastoral societies and their withdrawal from the area – are yet only poorly understood.

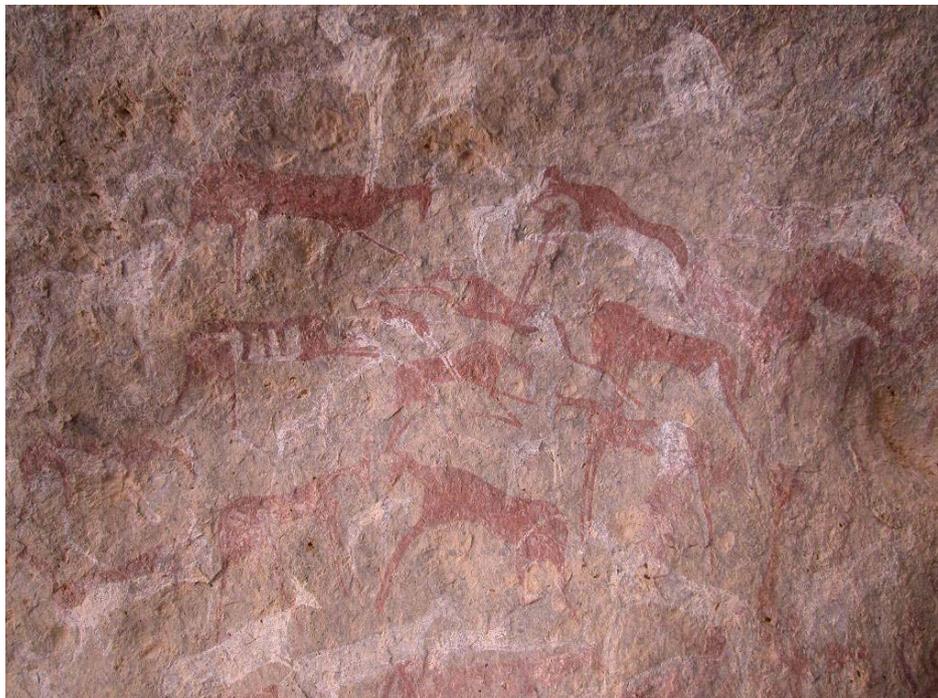


Fig.3. Rock art painting representing cattle.

These cattle herders would preferably have exploited the great plains surrounding the Ouenat massif on whose permanent water resources they became increasingly dependent when rains decreased. While outside the mountain their traces are hardly detectable, the inner rock surfaces, used by these cattle herders for artistic expression, today are a unique source of information about their life. Among the rich ethnographical details provided by the pictures are, for instance, the artificial deformation of cattle horns, that has already been described by Herodotus as practised by the Garamantes in Libya and is shown by Nubian cattle in ancient Egyptian wall paintings as well as still in use among Nuer tribes in Southern Sudan. Ouenat has also poor and schematic engravings of camels, which point out to the occasional stop in the area, by camel herders and caravans as the desiccation of The Sahara reached a point, which finally, isolated this area. More recent graffiti also exist, one of which dating from the first half of the 20 century testifies to the arrival of the first automobiles to the area (see fig.3, page 13).

Criterion (iv)

The Jebel Ouenat *is an outstanding example of a type of landscape, which illustrates significant stages in human history.*

Owing to its exceptional geographical position as an ecologically favoured niche in one of the most arid parts of the world, the Jebel Ouenat attracted human occupation of the Eastern Sahara through the whole Pleistocene up to the present. Unlike other parts of the Eastern Sahara, where settlement was limited to perhaps 5000 years, the Jebel Ouenat might mirror the whole sequence of human adaptation to arid environments and the different stages of hunting to cattle keeping and finally caravan traffic. The use of this criterion is supported by analogous evidence from adjacent areas but subject to confirmation of physical evidence of human settlements, production activities, burials etc. in the Ouenat region itself (see statement of integrity below).

Criterion (v)

The Jebel Ouenat *is an outstanding example of a traditional human land use, which is representative of cultures especially when it has become vulnerable under the impact of irreversible change.*

The Jebel Ouenat, as the only point of water in a radius of several hundreds of kilometres, has been for millennia a haven for hunters and breeders, a station along desert routes and a meeting point of different cultures. The characteristics and resources that enabled this use of the landscape are still present today: prominent landmark in the desert and shelter for travellers, permanent water, fauna, camel food and fire wood. Indeed, caravans of travellers and traders are still making camp at Jebel Ouenat, today like thousands of years ago, hunters are still killing the gazelles and Waddan “Barbary Sheep” (*Ammotargus lervia*) like the ancient authors of the rock drawings (also following them in leaving their messages on the rocks) and people, including tourists, are still coming from afar attracted by the favourable conditions of the Jebel Ouenat. Such a traditional use over the millennia is threatened today by an incompatible and excessive exploitation, especially as a consequence of military and long distance motor traffic and tourism. Its conservation will depend on

the safeguarding and careful management of the fragile resources of Jebel Ouenat (water, fauna, environment in general) (see fig.4, page 15).

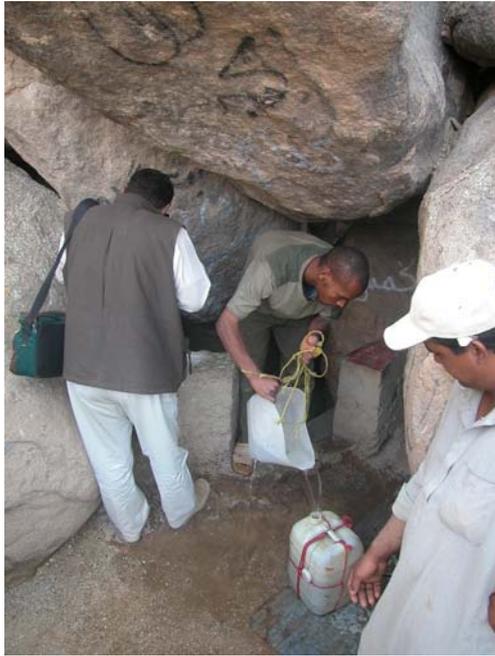


Fig.4. The water spring in Ain Dua.

Criterion (vii)

The Jebel Ouenat contains superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance. These phenomena include being a prominent feature (nearly 2000 m of altitude above the sea level) emerging abruptly like an island from a very large flat extension (hence the scientific name of “inselberg”), featuring picturesque arranged mountain chains, with very peculiarly shaped huge granite boulders, as well as steep high cliffs with bizarre dilapidated sandstone formations. In front of this cyclopean scenery the scarce but expressively contrasting vegetation generates pictures of rare fascination. In addition Jebel Ouenat provides the unique opportunity to enter a plutonic rim formation cutting its successive rings through a wadi and observe this characteristic geological formation from its centre, as in the middle of a giant natural amphitheatre. The extraordinary landscape created by the superimposed granite boulders, moreover, provided a perfect shelter to the ancient inhabitants of the Jebel Ouenat and an ideal surface for their artistic expression (see fig.5, page 16).



Fig.5. Entering the plutonic rim formation through one of the wadis.

Criterion (viii)

The Jebel Ouenat *is an outstanding example of the development of landforms and significant geomorphic features*. Besides being a unique water point in a huge desert area and the highest elevation in eastern Sahara at the centre of a large flat area (i.e. an exceptional landform), the weathering process of the plutonic rocks (granites) created gigantic rock boulders, which are a very rare geomorphic feature. In addition, particular erosion phenomena facilitate access to the core of the rim complex, thus exposing the last remains of ancient land surface in this region. Finally, the three Jebels (Arkenu, Ouenat and Kissu) have been formed by successive hot-spots “bubbles” which, because of their relative distance, provide an insight on the phenomenon of the slow but continuous drifting of the continental plate over hundreds of millions of years (see fig.6, page 17).



Fig.6. The gigantic rock boulders.

Criterion (ix)

The Jebel Ouenat is an outstanding example representing significant ongoing ecological and biological processes in the evolution and development of terrestrial ecosystems and communities of plants and animals.

Due to the isolation of the massif in the Eastern Saharan context, the biocoenoses of Jebel Ouenat might exhibit, pending confirmation from further research, special ecological adaptation on an infra-specific as well as ecosystem level. The use of this criterion must be substantiated by evidence and requires further research.

Criterion (x)

The Jebel Ouenat contains a significant habitat for the in-situ conservation of biological diversity, including threatened species of outstanding value. The presence of the Barbary sheep is attested in the area of the Jebel Ouenat. This is a threatened species endemic to the Sahara but almost extinct elsewhere. The Jebel Ouenat provides a unique possibility for the conservation of this particular species, as well as of others that might still exist or could be reintroduced. Moreover, compared to other Saharan massifs the Jebel Ouenat displays a particularly high density of plant species per area (see Fig. 7, page 18).



Fig.7. The Barbary sheep.

2.3 Proposed statement of significance

The Jebel Ouenat constitutes a prominent landmark emerging abruptly from the vast plains of the Libyan Desert, one of the most arid regions in the world, justifying the use of the scientific term “*inselberg*”. Owing to the special environment created by its outstanding natural features, it has enabled, over the millennia, the development of specific and exceptional ecological and cultural phenomena.

The site includes the highest point in the Eastern Sahara and thus provided favourable ecological conditions during past phases of climatic history up to present day’s hyper aridity, witnessed by the continuous presence of a rich fauna almost extinct elsewhere. The permanent availability of water attracted human occupation since prehistoric times, and still does up to this day. This ancient occupation is reflected by rich archaeological evidence, especially by a wealth of rock paintings and engravings, testifying to the development of pastoral society in Africa and to cultural exchanges among different areas of the Eastern Sahara. The rock paintings and engravings are performed with outstanding artistic skills and variety and provide an exceptional insight into the daily life of prehistoric communities as well as into their spiritual world (criterion iii). From the historical and anthropological viewpoints, the importance of the Jebel Ouenat lies in the fact that it sheds light on different stages of human adaptation to arid or semiarid environments. This started with the re-occupation of the Eastern Sahara during the 9th millennium BP up to the new spread of the desert after 7000 BP, when people were expelled by the drought and paid their contribution to the cultural history of the adjoining areas, especially to the rise of the Pharaonic civilisation in the Nile valley. After 7000 BP, the Jebel Ouenat gradually turned into an ecological niche, due to the humidity caught by its elevations. In this isolated environment, ancient cultural habits and special types of flora and fauna continued to exist for thousand of years long after they had disappeared from the surrounding desert areas (criterion iv).

Till today, however, the springs, vegetation and animal resources of Jebel Ouenat (*ouenat* meaning “Springs” in Arabic) continue to provide for the needs of large caravans, hunters, military and other groups (including the tourists), attracted by this haven of life in the middle of a huge, dead, flat extension (criterion v).

The unique aesthetic quality of the property, moreover, provided by its superlative landscape and natural features, would justify the use of criterion vii. Criterion viii has been considered in relation to the extraordinary geological formations, including the "hot spots" phenomenon, the gigantic rock boulders and eroded circular rims. Criterion ix might be relevant, pending confirmation of the existence of specialised ecosystems developed in isolation within Jebel Ouenat, while criterion x refers to the presence of a variety of animal species almost extinct elsewhere, such as the Barbary Sheep, which could be protected in the area under the appropriate conditions.

The above-mentioned cultural values are represented at Jebel Ouenat in an authentic way, despite a growing pressure from development of tourism and other uses. The area taken into consideration is also sufficiently large to ensure the full representation of the phenomena that carry the natural heritage values, thus providing for the integrity of the property.

It should be stressed, however, that further research will be necessary to substantiate these statements and confirm the alleged outstanding universal value of the site, particularly as regards the archaeological evidence of human occupation and the various aspects of the ecosystem. From the results of such research and documentation, the statement of significance might be revised, together with the perimeter of the area subject of the present report.

2.4 Comparative analysis with similar sites

A detailed and exhaustive comparative analysis would require a substantial study. From the preliminary observation, with regard to its geological structure, its environmental conditions and its geographical position as an extremely isolated, sharply defined granite *inselberg* within the vast plains of the eastern Selima Sandsheet, Jebel Ouenat has no comparison all over the Sahara. By the mentioned criteria it is clearly distinct from other, comparable regions like the Gilf Kebir in Egypt or more distant mountain areas such as Ennedi in Chad or Acacus in Western Libya. The only appropriate analogy is provided on the southern hemisphere by the Brandberg in Namibia. Situated at the fringes of the Namibian Desert, the Brandberg houses thousands of rock paintings and provides an environment similar to that which might have prevailed in Jebel Ouenat 5,000 to 4,000 years ago.

When trying to compare Jebel Ouenat with other similar sites, its rock art clearly comprises a broader spectrum of styles and themes and obviously also a greater depth of time than e.g. its nearest neighbour to the South, Ennedi mountains. But also when compared to the most celebrated highlights among Saharan rock art sites in the Tassili and Acacus mountains, with regard to originality of styles, the diversity of topics and the variety of techniques adopted Jebel Ouenat maintains its outstanding character (see fig. 8 & 9, page 20).



Fig.8. Giraffes, ostriches and other animals in a rock art carving.

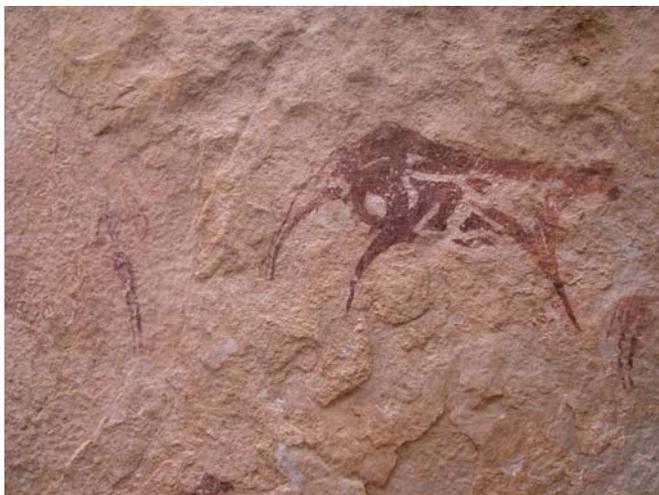


Fig.9. Rock art painting representing a hunter.

2.5 Statements of authenticity and/or integrity

Authenticity

Concerning the use of criterion (iii), the rock art sites (thousands have been recorded, according to some sources, but their state of conservation was not assessed) appear to suffer from deterioration, but still retain their authenticity in that they truthfully represent the ways of life and spiritual perceptions of the original civilizations that

produced them. Some vandalism and deterioration has occurred but so far has not significantly compromised the overall significance of the site.

For criterion (iv), a statement of authenticity will be possible only after a comprehensive survey and analysis of the site has provided its results (see also Statement of Integrity below).

Concerning the traditional use of the land (criterion (v)), we argue that this is still authentic (although at risk of losing this authenticity) in that the site has maintained its ancient function of station along desert routes, place of rest and refuge for an endangered flora and fauna, and hunting reserve, which characterised Jebel Ouenat over several millennia. The use of this criterion in a future possible Nomination would require as a precondition the implementation of very strong conservation and management provisions at the site.

Integrity

Criterion (iv) refers to Jebel Ouenat as an outstanding example of a type of (cultural) landscape, illustrating significant stages in human history. In that respect, the condition of integrity could best be met by archaeological evidence of the complete range of activities taking place in this landscape (that, however, also elsewhere are to be found only rarely all together: habitations, use of resources, rituals etc.). Concerning cultural remains other than rock art (settlement remains such as pottery, stone artefacts, bones, habitats, burials), however, these are expected to be still present, but in the areas visited during the workshop would be most probably hidden by the sediments caused by floods or could have been destroyed. Well-preserved sites might be expected under rock shelters or in the upper parts of the mountain. Further extensive research, however, would be needed to confirm their full extent and integrity.

Concerning criteria from (vii) to (x), the Jebel Ouenat alone is fully representative of most of the natural characters and processes described (i.e. the *inselberg* feature, granite rock boulders, rim formation etc.). The sequence of the three hot-spots, and especially the importance of the plains among the three Jebels for the development of the specific ecosystem of the area, however, require the inclusion of Jebel Arkenu and Kissu to the proposed Protected Area. From the point of view of the cultural significance, moreover, further research might provide additional information on the specific relation among the three Jebels (Arkenu, Ouenat, Kissu), which may complete our knowledge of ancient life systems and habits. For this reason, the proposed Protected Area includes the three Jebels and the adjacent plains. The final and detailed delineation of the most appropriate boundaries of the Protected area would require more research and studies.

The Gilf El-Kebir (Egypt), inserted by Egypt in its Tentative List, was not included in the proposed Jebel Ouenat Protected Area, as it would seem to have different characteristics, especially from the natural heritage perspective and, due to its distance and size, would constitute a considerable challenge from the management point of view. However, taking into account its importance, the participants in the Workshop strongly recommended that it be also declared a Protected Area in its own right, as suggested by the Egyptian National Commission for UNESCO, and be the subject of extensive further research in view of its future nomination for inclusion on the World Heritage List. If additional research demonstrated that the Gilf El-Kebir and the Jebel Ouenat were complementary in providing an understanding of the specific patterns of

human occupation in the area, including trading routes, movements of people and other cultural links, it would be always possible to envisage the extension of a future potential Jebel Ouenat World Heritage property to include also the Gilf El-Kebir.

2.6 Potential benefits from the conservation of the Jebel Ouenat Area

The Jebel Ouenat constitutes a precious resource for the sustainable development of the communities living near the site, and in general for the three concerned countries. Among the potential benefits that the site might provide if appropriately conserved there are:

- A resource for the development of research into the interrelation between Humankind and the Environment;
- An opportunity for the conservation of biodiversity and endangered species;
- A socio-economic resource for the sustainable development of regional communities (especially from eco-tourism);
- An important material testimony to raise awareness among regional communities and the concerned countries in general of shared cultural roots and identity;
- A tool for enhancing cooperation among the three neighbouring States.
- The appreciation of its natural beauty and rock art by present and future generations.

3. FACTORS AFFECTING THE PROPERTY

3.1 Present state of conservation

As already mentioned, the scarce knowledge of the property, e.g. environmental, archaeological and ethnographic (i.e. communities living there in a recent past) does not allow a comprehensive and reliable evaluation of its state of conservation. A complete assessment should be therefore undertaken through a proper survey.

From a preliminary observation, however, it would appear that the state of conservation of the cultural and natural heritage of the Jebel Ouenat area gives rise to some concerns. The over-exploitation of some natural resources, some incompatible uses and the lack of any management and conservation policy seem to pose a serious threat to the long-term safeguarding of the local landscape, fauna, flora and cultural features. On the environmental side, geo-dynamic processes (floods, erosion, evaporation etc.) have taken their toll on the remains of rock art, as well as of settlements, funerary sites and other archaeological record.

During the visit to the site, the participants of the Workshop had the opportunity to identify a number of active factors affecting the state of conservation of the Jebel Ouenat, and which should be certainly taken in consideration when preparing a Management Plan. For the purpose of this report, they have been divided according to their origin, natural and man-made.

3.2 Factors affecting the property

Environmental pressure

Wind erosion. Desert landscapes are actually shaped by wind activity. The archaeological record, specially rock art, is partially affected by this process. Paintings show micro-traces of desquamation and exfoliation, which can increase the general deterioration processes affecting the property, up to creation of cracking and loss of the painted surface.

Rainfall. Paradoxically, the very rare, erratic rainfall might have important negative effects on the state of conservation of the site. High energy flash floods have been recorded in the recent past, which seriously affected natural and cultural heritage, and over the millennia must be held responsible for the very little evidence of settlement remains visible on the ground. Paintings located on the lower side of horizontal rock shelters, and particularly those which are close to the contour line where rain water drips, severely suffer from the effects of multiple cycles of drainage and evaporation over the centuries, eventually leading to the detachment of the rock surface.

Biological activity. Nests of hymenoptera (insects) were observed on the rock surface depicting Paleo-art panels. These insects inflict heavy damages on the paintings and engravings, while accelerating other forms of deterioration (see fig.10, page 24).



Fig.10. Deteriorated rock art painting.

Another natural phenomenon with potential adverse impact on the site is the widespread parasite attack on the *Acacia* trees, especially in Karkur Talh (Sudan). The plants are heavily infested probably by a scale insect (*Coccidae* or *Pseudococcidae*, *Homoptera*), which thrives on the plant sap, thereby producing a large amount of honey dew. This can damage the infected trees and will eventually pose a threat to the whole *Acacia* population of Jebel Ouenat. Fortunately there are indications that an antagonist species (cf. *Rodolia cardinalis*) has reached the mountain, which can control the out-break of the parasite on the long run. In any case, as this is a new phenomenon to Ouenat, the interaction between plant and animal species should be monitored carefully.

Man-made factors

Various groups use the area of Jebel Ouenat. As a border post, Ouenat has a small, continuous but rotating short term population of police, security and army personnel, estimated at around 20-30 persons at any given time. Large caravans and regular heavy trucks from Dongola, and El Fasher also stop at the site, which is the only source of water in hundreds of kilometres. Occasional tourists in 4x4s visit mostly from Egypt (Dakhla) and Libya (Kufra). Finally, locals still hunt the gazelle and Barbary sheep and collect medicinal plants in the *wadis*. No permanent population has been recorded at Jebel Ouenat since the 1930s.

Most man-made factors affecting the state of conservation of Jebel Ouenat are caused by a lack of awareness of the importance of its heritage or the need to protect it, aggravated by the current lack of any legal protection or safeguarding policy. This is apparent among military and customs officers, as well as drivers of trucks and tourist cars. Tourists, moreover, are often not aware of the damage that they can cause to the fragile remains of ancient civilizations by driving on archaeological sites, collecting or simply moving artefacts, wetting rock art etc. In particular, the following are some of the most common activities which have a negative impact on the heritage resources of the site.

Vandalism. This includes writing, scraping, breaking of the rock art. The main concern is from visits by local people – possibly bored soldiers or police patrolling the area, or drivers – who would appear to be responsible for much of the graffiti on rocks adjacent to the sites.

Poaching. This seems common in the area of Jebel Ouenat. The participants of the Workshop have gathered information on this activity from local people and seen the remains of carcasses of Barbary sheep and gazelle, both species at risk of extinction. Poaching can seriously endanger the animal population on the very short term (see fig. 11, page 25).



Fig.11. Remains of a carcass of Barbary sheep.

Solid waste. Garbage and other traces of human activities have been observed in the immediate vicinity of the military/custom posts, where sometimes people concentrate for crossing the borders (it is important to recall that this is the only place with water

supply within hundreds of kilometres). In the area where large caravans stop, hundreds of carcasses of camels were observed, together with the usual thoughtless tide of litter – tin cans, plastic bottles, tires, bones from meals. Sometimes garbage is thrown near important rock art sites, such as at Ain Doua. Waste left by tourist camps do not yet seem to constitute a major problem, compared to other users, possibly owing to their very limited number for the time being. However, this is likely to increase as access details are more widely published.

Firewood collection. Wood is collected in the wadis of Jebel Ouenat for making fires. Many trees have been severely damaged in the attempt to cut large branches.

Uncontrolled firing activities. When fires are lit, sometimes they cause damage to existing trees, as visible at the foot of the large Acacia tree of Jebel Arkenu (the one observed by the Egyptian explorer Hassanein Bey in 1923). (see fig.12, page 26).



Fig.12. Tree damaged by firing activity.

Vehicular traffic. The area of Jebel Ouenat is crossed by important traffic related to commercial activities, caravans, military operations and tourism from Kufra (Libya) and Dakhla (Egypt). This includes large trucks, four-wheel-drive cars, camels etc. Current traffic comprises regular heavy trucks from Dongola to Kufra that stop at the customs post on the Libyan side at Ain Zweia. While trucks and caravans mostly use established routes (with long stops at the custom post on the Libyan side of the border), tourist vehicles have a tendency to drive nearly everywhere, sometimes over ancient sites and on light-stone covered areas where wheels leave a visible track that shall not be easily cancelled by natural factors, thus spoiling the landscape (see fig.13, page 27).



Fig. 13. A caravan in Jebel Ouenat.

Touching/flushing/wetting the rock art. Many rock art sites have significantly deteriorated in the last decades, after surviving for millennia in a relatively good state of conservation, as a result of inappropriate visitation. The deterioration is due to the removal of their thin natural protective layer by means of touching and wetting (with water or oil) to enhance photographic contrast. The rock art at Ain Doua, among the first to be published in the first half of the 20th century, has been very seriously damaged over the past four decades. Tourists (and their accompanying guides) are thought to be the most likely responsible for this negative impact.

Proposed new road. The status of reported plans for a Kufra-Dongola hard-top road need to be established at authoritative government level as a matter of some urgency. Such a road would have a profound and magnifying effect on the access to and vulnerability of the Jebel Ouenat group.

Looting of artefact and rock art. Prehistoric artefacts, sometimes dating from hundreds of thousands of years ago, are often scattered on the ground in the desert, due to the particular erosion phenomenon which, contrary to European archaeological sites, progressively exposes on the surface the most ancient remains. Collecting these artefacts as a souvenir, or even simply moving them from their original location, constitutes a temptation difficult to resist, especially for tourist unaware of the consequences of their action. However, this behaviour destroys the evidence from which archaeologists can reconstruct the material history of ancient human communities. Unfortunately, the participants of the Workshop have also witnessed the deliberate removal of fragments of rock art, by means of chisels or other mechanical tools.

4. PROTECTION OF THE PROPERTY

4.1 Current situation

Ownership

By reason of its geography vis a vis current international borders, ownership of the Jebel Ouenat must be, for now, considered to lie with the countries in whose sector of the mountain they are. The Jebel Ouenat, on the three sides, appears to be public property of the three concerned States. However, traditional use rights are apparently still recognized, especially by local Tebbu tribes who bring their camels to the area after seasonal rains. The issue of the ownership of the proposed Jebel Ouenat Protected Area would need to be the subject of a more detailed investigation.

Legal status or other designation

The area of Jebel Ouenat is currently not protected by any legislation. It is possible that some parts of the proposed Protected Area might be designated as a military zone. This would require some further enquiry.

If protected, the status of the site would lie within the provisions of the Libyan Law for Protection of Archaeology 3/1424 of 1994; the Egyptian Law of Protected Areas 102/83 and for Protection of Archaeology 117/83; the Sudanese Law 1986 Ordinance for Wildlife Conservation and the 1999 Sudan Antiquities Ordinance.

Stakeholders and use

A number of stakeholders, both institutional and from the civil society, have been identified. All the concerned parties, each with its particular role and responsibility, should be consulted and actively involved in the preparation of a future Management Plan, which should include a study of their specific interests and potential for the conservation of the site. Among the stakeholders, we should include:

- Shaabiya of Kufra (Libya);
- New Valley Governorate (Egypt);
- Northern State (Sudan);
- Nomadic tribes traditionally using the area;
- Department of Archaeology, General Secretariat of Tourism (Libya);
- SCA, Ministry of Culture (Egypt);
- NCAM, Ministry of Tourism and National Heritage (Sudan);
- Egyptian Environmental Affairs Agency, Ministry of Environment (Egypt)
- Wildlife Administration, Ministry of Interior (Sudan, Egypt);
- Agency for the Protection of the Environment (Libya);
- Ministries of Defense of the three countries;
- NGOs active in heritage conservation from the three countries;
- Tour operators;
- Companies running the heavy trucks transporting goods and people from Sudan to Kufra (if they exist);
- UNESCO;
- Foreign scientific missions (archaeologists, environmentalists, etc.).

Other stakeholders might be identified in the process of the preparation of a Management Plan.

4.2 Proposed protection system (establishment of a “Protected Area”)

In the medium and long term, an adequate conservation system with a formal Management Plan should be established at Jebel Ouenat, including the appropriate coordinating mechanisms among the three concerned countries. Until this is in place, however, and with a view to minimize the negative effects of the above-mentioned factors, a number of immediate measures could be implemented.

This proposed “interim” protection system, which is designed to progressively turn into a permanent one, can in a single word best be summarized as “education” – making local people and visitors aware of the values of the site and its content. The institution of a protection system can be broken easily into phased stages as below, starting with informing and constraining those in immediate contact with the region and expanding into the wider education of guides, tourist agencies (possibly by the institution of an agency licensing system) and eventually into schools and colleges.

A vital corollary to this is the establishment of waste management and the appointment of officials and equipment – such as diggers and bulldozers to implement it. Disgusting as is the present position at, for example, Ain Doua (also called Ain Kaseet or Ain Ghazal), without a basic infrastructure for collection and disposal of waste, short term visitors, such as the young unmotivated soldiers at the post are unlikely to be worried about adding plastic bottles and cans to the pile already there.

It can not be emphasized too strongly that the net final outcome of this protection system must be regarded by the target groups not as a further piece of Government inspired intrusive legislation but as a awakening of a realization of the value of a national heritage and a pride in the implementation of its protection.

4.2.1 Institutional and legal set up

In addition to the recalled value-based arguments (see Chapter 2 above), management considerations suggest that there is considerable benefit in a concept of grouping Jebel Ouenat, Jebel Arkenu and Jebel Kissu into a single "Protected Area", and possibly later into a single joint World Heritage trans-boundary Nomination. This of course implies that some sort of coordination, or indeed a formal agreement, should be made among the responsible authorities of Egypt, Libya and Sudan, to ensure the respective commitment of each State to the protection of the Jebel Ouenat area and harmonize the necessary measures for its conservation.

It is to be hoped that following the broader tri-national agreement, each country, within its legislative framework, would take the necessary steps to accord the Jebel Ouenat the status of Protected Area. In order to ensure the necessary coordination in delineating the boundaries of the Protected Area, but also in view of the future conservation actions that will have to be implemented by the three countries, it is recommended that multidisciplinary working groups be established at the earliest possible time within each country.

4.2.2. Immediate protection measures

In addition, and complementary to the above steps, the following simple, on-the-ground measures might contribute from now to the effective protection of the area:

Stage One: Entry point signed undertakings.

It is fortunate that traffic to and through the area can come only from three directions – Kufra in Libya, Dongola or via Darfur in Sudan and Kharga/Dakhla in Egypt. At these entry points it is envisaged that all traffic – drivers, guides or persons in charge including military and police – would sign an undertaking, an agreement indicating that:

1. Carrying out limited archaeological survey between a number of main rock art sites in order to give free some areas for fixed routes and camping places.
2. They are entering a protected area. A map showing well known place names (in Arabic and English script) and scale would be provided.
3. That the leaving of litter of any kind – tins, plastic bottles, any non-biodegradable waste – is prohibited.
4. That the leaving of graffiti is forbidden.
5. That it is forbidden to touch or remove any archaeological object such as stone artifacts, potsherds, etc..
6. That the rock art must not be touched, wetted, defaced or removed.
7. That collection of flora and fauna is forbidden. That protected animal species reside in the area and no shooting or trapping of any of wildlife is permitted.
8. That failure to comply with these simple rules could incur on the spot fines for which a clear receipt would be given.
9. A copy, date stamped, of this undertaking is to be carried by the person concerned. These forms should be multi-lingual.

It is important that the military and police, who are inevitably seen as administrators of the law, should be made aware of these proposals in advance of the general public. It is hoped that at government level, the co-operation of the military commands can be obtained so that the impending rules can be passed down to local military/police units. This should happen in advance of implementation of this “signed undertaking” proposal.

No system of forms, undertakings and permissions can function unless its universal application can be assured. Thus, it is vital to establish from each country a single point at which ALL traffic can be controlled. As for Libya, whilst the police post south of Kufra is a natural point of contact for south-bound traffic, this can be bypassed by routes further out in the desert. A suitable alternative, reliable point of contact is the Kufra fuel station. Police permission is needed to obtain the 500 hundred liters or so of fuel needed to get a large truck to Dongola. Such permission could be conditional on signing the undertaking at the police station or at the fuel station.

Until these essential control measures are implemented, the area should be closed by the three countries to tourism and caravans.

Stage Two: Monitoring system. Stage One could, with tri-national agreement, be set up very quickly, thus affording the first line of defense required. “Stage Two: Monitoring” would comprise the establishment of designated and trained rangers or warders whose task would be to make regular checks on passing vehicles to ensure possession of the signed undertaking (Stage One) and to patrol rock art sites.

Careful consideration should be given to locating bases from which rangers would operate and detailing their responsibilities. Each ranger should know what he/she is protecting. This knowledge will be progressively updated as the multidisciplinary survey progresses (see stage 3).

Although this is unlikely to be an immediate problem, in due course thought must be given to the area’s carrying capacity – the number of visitors the site can accommodate at any one time without adverse impact on its heritage resources. In some of South Africa’s and Namibia’s more remote National Parks this is controlled through the visitors’ permit system. In the case of Ouenat Protected Area, it would be better to have a controlling framework in place before, rather than after the problem arises.

“Stage Two” would require a number of Training and Awareness-raising activities, including:

1. Education of guides and tourists agencies;
2. Possible setting up of a tourist agency/guide licensing system that would include indoctrination on conservation values and existence of Protected Areas and codes of conduct;
3. Inclusion of small but significant items in school syllabuses to raise awareness of the above;
4. Specific training of rangers to operate in Protected Areas in patrol vehicles. The establishment of a career structure. The Egyptian environmental Affairs Agency (Nature Conservation Sector) have extensive experience at their Sharm El Sheikh facility;
5. Instruction to military and police. This, optimally, would be throughout the services (since personnel are liable to be posted anywhere in the country) but certainly there should be specific instruction to personnel nominated for postings to areas that include Protected Areas.

Stage Three: Multidisciplinary survey. An essential long term aim must be a detailed multidisciplinary survey of rock art and other protective aspects in the Protected Area and the establishment of a GIS covering history, geology, and wildlife. This would take time, funds and expertise but will be essential to lend credibility and stature to the Protected Area, and possibly one day to the World Heritage Property. This stage will take long to set up but need not delay the implementation of Stage One.

Consideration should be given to defining a buffer zone around the area and funneling traffic through it though this would be difficult in a desert region until surfaced roads are made.

4.2.3 Resources required

Setting up the immediate-need infrastructure for Stage One will be very inexpensive. It is hard to see it exceeding the equivalent of a few thousand Euro if it is provisionally taken on as an additional task by already established police units.

The implementation of Stages Two and Three, however, would require substantial resources. Moreover, to complete the efficacy of the Protection System and prepare for the inevitable arrival of tourists, singly or in groups, some essential facilities and equipment needs should be considered, including Ranger bases, vehicles and communication.

Meeting the high combined cost of the above projects could be significantly facilitated by private sector donations in association with donor credits on signage and publicity material. Thus, in the case of Libya, where competition from potential oil company giants is currently intense, the time to seek such support now is close to ideal. Especially as oil companies are keen to be seen as “green” and environmentally aware after a poor record in recent decades. Since operation in remote areas would be almost unthinkable without them, Toyota, or other major international companies, might also be approached for support. Such donations could act as a catalyst for allocation of Government funds. Governmental Cooperation Agencies should be also mobilized.

4.3 Medium and Long Term Conservation

As mentioned at the outset of this Chapter, in the medium and long term, the preservation, use and presentation to the visitors of the proposed Jebel Ouenat Protected Area should be regulated by a proper, formal Management Plan. This should be developed jointly by the responsible conservation Agencies of the three countries, in consultation with all the concerned parties and in close cooperation with UNESCO and any foreign scientific missions conducting research in the area. Subject to periodical review, the Management Plan could be integrated as an Annex to the tri-national Agreement.

In the long term, the establishment of Visitors centres and Ranger training facilities should be given consideration, paying special attention to the selected location, to minimize the impact on the property. The Egyptian Environment Affairs Agency has extensive and detailed experience of these aspects, including accommodating tribal sensitivities – e.g. at the St. Catherine Monastery site (and many others) in Egypt.

When the above-described processes have achieved significant progress, the Participants of the Workshop strongly encourage the three concerned countries to jointly prepare and submit a Nomination File for the inclusion of the future Jebel

Ouenat Protected Area on the World Heritage List. The advice and assistance of the World Heritage Centre of UNESCO should be obtained at this stage.

The Participants have agreed on the Conclusions and Recommendations contained in Chapter 5 below.

5. CONCLUSIONS AND RECOMMENDATIONS

At the end of the Workshop, the participants agreed on the following conclusions and recommendations.

The Participants of the Workshop:

1. Express their gratitude to the Libyan authorities for the generous hospitality and excellent cooperation provided, and to the Italian Government for the financial support granted to the initiative;
2. Recognize the great importance of the cultural and natural heritage of the Jebel Ouenat, an outstanding testimony to the peculiar interaction between Man and the Saharan environment over the millennia and through dramatic climatic changes;
3. Consider that, while the area of the Jebel Ouenat is spread over the territories of Egypt, Libya and Sudan, the site constitutes an indivisible whole from the point of view of its heritage significance;
4. Further recognize that this heritage is increasingly endangered by a number of natural and man-made factors, including tourism pressure, vandalism and the lack of a conservation system;
5. Emphasize the urgent need for adequate protection of the Jebel Ouenat and an increased awareness among the local communities of the significance and value of its heritage;
6. Are aware of the difficulties faced by the three countries in ensuring its necessary protection and presentation, owing to the remoteness of the area as well as to insufficient means and human resources;
7. Take also into account that the Jebel Ouenat represents a precious socio-economic and educational resource for the sustainable development of the three concerned countries;
8. Are desirous therefore to contribute, through their combined professional experience, to the safeguarding of this vital heritage resource.

The Participants have agreed to make the following recommendations to the responsible authorities of Egypt, Libya and Sudan:

- A. That the necessary steps be taken by the three countries concerned to ensure appropriate legal protection to the cultural and natural heritage of the Jebel Ouenat;
- B. That multidisciplinary working groups be established within each country to develop and implement the required actions for the conservation of the site;

- C. That a tri-national Coordinating Committee be set up, including representatives of the concerned governmental institutions at the appropriate level of authority, to steer and facilitate the implementation of these recommendations;
- D. That the single-country sectors of the Jebel Ouenat be included, as a trans-boundary site, in the Tentative Lists of Egypt, Sudan and Libya, based on the proposed criteria and approximate perimeter described in the Final Report of the Workshop;
- E. That a comprehensive survey of the natural and cultural resources be carried out on the three sides of the area, according to an agreed and common format and methodology, in order to fully document the extent, significance and state of conservation of the natural and cultural heritage of the Jebel Ouenat;
- F. That specific information sessions be organized as soon as possible to raise the awareness of tourist guides, drivers, police and military personnel involved in activities within the area on the importance of the heritage of the Jebel Ouenat, the factors threatening its conservation and the appropriate measures to prevent its deterioration;
- G. That, in close consultation among the three concerned parties and local stakeholders and with the advice of UNESCO, a joint Management Plan be prepared, including provisions and estimates for the establishment of the appropriate institutional framework and the necessary technical and financial resources to ensure the effective conservation and presentation of the site;
- H. That, based on the above-mentioned Management Plan, the necessary funding and political support be provided by the competent authorities of the three countries to ensure its phased implementation;
- I. That, once significant progress is made in the implementation of the above-mentioned recommendations, a Nomination File be prepared and submitted jointly by Egypt, Libya and Sudan for the inscription of the Jebel Ouenat on the World Heritage List.
- J. That, as soon as the Jebel Ouenat is granted legal protection by the three countries and included on their respective Tentative List, the UNESCO World Heritage Centre develop, in close consultation with the responsible national authorities, a comprehensive project proposal to be submitted to potential donors with a view to contribute to the implementation of all the above recommendations.

(مصر، ليبيا والسودان)
من 3/27 إلى 2004/4/5
الخلاصة و التوصيات

المشاركون في حلقة النقاش:

1. يعربون عن إمتنانهم للسلطات الليبية لكرم الضيافة وحسن التعاون الذي بذلوه، وللحكومة الإيطالية للمساعدة المالية التي منحتها للمبادرة؛
2. يتفهمون الأهمية البالغة للتراث الثقافي و الطبيعي لجبل العوينات، الذى يشكل شاهداً صارخاً للتفاعل المتميز بين الإنسان والبيئة الصحراوية عبر آلاف السنين والتغيرات المناخية الحادة؛
3. يعتبرون أن جبل العوينات وعلى الرغم من أن منطقته تمتد فى أراض كل من مصر، ليبيا والسودان، فإنه يشكل وحدة واحدة من ناحية الأهمية التراثية؛
4. يستشعرون، وبصورة أجلى، بأن التراث يهدده، بشكل متزايد، عدد من العوامل الطبيعية والمفتعلة بسبب البشر، والتي من ضمنها ضغوط السياحة، والتخريب وغياب برامج الصيانة؛
5. يؤكدون على الحاجة الملحة لحماية كافية لجبل العوينات مع زيادة وعى السكان المحليين بأهمية وقيمة التراث؛
6. واعون بالمصاعب التي تواجه الدول الثلاث لتأمين حماية الضرورية والتعريف به نظراً لموقعه النائي وعدم توفر الوسائل والموارد البشرية الكافية؛
7. يأخذون فى إعتبارهم بأن جبل العوينات يمثل مورداً إجتماعياً و إقتصادياً وتعليمياً نفيساً للتنمية المستدامة فى البلدان الثلاث؛
8. ولذلك فإنهم توافقون للمساهمة بخبراتهم المهنية المشتركة لحماية هذا المورد الحيوى للتراث؛ إنفق المشاركون على التقدم بالتوصيات التالية إلى السلطات المسؤولة فى مصر و ليبيا والسودان:
 - أ. أن تتخذ البلدان المعنية الخطوات الضرورية التي تؤمن الحماية القانونية للتراث الثقافي والطبيعى لجبل العوينات؛
 - ب. أن تشكل مجموعات عمل متعددة التخصصات فى كل بلد على حدة لتطوير و تنفيذ الأنشطة المطلوبة لصيانة الموقع؛
 - ت. أن تشكل لجنة ثلاثية للتنسيق، تشمل مندوبين عن المؤسسات الحكومية المعنية يتمتعون بمستوى مناسب من المسؤولية لتوجيه وتسهيل تنفيذ هذه التوصيات؛
 - ث. أن تدرج كل من مصر والسودان وليبيا قطاعها من جبل العوينات كموقع حدودى-مشترك على لائحته المؤقتة، بمحيطها التقريبى وعلى أساس المعايير المقترحة المنصوص عليها فى التقرير النهائى لحلقة النقاش؛
 - ج. أن يُجرى مسحٌ شاملٌ للموارد الثقافية والطبيعية فى القطاعات الثلاث للمنطقة طبقاً لمنهجية وأسلوب موحد ومتفق عليه، من أجل توثيق كامل لمدى وأهمية وحالة الحفظ للتراث الثقافى والطبيعى لجبل العوينات؛
 - ح. أن تنظم جلسات إعلامية مخصصة فى أقرب وقت ممكن لرفع درجة الوعي، لدى الأدلاء السياحيين والسائقين وأفراد قوات الجيش والشرطة العاملين بالمنطقة، بأهمية تراث جبل العوينات، والعوامل التي تهدد سلامته والإجراءات الكفيلة بإيقاف تدهوره؛
 - خ. بالتشاور الوثيق بين الأطراف المعنية وأصحاب الشأن المحليين وبناءً على نصيحة اليونسكو، توضع خطة إدارة مشتركة تتضمن تدابير وتقديرات لإنشاء الإطار المؤسسي المناسب والموارد المالية والتقنية الضرورية التي من شأنها ضمان حفظٍ فعالٍ وإبرازٍ حسنٍ للموقع؛
 - د. تأسيساً على خطة الإدارة المذكورة أعلاه، تُمنح التفويضات المالية الضرورية و يُقرّ السند القانوني من طرف السلطات المختصة فى البلدان الثلاث لضمان تنفيذها المرحلي؛

ذ. بعد تحقيق تقدم ملموس فى تطبيق التوصيات المذكورة أعلاه، يُجهز ملف الترشيح ويقدم مشتركاً من طرف كل من مصر وليبيا والسودان لوضع جبل العوينات على لائحة التراث العالمي؛

ر. بمجرد أن تمنح الدول الثلاث جبل العوينات الحماية القانونية وأن تضعه على لوائحها المؤقتة، يقوم مركز التراث العالمي لليونسكو، وبالتشاور الوثيق مع السلطات الوطنية المسؤولة، بوضع مقترح مشروع شامل يقدم إلى مانحين متوقعين من أجل تنفيذ كل التوصيات المذكورة أعلاه.

ANNEX . List and contacts of all participants of the Workshop

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