

The Archaeological Site and Cultural Landscape of Qohaito, Eritrea

Site Management and Implementation Plan



July 2007

Qohaito Management and Implementation Plan

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Acknowledgements

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The consulting teams are grateful to the many people, who have contributed to the planning process with great interest and enthusiasm. Special thanks are directed to the people in Qohaito, who have demonstrated great concern and involvement in the initial consultations, which are providing the platform for all subsequent programmes and policies that will articulate the future development of Qohaito.

Special thanks are extended to the local guards in Qohaito: Hadid Suleiman and Ibrahim Mohammed Omar.

Maps: Søren Fredslund Andersen; Photo credit: Flemming Aalund.

Glossary of abbreviations

CARP	Cultural Assets Rehabilitation Project
The Convention	Convention Concerning the Protection of the World Cultural and Natural Heritage, UNESCO 1972
EIA	Environmental Impact Assessment
GAME	German Archaeological Mission to Eritrea (two campaigns in 1996, 1997 in cooperation with NME)
ICCROM	International Centre for the Study of the Preservation and Restoration of Cultural Property; www.iccrom.org
ICOM	The International Council on Museums; www.icom.org
ICOMOS	International Council on Monuments and Sites; www.icomos.org
IUCN	World Conservation Union (formerly the International Union for Conservation of Nature and Natural Resources); www.iucn.org
NEMP - E	National Environmental Management Plan - Eritrea, 1995
NGO	Non-Governmental Organisation
NME	The National Museum of Eritrea
Operational Guidelines	Operational Guidelines for the Implementation of the World Heritage Convention. The Guidelines are periodically revised to reflect the decisions of the World Heritage Committee, last revision is dated 2.February 2005 Any individual, community, NGO or Government Institution, who have a vested interest in Qohaito
PFDJ	Peoples Front for Democracy and Justice
Stakeholder	Any individual, community, NGO or Government Institution, who have a vested interest in Qohaito
UNESCO	United Nations Educational, Scientific and Cultural Organization; www.unesco.org

Glossary and definitions

Cultural Landscape:

Cultural landscapes are cultural properties and represent the “combined works of nature and man”. They are illustrative of the evolution of human society and settlement over time, under the influence of the physical constraints and/or opportunities presented by their natural environment and of successive social, economic and cultural forces, both external and internal (Operational Guidelines para. 47)

The World Heritage Convention:

The World Heritage Convention is an international treaty adopted by the General Assembly of UNESCO in 1972. It is based on the premise that the cultural and natural heritage constitute irreplaceable resources some of which are of outstanding universal value to humanity. The WHC is an international instrument for the identification, protection and preservation of cultural and natural heritage around the world. The Convention recognises the way in which people interact with nature, and the fundamental need to preserve the balance between the two.

Countries signing the Convention become states parties to the Convention thereby belonging to an international community of appreciation and concern for universally significant properties that embody a world of outstanding examples of cultural diversity and natural wealth protected for present and future generations. (<http://www.whc.unesco.org>)

The Operational Guidelines:

The World Heritage Committee, the main body in charge of the implementation of the Convention, has developed precise criteria for the inscription of properties on the World Heritage List and for the provision of international assistance under the World Heritage Fund.

These are all included in the Operational Guidelines for the Implementation of the World Heritage Convention. This document is regularly revised by the Committee to reflect new concepts, knowledge or experiences. (<http://www.unesco.org/en/guidelines>)

The World Heritage List:

The World Heritage List embraces at present 830 properties forming part of the cultural and natural heritage considered as having outstanding universal value (<http://whc.unesco.org/en/list>) Nominations to the World Heritage List will not be considered unless the nominated property has already been included on the State Party's Tentative List.

The Tentative List:

A Tentative List is an inventory of those properties which each State Party intends to consider for nomination during the following years.

Introduction



1. Introduction

1.1. Site History outline

The Eritrea Cultural Assets Rehabilitation Project (CARP), as defined in the Project Appraisal Document of May 2001, is designed to support the Government of Eritrea's cultural asset rehabilitation and conservation agenda with regard to capacity building, increasing sources of growth, and human resources development. The Cultural Assets Rehabilitation Project is processed as a Learning and Innovation Loan through the World Bank.

The project aims to test out and develop means for more fully integrating the conservation and management of Eritrea's cultural assets into local and national economic development. One of the project priority actions involves the preparation of a community based Management and Implementation Plan for Qohaito.

Qohaito is a mountain plateau located at an elevation of about 2.600 m to 2.700 m above sea level in the southern part of Eritrea. Situated between the Wadi Haddas and the Wadi Komailé the high mountain range gives way to a flat plateau, which extends about 16 km in the south-north direction and varies between 4 km and 400 metres in the shorter direction east-west. The total area is about 32 square kilometres and the circumference reaches about 84 kilometres.

The physical environment has stunning attributes with steep, rocky escarpments at all sides and wide views to the high mountain ranges culminating at Amba Soyra, the highest mountain in Eritrea reaching a height of 3.018 m above sea level. At a day with a clear sky the Red Sea can be viewed in the distance.

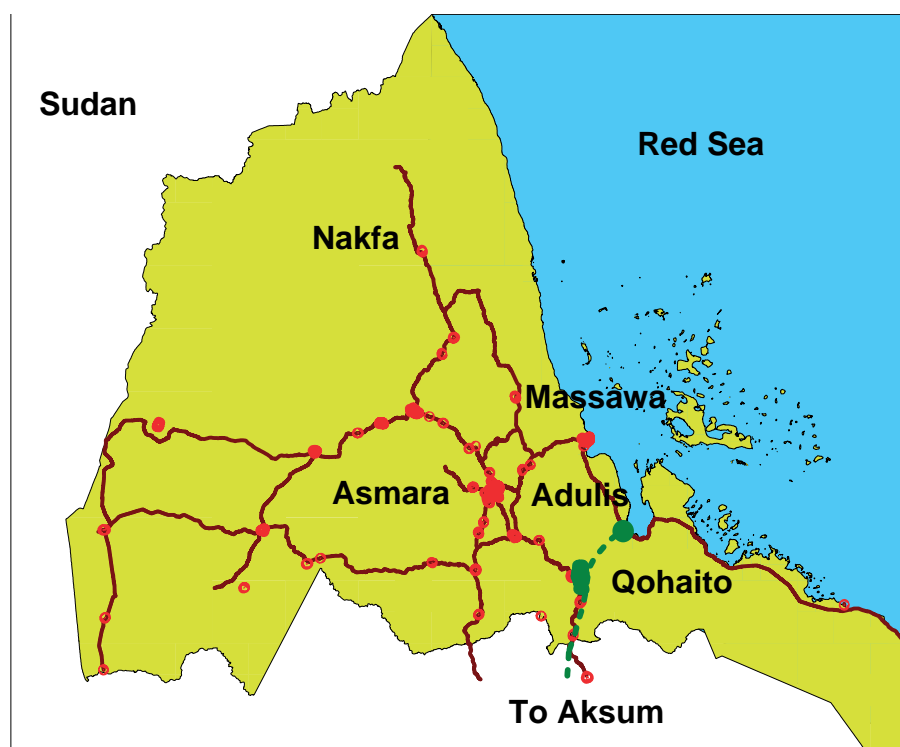


Fig. 1 Map of Eritrea showing location of Qohaito

In the ancient world an undefined land including present day Eritrea and the northern part of Ethiopia was known as the legendary *Land of Punt* as far away as Egypt and Rome.

In Antiquity Qohaito developed and prospered as a complex society during the time of the Aksum Empire from around 100-700 AD. As part of a dominating regional civilisation expanding from present day Sudan to the southern part of the Arabian peninsula the ancient inhabitants of Qohaito benefited from extensive local trading networks as well as from foreign relations to the Roman and Byzantine empires.

The place seems to have been abandoned sometimes around 900 AD. and subsequently left in relative isolation for centuries, until foreign travellers heard about this exceptional place in the middle of the 19th century and again made it known to the outside world through their travel accounts about the enigmatic archaeological monuments and sites on the plateau.

The Saho people, the present inhabitants in Qohaito, has occupied the plateau for centuries as pastoralists and farmers exploiting the scarce resources to sustain their livelihood on the plateau. The fields are used for grazing of highland cattle during the raining season and in the following months until the grass has been eaten away. Most of the livestock are then taken to the lowland to benefit from the winter rain there by early December, only to return to the plateau when the summer rain starts in June and the sowing of the fields has to take place.

The Saho now increasingly relying on agriculture for their livelihood and more people are becoming sedentary farmers. The site is currently under considerable development pressure from the increasing population and the scale and style of human activity will soon be changing and lead to an even more intensive use of the scarce resources. The change in livelihood pattern is also influencing on the habitation pattern and the traditional *Hidmo* houses with flat roofs and stone walling are now being replaced by modern houses build of concrete blocks and corrugated iron roofs.

The cultural landscape in particular is vulnerable to social, economic and environmental changes. Farming and husbandry will continue to have a role in Qohaito, but there is now a recognition of the high value of the landscape and the archaeological remains as an added resource for improvement of livelihood. In this transformation process this management plan is proposing alternative land uses to maximise on ecology and landscape values and tourism to develop as a new activity related to the rich natural and cultural heritage resource of Qohaito.

1.2. World Heritage Listing

As a State Party to the World Heritage Convention since 2001 Eritrea is intending to include Qohaito on the Tentative List owing to the outstanding cultural landscape and unique archaeological remains. It follows that Eritrea has an international obligation to conserve this outstanding natural and cultural heritage for future generations and to formulate an appropriate Management Plan, which specify



how the outstanding universal cultural and natural values of the site should be preserved.

Only countries that have signed the World Heritage Convention, pledging to protect their natural and cultural heritage, can submit nomination proposals for properties on their territory to be considered for inclusion in UNESCO's World Heritage List.

Each State Party to this Convention recognizes the duty of ensuring the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage

(and that)

It will do all it can to this end, to the utmost of its own resources and, where appropriate, with any international assistance and co-operation, in particular, financial, artistic, scientific and technical, which it may be able to obtain

Article 4. Convention Concerning the Protection of the World Cultural and Natural Heritage, UNESCO 1972

The States Parties to the Convention, express a shared commitment to preserve the natural and cultural heritage for future generations. The prestige that comes from being a State Party to the Convention and having sites inscribed on the World Heritage List often serves as a catalyst to raising awareness for heritage preservation. The World Heritage status is qualifying for international co-operation and may thus receive financial and specialist assistance for heritage conservation projects from a variety of sources, including the World Heritage Fund¹.

Finally, the inscription of a site on the World Heritage List enhances public awareness of the site and of its outstanding values and consequently attracts increasing number of tourists to the site. Properly managed increased tourist activities may generate additional funds to the site and to the local economy.

1.3. The Tentative List

The first step in a possible nomination as World Heritage is to make an inventory of its important natural and cultural heritage sites located within Eritrea. This inventory is known as the Tentative List, and provides a forecast of the properties that a State Party may decide to submit for inscription in the next five to ten years and which may be updated at any time. It is an important step since the World Heritage Committee cannot consider a nomination for inscription on the World Heritage List unless the property has already been included on the State Party's Tentative List.

Eritrea has so far added *The Historic Perimeter of Asmara and its Modern Architecture* on the Tentative List in 2005 and is further intending to include the *Cultural Landscape and the archaeological site of Qohaito* on the List and eventually to apply for World Heritage



¹ *Investing in World Heritage: past achievements future ambitions, A guide to International Assistance*, World Heritage paper 2, UNESCO World Heritage Centre, 2002, p.1-57

nomination on the understanding that all the formal and practical requirements are ready.

While there is no legislation or regulation pertaining solely to the World Heritage Sites or nominations, Eritrea has implicitly accepted to adhere to the requirements set out in the *Operational Guidelines for the Implementation of the World Heritage Convention* (last revision 2 February 2005). The process for the inscription of properties on the World Heritage List is specified in section III of the Operational Guidelines stipulating e.g. that.. 'each nominated property should have an appropriate management plan or other documented management system which should specify how the outstanding universal value of a property should be preserved, preferably through participatory means' (para. 108).

It is further stipulated that.. ' participation of local people in the nomination process is essential to enable them to have a shared responsibility with the State Party in the maintenance of the property. State parties are encouraged to prepare nominations with the participation of a wide variety of Stakeholders, including the managers, local and regional governments, local communities, NGO's and other interested parties' (para. 123).

Common elements of an effective management system include:

- A thorough shared understanding of the property by all stakeholders
- A cycle of planning, implementation, monitoring, evaluation and feedback
- The involvement of partners and stakeholders
- The allocation of necessary resources
- Capacity-building
- An accountable, transparent description of how the management system functions.

1.4 The Management Plan

Possible World Heritage nomination will require in the least that the relevant steps are taken to meet the following conditions:

- Define the site boundaries and enact the appropriate development regulations
- Establish a management regime, including assignment of the relevant professional staff
- Enact adequate protective legislation
- Secure a continuous monitoring process and appropriate co-ordination of activities and projects

The drafting of the Management Plan for Qohaito affirms the commitment of the Government of Eritrea to strengthen mechanisms of identification, protection, conservation, presentation and transmission to future generations of cultural and natural heritage of outstanding universal value according to the stipulations set out in the Convention concerning the Protection of the World Cultural and Natural Heritage.

1.5 The vision

The Management Plan is a communication tool in the collaboration between the various stakeholders and provides a platform for presenting the guiding principles and sharing ideas about future development issues.

This process is characterised by three main stages:

- Understanding the site
- Developing a vision
- Implementing the vision

The main task is to identify the specific cultural values represented in the site, preservation of the cultural values as identified in the statement of significance and to develop a sustainable livelihood for the inhabitants in Qohaito with due respect to the tangible and intangible heritage values specific to the life as pastoralists and farmers.

A group of core objectives, based on the Convention and on the Statement of Significance form the basis for future actions. These objectives include:

- Formation of an appropriate management regime and develop local capacity in cultural heritage management
- Systematic documentation of the archaeological sites and formulation of a programme for preservation.
- Facilitate community participation in managing natural and cultural heritage resources
- Development of sustainable cultural tourism

The Management Plan is addressing these issues and attempts to outline sustainable solutions to these challenges and opportunities by formulating a vision of the future and a policy for carrying this vision into effect. Wisely managed Qohaito can be a model in effective landscape stewardship, demonstrating excellence in conservation practices, and innovative land uses.

Qohaito has the distinction of being the first natural and cultural heritage site in Eritrea having a Management Plan completed. This plan may serve as a model for cultural heritage management in other parts of the country and help put more focus on the need to preserve and present the country's rich heritage.

Part I.
Historic background and analyses



2. Historic background and analyses

2.1 Site characteristics

2.1.2 The topography

Qohaito is a high plateau situated at an elevation of about 2600 m above sea level forming the southern part of the mountain range between the two valleys of Wadi Haddas and Wadi Komalié. The plateau is bordered by precipitous rocks and clearly defined by the escarpment with a vertical crag of about 500 meters at the eastern side, while there are more sloping grounds at the western side. It has an elongated shape oriented in north-south direction and covering an area of about 34 square kilometres. The length is about 16 km and the width varies between 200 metres and 4 km. The extreme borders of the plateau are defined by 14,773 and 14.912 northern latitude and by 39,403 and 39,448 eastern longitude.



2.1.3 The site boundary

The boundary of the site is determined primarily by the extension of the plateau as defined by the escarpment and the mountain slopes and associated landscapes, which form an interrelated social-economic environment. For administrative reasons the planning area comprises the five sub-zones named according to the main settlement within the zone. The boundaries are not yet mapped awaiting the preparation of a land use map based on satellite images, but they are identifiable on site by the residents.

Listed from north to south the names are as follows:

- Karibosa,
- Safira
- Subiraso
- Masagolesula
- Igila

2.1.4 The cultural landscape

According to the definition set out in the World Heritage Convention a Cultural Landscape includes the combined works of nature and humankind expressed through a long and intimate relationship between people and the surrounding natural environment. The most significant occupation of the plateau is recorded during the first millennium A.D. by an ancient society closely affiliated to the Aksumite Kingdom. The enigmatic ruins of this ancient civilisation are spread throughout the whole plateau forming an extended archaeological landscape, which has remained largely undisturbed of later subsequent development.



For hundreds of years the land has been in continuous use for seasonal farming and cattle herding by the Saho tribe, who has exploited the natural resources in the highlands during summer time moving down to the pastures in the lowlands during winter time. Having

been on the move and travelling light their presence has impacted very little on the archaeological landscape apart from the vernacular settlements with stone built houses which are an integrated part of the cultural landscape. Further evidence of human activities in the environment relates to rock paintings depicting themes connected with wildlife, cattle herding and husbandry.

2.2. The history and archaeology

In the ancient world Eritrea was part of the legendary *Land of Punt*, which played an important role in the religious myths of Pharaonic Egypt. Its reputation was based on the production of myrrh, frankincense and other precious aromatic essences being exported via the ancient site of Meröe. The precise location of *Punt* is disputed, but most likely located in the area of present day Eritrea and northern Ethiopia conveniently accessible from the Red Sea's western shores and the early history of Qohaito has in one way or the other been related to the trade and economy of ancient².

By the end of the first millennium BC. over land communication between Asia and the Roman Empire decrease because Greek sailors succeeded to sail directly to India on the monsoon and tranship through harbours at the Red Sea. This change in trading practices lead to an increased commercial activity around the Red Sea.

The *Periplus Maris Erythraei*, the famous sailors' hand-book of the first century AD., gives advise on the circumnavigation of the Red Sea and further on to the Indian Ocean, also referring to the cultural and historical affinity between the two shores of the Red Sea and the commercial relations with contemporary Roman Empire and further on to India. Probably for the first time reference is given to 'the city of the people called Aksumites'³ and Adulis is specifically mentioned as a port of the greatest significance.

In Antiquity the fame of Aksum was widespread. It is generally accepted that the Aksumite culture was influenced by the spread of ideas and technologies from other cultures in the region and the economic development was depending on a greater network of trade routes extending all around the Red Sea and beyond, including the Mediterranean and the Indian Ocean.

The port of Adulis was of great significance in Antiquity. It is best known for its role in Aksumite trade during the fourth – seventh centuries AD. as described by Cosmas Indicopleustes, who visited the kingdom of Aksum about the year 525 AD. and provides a written account of Adulis as a flourishing port on the Red Sea coast closely related to trade with Aksum⁴.



² K.A.Kitchen, The elusive land of Punt revised, *Trade and Travel in the Red Sea Region*, Society for Arabian Studies Monographs No. 2, 2004, pp. 25-31

³ Cited from Edward Ullendorff, *Ethiopia and the Bible*, London 1968, p.23.

⁴ Cosmas Indicopleustes, *Christian Topography*. The site was first identified by Henry Salt, who visited it in 1810, and noted that the site was still called Azoole by the natives. Archaeological surveys to identify the location of the ancient site of Adulis has recently been conducted by the University of Southampton in cooperation with NME. A first season of survey work took place in 2004 and a topographic survey was completed in 2005. Cf. web site of Archaeology, School of Humanities, University of Southampton



Christianity was introduced into the Kingdom of Aksum during the first centuries AD. through its commercial and maritime relations with the Byzantine Empire. According to several contemporary sources the conversion from paganism was advanced by the preaching of two Syrian monks. One of them, Frumentius, became the first bishop and his consecration initiated the close link between the new Christian community and the Egyptian Coptic churches.

The Kingdom of Aksum flourished through most of the first millennium AD. A written account attributed to the third-century Persian religious leader, Mani, describes the Aksumite Kingdom as one of the four greatest empires of that time including Babylon, Rome and Egypt. At the height of its power from the fourth to seventh centuries A.D. the Aksumite Kingdom at times extended from the northern Ethiopian highlands to the Nile valley on the west, and far into southern Arabia on the east. The enormous monolithic mortuary steles at Aksum, many of which are still standing, bear witness to the artistic achievements of this great civilisation.

Coin finds testify to the names of twenty-four kings⁵ and the long inscriptions on commemorative stones from the times when Aksum was most powerful, provide information of the extent of power and the conversion to Christianity of the peoples, otherwise very little information exists on the origins of the Kingdom, its social organisation and economic base.

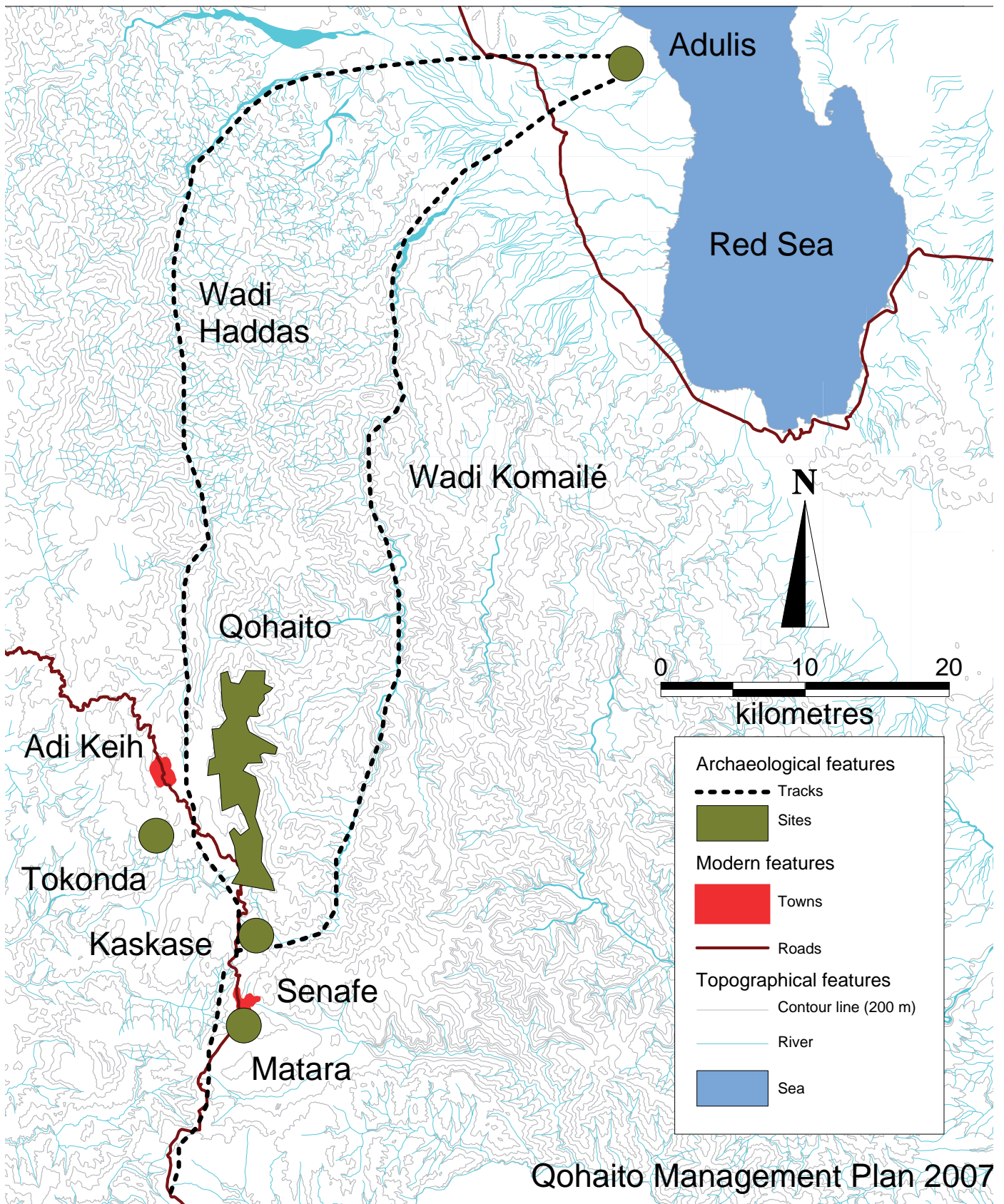
The Aksumite power apparently began to diminish in the seventh century AD. possibly due to the advancement of the Persians into the Arab Peninsula and the consequent disruption of the sea and trade routes in the Red Sea and the surrounding lands. By this time the influence of the city of Aksum had so declined that the seat of power was transferred further south into the Ethiopian highlands. The most serious attacks on the sovereignty of Aksum took place around 976 AD.⁶, possibly accounting for the destruction of many of the monuments in the region. The former splendour has survived only through the great number of mortuary stelae and extensive archaeological remains.

The ancient port of Adulis on the Red Sea coast was the empire's main emporium from where two main routes lead into the highlands, either through Wadi Haddas, or through Wadi Komalié and both are passing close to the Qohaito plateau. Occupying a strategically important location Qohaito would be able to intercept and benefit from trade caravans travelling to and from Aksum. The high number of ancient urban centres reinforce the sentiment that the whole mountain area of Tigray and the southern part of present day Eritrea was densely populated during the first millennium AD. and a close interaction took place between the urban zones and the rural areas creating an interrelated commercial network depending on an extensive subsistence farming and cattle herding.

From the sheer number of archaeological remains it is obvious that Qohaito had an important position within the Aksumite realm, but very little is known about the socio-economic background of this ancient society, which developed as a distinct settlement at the Qohaito plateau.

⁵Neville Chittick, *Excavations at Aksum, Azania*, vol. IX, 1974, p.1.

⁶J.S.Trimingham, *Islam in Ethiopia*, London 1952/ third ed. 1976.



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Fig. 2 Location map of Qohaito and affiliated archaeological sites with indication of ancient trade routes between Adulis and Matara and further on to Aksum

2.2.1. Research history

The exploration and investigation of the archaeology of the Qahaito Plateau has been limited. The German explorer E. Rüppell was the first to hear about the existence of the plateau and to pass on his information about the archaeological remains in 1838. Subsequently the enigmatic ruins attracted the attention of several European explorers, who actually made their way to Qohaito during the later part of the 19th Cent. and reported on the existence of the conspicuous ruins with standing pillars, whereas the large number of mounds apparently went unnoticed and receive little attention in their reports⁷.

The first scientific documentation was completed by the 'Deutsche Aksum Expedition' visiting the plateau for a few days in April 1906. During this short time the expedition members, Littmann, Krencker and Lüpke, succeeded to document several ruins with standing pillars, the so called 'Egyptian tomb', and the Safira dam as well as some 60 rock inscriptions. Especially the photographs constitute an important documentation of the sites, providing a rich source for comparative studies of the changes that have occurred to these sites during the intermediate time⁸.

Qohaito apparently did not attract any attention from scholars in the time since 1906, but after the independence of Eritrea a reconnaissance trip in 1995 by professor Steffen Wenig, Humboldt University, Berlin, revealed the vast amount of archaeological ruins that are spread throughout the whole plateau of Qohaito. Subsequently the German Archaeological Mission to Eritrea (GAME) in cooperation with the National Museum of Eritrea (NME) conducted a detailed and systematic survey of the larger parts of the plateau during two campaigns in 1996 and 1997 from which a number of preliminary reports have been published⁹. The yet unpublished catalogue of archaeological sites and findings was made available for the current management planning by courtesy of Professor Steffen Wenig.

Additional field surveys have been completed in preparation for the current Management Plan providing supplementary information about the extent and character of the archaeological sites. For a detailed description of this work, please refer to Appendix IV.

2.2.2. Prehistoric stone tools

A large number of sites with stone tools originating mainly from the Middle Stone Age have been observed by the German Archaeological Mission in different locations all over the plateau, but no systematic survey has been conducted.

Pottery and stone tools are to be found at most of the sites, but no systematic analysis has yet been made. The presence of lithics tools

⁷ Comte Stanislaus Russell visited Qohaito in 1860, followed by J.T. Bent (1893), M. Schoeller and G. Schweinfurth (1895) as referred by Dieter Eigner, 2004, p.108.

⁸ A description of the expedition is published recently: S.Wenig(ed.), *Im Kaiserlichem Aufdrag, Die Deutsche Aksum-Ekspedition 1906 unter Enno Littmann*, band 1, Die Akteure und die wissenschaftlichen Unternehmungen der DAE in Eritrea, 2006, pp. 1-397.

⁹ For a full record of the GAME reports and publications cf. the bibliography in Appendix III

and especially microlithics of obsidian have been observed on the surface of many of the smaller mounds in the landscape and may have been taken as evidence for middle Stone Age occupation. However, lithics are known to have been used into the historical era and can as such not be taken as evidence for prehistoric activities. The pottery, of which a wide range of shapes have been observed, can provide a more detailed chronology, but only finds of potsherds from amphoras provide dating evidence relating to the period 300-800 AD, and systematic studies have yet to be conducted.

2.2.3. Rock art

Rock art sites are numerous at rock shelters along the escarpment in many different places of Qohaito. Only the rock art site of Adi Alauti at the eastern cliff face to the south east of Safira is known to visitors because this particular site is widely communicated on the Internet and in travel guide books.



About 15 sites with rock paintings and 5 sites of rock inscriptions were located by the German Archaeological Mission in 1997. At least one site was identified as prehistoric due to its connection to deposits of paleolithic stone tools. Ornamental engravings originating from the Christian period are also identified.

In the course of the field surveys conducted as part of the management planning further sites have been identified. The predominant number of rock paintings depict themes connected with cattle herding showing human figures together with various representations of cattle and other domesticated animals. Rather frequent are representations of camels, with or without loads or riders, or lead by humans. Also wild animals, which can be identified as gazelles and antelopes, are depicted. The rock paintings varies widely in technique and style, but collectively they give a valuable picture of the livelihood in pastoralist communities to whom cattle is representing a valuable capital¹⁰.

It has recently been suggested that some rock inscriptions at the edge of the plateau indicates the penetration of people from Southern Arabia as early as 9th century BC.¹¹ providing further evidence of the enormous impact of livestock upon daily life in the highlands. However, no sites have been studied in detail and their significance remain unknown.

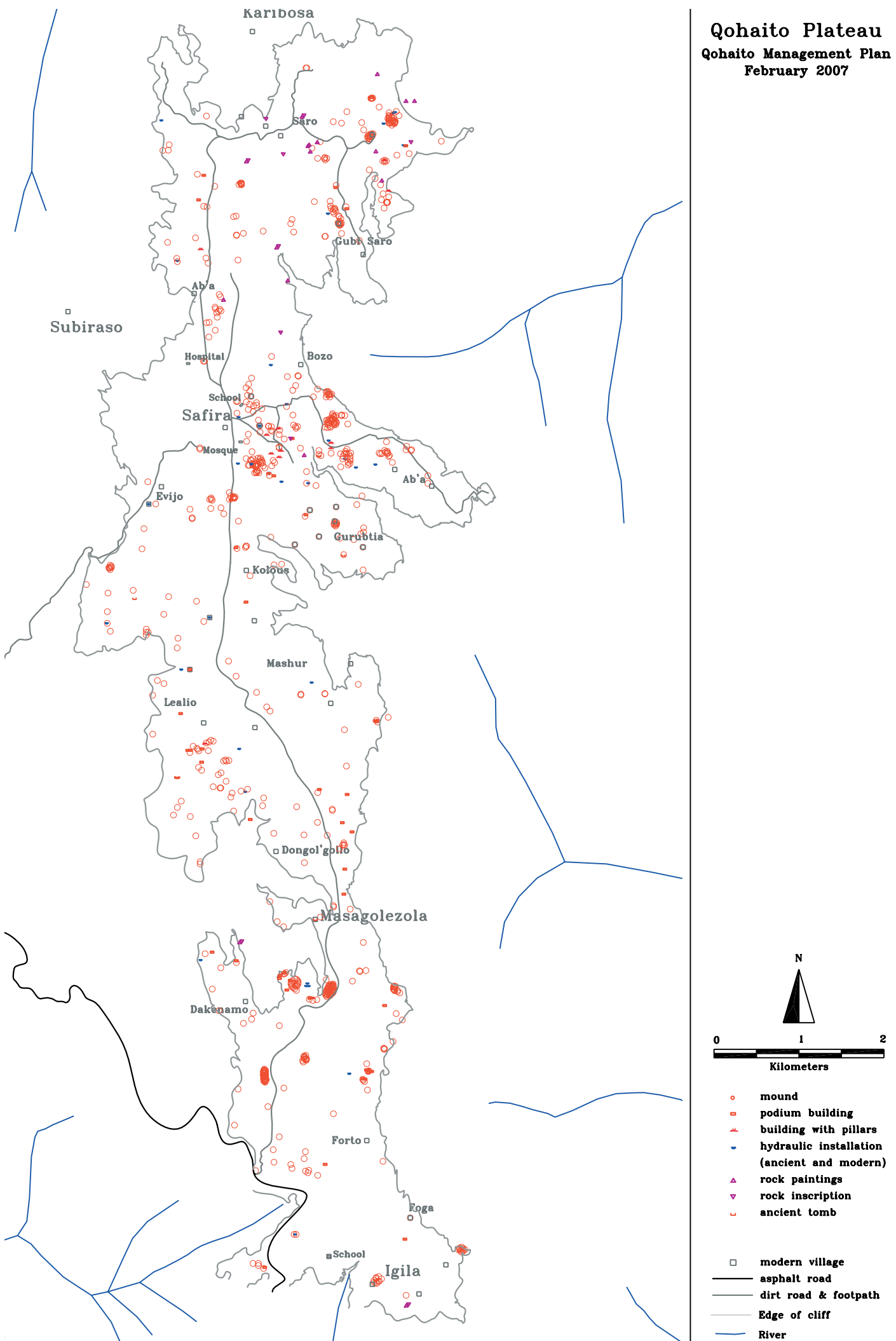
2.2.4 The archaeological landscape

The ancient cultural landscape of Qohaito is characterised by a high density of archaeological sites presumably dating back to around 700 BC. with the large majority of archaeological sites presumably relating to an extended early settlement of the plateau during the Aksumite civilisation from second to seventh cent. AD. The majority of



¹⁰Nicholas Weber, *The distribution and use of cattle products in northern highlands of Ethiopia*. PhD Thesis, Department of Archaeology, Simon Fraser University, USA, 2005, pp.1-180.

¹¹R. Fattovich, 'The 'Pre-Aksumite' Period in Northern Ethiopia and Eritrea Reconsidered', *Trade and Travel in the Red Sea Region*, Society for Arabian Studies Monographs No. 2, 2002, pp. 71-77.



24 Fig. 3 Map of archaeological sites on the Qohaito plateau

sites appear as rubble mounds situated on rock outcrops and raising to a height of up to about 1.5 –2 meters above the surrounding arable fields. The mounds most often extend 10 and 40 meters across, though in certain areas they cover an area of up to five hectares.

Standing architecture is generally rare, but remains of stonewalls are often visible on the surface, indicating a double-faced construction of roughly shaped stones of a hand to head size with a fill of mud and rubble reaching approximately a total thickness of 0.5 meter. Sometimes walls of larger irregular or roughly quarried blocks are visible, which are likely to serve as foundations for buildings or part of walls for soil management. Such terrace walls have been noted in many places especially at the extremities of the plateau. Ashlar walls are rarely found, possibly forming part of a podium of more prominent buildings of which some have standing monolithic pillars.

Pottery and stone tools are to be found at most of the sites, but no systematic analysis has yet been made. The presence of lithic tools and especially microlithics of obsidian have been observed on the surface of many of the smaller mounds in the landscape and may have been taken as evidence for middle Stone Age occupation. However, lithics are known to have been used into the historical era and can as such not be taken as evidence for prehistoric activities. The pottery, of which a wide range of shapes have been observed, can provide a more detailed chronology, but systematic studies have yet to be conducted. Besides the general similarities of the visible ancient architecture on the Qohaito Plateau with Akumite architecture, only the presence of a few Christian crosses have so far provided dating evidence for the ancient human activities. One cross was engraved on an architectural fragment from the so-called Temple, Littman no. 6 (part of site saf.23) and during the detailed condition survey of the so-called Temple, Littman no. 8 (site saf.40), it became evident that an apse was situated in the eastern part of the building, indicating that this was actually a church, cf. fig. 7.

2.2.5. Interpretation and archaeological significance

Concentration of archaeological sites including several pillared building sites are especially high in the central part of the plateau immediately to the east of the modern village of Safira. However, the character and function of the ancient urban area is not understood at present. There are no indications in the archaeological record of continued human activities from the Aksumite period until modern times. Some of the travellers visiting the area a century ago relates that the plateau at this time was 'entirely uninhabited'¹², whereas the German expedition in 1906 is commenting on the seasonal presence of the Saho people (referred to them as the indigenous people called Assaorta), who were returning from the low lands to the plateau during the rainy season and give mention of local settlements some of which were situated on inaccessible mountain slopes¹³.

The modern inhabitants claim to have been present in the area in 20-30 generations. Other local informants refer that the many stone

¹²Bent, 1893, p. 217 as referred by Eigner, 2004

¹³As referred by Theodor von Lüpke in his diary on 22 April 1906, quoted in *Im Kaiserlichem Aufdrag* 2006, p. 232-233. Allegedly the plateau had been densely occupied, but largely depopulated due to the Italian colonisation.

houses have been built within the last 30 years indicating that the present settlements are of a relatively recent origin. Past land use may thus have been seasonal exploitation of the land, not necessarily involving permanent building construction and continuous presence of humans. Due to the need of travelling light the use of household pottery may have been very limited or totally absent. This nomadic lifestyle is unlikely to have had any significant impact on the landscape and it is also unlikely to have left any traces in the archaeological record.

The discontinuity of human activities since antiquity is a distinctive attribute to Qohaito leaving the archaeological landscape and the ancient sites largely undisturbed of subsequent development. This unique circumstance create an exceptional possibility of studying the organisation of land use, property and household resources in an ancient society through archaeological research.

Before the 19th century there is no specific reference to Qohaito apart from a general reference of the inland regions and a specific reference in the *Periplus of the Maris Erythraei* to an ancient place named Koloê: 'From Adulis it is a journey of three days to Koloê, an inland city that is the first trading post for ivory, and from there another five days to the metropolis itself, which is called Axômitês; into it is brought all the ivory from beyond the Nile through what is called Keyêneion, and from there down to Adulis'¹⁴.

The site of the ancient caravan trading post named Koloê has not been convincingly identified, but it might be identical with Tokonda or Matara, where impressive archaeological remains are identified¹⁵. Qohaito has been brought forward as a possible candidate¹⁶, but this proposal has been questioned on grounds that the scattered settlement patterns on the plateau does not resemble an urban centre, which would otherwise be expected for a commercial site like Koloê and the fact that reaching Qohaito would imply a detour on the most attractive caravan routes from Adulis to Aksum¹⁷.

On the other hand Qohaito is situated conveniently close in between the alternative caravan routes via Wadi Haddas or Wadi Komalié. Recently also Hishmale has been mentioned due to the occurrence of many ruins of large buildings. Both Hishmale and Qohaito are situated a three days' journey from the sea and from both of these places the caravans could reach Aksum via Tokonda-Kaskase and Yeha within five days, just as the *Periplus* says¹⁸.

A hypothesis of Qohaito being an area of summer residences of the elite in Adulis has been suggested¹⁹, the main evidence being the exceptional location of some of the houses in places with a good view to the spectacular surroundings. This idea may be supported by the uncovering of cultural deposits more than 10 metres thick at



¹⁴ *Periplus* 4, transl. Casson (1989:53), referred from Eivind Heldaas Seland, 2006, p. 103.

¹⁵ Anfray, 1974, p. 753

¹⁶ Munro-Hay, 1991, p. 47

¹⁷ Wenig 2003, p. 93

¹⁸ W. Raunig, Adulis to Aksum, *Trade and Travel in the Red Sea Region*, Society for Arabian Studies Monographs No. 2, 2002, pp. 87-91.

¹⁹ Eigner 2004, p. 126

²⁰ Munro-Hay, 1991, p.:47, cited by Seland, 2006, p. 98.

Adulis, which may indicate that the history of a coastal culture goes much further back than the first century, being perhaps a centre in its own right before the highland rulers from Aksum came to dominate it²⁰. However, the condition survey of one of the ruins with standing pillars at Qohaito have revealed an apse facing to the east, suggesting that it is a church. If it is verified that the monumental ruins are churches, the prominent locations are justified, whereas ordinary buildings are positioned on rock outcrops, probably to avoid occupation of arable land, rather than benefiting from an extraordinary view.

The existence of what seems to be a massive investment in soil management and the fact that microlithics are found on many mounds could indicate that the ancient activities were directly related to the exploitation of the farming potential of the area and ancient Qohaito was in fact largely depending on agriculture based on wise management of the water resources including construction of terraced fields. This does not exclude the existence of elite residences, but objects relating to the lifestyle of the upper classes in late antiquity or earlier has to be found to provide specific evidence of this hypothesis.

2.2.6. Neighbouring archaeological sites

There is no doubt that ancient Qohaito has been closely affiliated to the Aksumite civilisation embracing a group of sites from the same region and period that share distinguished architectural and artifactual features. Whereas extensive research has been conducted on Aksum relatively little research has been carried out on the affiliated sites in Tigray and Eritrea and only a few observations have so far provided some insight into the foundation of Qohaito and its cultural and socio-economic background.

Recent archaeological reconnaissance surveys around the Adi Keih plateau west of Qohaito revealed the existence of extensive archaeological deposits indicating a wide-spread settlement pattern integrated into a common cultural system in the region²¹.

Just south of Adi Keih ancient archaeological remains can be seen near the village of Tokonda, with exposed architectural fragments resembling sites at Qohaito. About 30 km further south spectacular ruins of the same period are located at Keskesse and Matara. All of these sites are within a days travel by foot from the Qohaito Plateau. Situated strategically close to the major caravan trade route between the Red Sea port of Adulis and the Aksum capital city. Qohaito would have benefited from intermittent trade and the livelihood was probably supported by domestic trade networks and goods generated by sedentary farmers.



2.2.7. Future archaeological research

The archaeological sites of Qohaito, Hishmale, Keskesse, Tokonda and Matara provide evidence of extended population of the area in

²¹ M. Curtis and Y Libseagal, Archaeological Survey in the Adi Qeyeh Areas, Eritrea, *Nyame Akuma*, no. 51, June 199, pp. 25-35

²²W.Raunig, 2002, p. 89.

Antiquity, but qualitative and quantitative analyses of the interrelationship between these sites are still pending and the importance of this area in East Africa to the history of the east-west trade in the ancient world is still under-estimated²².

Collection of artefacts from selected sites for comparative study have only limited consequences as long as a more comprehensive study of the regional variations of pottery is missing. Therefore research projects involving scientific excavations are needed to fully understand the context and meaning of the archaeological remains and to provide dating evidence of the chronological development of Qohaito. This knowledge is of scientific importance, and will also be required for the proper interpretation and presentation of the site to visitors. Without a story to tell the 'mounds of rubble' have very little appeal to the visitors, and likewise the local inhabitants in Qohaito may not be fully convinced about the importance of preserving the archaeological remains, which are situated in the midst of their fields obstructing a more intensive land use of the area.

The future research programmes may especially relate to the following topics:

- Establish the chronology of the human activities on the Qohaito Plateau;
- Provide understanding of architecture, construction and function of different type of buildings;
- Study the cultural and socio-economic relations within and beyond the Qohaito Plateau.

Wisely managed future archaeological research may provide knowledge of the development and organisation of the ancient society and explain the reason why the site was finally abandoned. The special conditions and properties in Qohaito provide unique possibilities for comprehensive studies of the cultural and socio-economic condition of the ancient society and its interrelationship with the natural environment. Only very few archaeological sites in the world have a similar potential for reconstructing the interrelationship between the farming settlements and the related land use system within a well defined area.

2.2.8. Current threats to the archaeological sites

The mounds seem to have been created by collapsed buildings. The collapsed roofs and fallen rubble from the upper parts of the walls then provide protection of the remaining part of walls and floors and the original walls may still be preserved in situ up to a height of about 1.5 meters, as it appears from some sites within 'Old Safira' partly dug out by villagers. This re-use of ancient ruins has happened in relatively few cases, where recent houses have been constructed within the site of ancient mounds and incorporating the ancient masonry in the new structures. This practice seems, however, to have stopped.

In recent times the use of the arable land is being intensified throughout the Qohaito Plateau with crops being grown in the midst of the ancient sites. The increased exploitation of land poses a potential threat to the archaeological remains, but as long as ground-



disturbing activities are not carried out directly on the sites or close to them, further degradation is not likely to take place as a result of non-mechanised farming techniques, and no further regulations are needed as long as the current land use is maintained.

However, the sites with standing pillars and otherwise exposed architectural details are vulnerable to further decay, especially because the rubble walls set in a clay mortar are disintegrating due to weathering and become vulnerable to interference by livestock and humans.

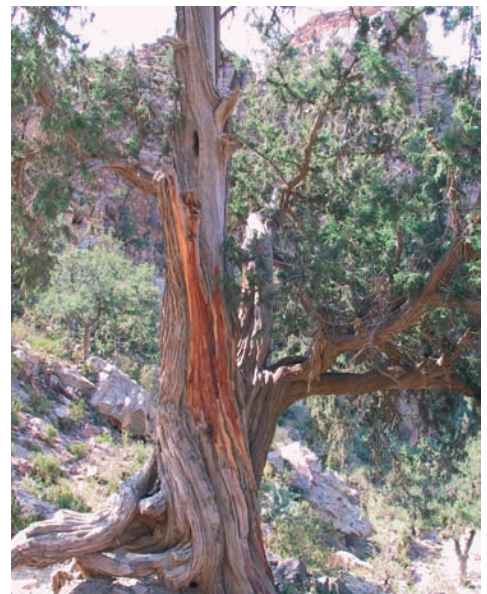
Stones from the ancient buildings laying on the surface may have been collected for reuse, but with the change of construction methods for new housing, this activity is no longer posing an imminent threat to the archaeological remains, however quarrying of rock outcrop, which takes place in various places all over the plateau is disturbing the integrity of the natural environment and heavy trucks are roaming all over the area in close vicinity of the ruins.

2.2.9. Environmental condition and vegetation history

In the 19th century and in the first half of the 20th century it appears that the plateau was covered by more or less dense forests of mainly juniper trees²³. The German Aksum Expedition in 1906 is referring that the whole plateau was covered by dense shrub and trees providing an impression of a parkland unusual to the otherwise treeless highlands. The photos by Theodor von Lüpke corroborate this information depicting large trees close to the ruins. In addition to juniper trees also *Boswellia papyrifera* was identified, which is one of the five species of *Boswellia* used for production of frankincense.

During the 30 years of the Eritrean liberation war the dense vegetation has largely disappeared due to several reasons, including increasing population pressure resulting in the conversion of woodland to agricultural land and the consumption of fuel and construction wood. A general picture of Eritrea shows that natural forest cover has been decreased from circa 30% of the total land area in 1900 to less than 1% today²⁴.

At present the larger part of the southern part of the Qohaito plateau is used for extensive farming with only smaller areas still covered by bushes and a rather sparse vegetation cover including cactus and agave. The northern part of the plateau and especially the slopes along the escarpment have a higher plant cover with dense and lush vegetation in places where water is more abundant. The valley at Karibosa is exceptionally fertile with a vegetation of large trees and cultivation of olive trees.



²³ J. T. Bent, The Sacred City of the Ethiopians, London 1893, p.220 : '...it is very rich in water and springs and offers excellent pasturage...' and later referring to '...a dense mass of juniper trees'...and when descending from the plateau '...wandering through a thick forest', quotation referred by D. Eigner 2004: p. 105.

²⁴ FAO, Support to forestry and wild-life sub-sector, preinvestment study, 1997. The *B. papyrifera* is listed by TRAFFIC, wildlife trade monitoring programme of WWF and IUCN, among the species, which are endangered and need priority in the conservation of the medicinal and wildlife resources in East Africa (Marchall, 1998).

²⁵W. Ogbazghi et al., Distribution of the frankincense tree *Boswellia papyrifera* in Eritrea: the role of environment and land use, Journal of Biogeography no 33, 2006, pp. 524-535.

The observation of *Boswellia* trees on the plateau is interesting, because it contributes to the ancient myths of the Land of Punt and the origin of frankincense. The real extent of the growth on the plateau cannot be clearly asserted on basis of the scant literary sources. Recent surveys of the frankincense trees in Eritrea indicate that the geographical distribution is limited to an altitude of 600-1500 m a.s.l.²⁵. There is, however, a lack of detailed studies on the distribution of *Boswellia*, which can grow in dry and rocky sites where other tree species often fail and it is highly likely that the change in distribution pattern relates to the drastic decline in natural forest cover. The export of frankincense from Eritrea has dropped from 2000 tons in 1974 to 400 tons in 1998²⁶, and a possibility of reviving the frankincense production in the historic place of Qohaito would be most interesting. If observations of *Boswellia* is not verified certainly *Commiphora* species do exist in Qohaito and these species are used to extract Myrrh, which was also traded in Antiquity, when Qohaito was a commercial centre²⁷.

2.3. The Saho people

2.3.1. The Saho and their history in Qohaito

Existing information about the Saho, their socio-cultural history and livelihood pattern is very scarce. Based on scattered information in various sources and interviews with Saho living in Qohaito area, the following picture emerges about the Saho and their history in Qohaito.

The Saho is one of the nine ethnic groups living in Eritrea today and composes about 5 % of the total population in Eritrea (Nielsen 2000). They speak an Eastern Cushitic language closely related to Afar and they seem to be a northern extension of the Afar people, but have during the times mixed with other ethnic groups (Killion 1998). Although referring to themselves as Saho they belong to a number of different sub-tribes, which traditionally were territorial groups (Killion 1998). The traditional social organisation among the Saho is the segmentary lineage system based on kinship and decent (www.allsaho.com). The family constitutes the elementary segment in the segmentary genealogical structure, which taken as a whole defines the system of rights over the land, including particularly pasturage to which each family may lay claim by reasons of its genealogical position (www.allsaho.com).

Today the Saho compose the majority of the inhabitants living in Qohaito. Groups of Tegrinya people have also been living in the area, but mainly as refugees/internally displaced and staying in camps. Most of the Tegrinya have now returned to their home areas (local interviews). There are people from other ethnic groups living in Qohaito, including some Tegrinya, but they are mainly working as schoolteachers, involved in the few small businesses existing in the



²⁶K. Gebrehiwot et al., *Boswellia papyrifera*: a tropical key species in northern Ethiopia, Deutscher Tropentag, Witzenhausen, 2002

²⁷Information from W. Ogbazghi.

²⁸Qohaito (also spelled Kohaito) forms part of Akele Guzai

area, and they do generally not have access to land in the area.

The Saho claim that they can trace their presence in Qohaito at least 30 generations back (local interviews). In fact some old individuals claimed that they know in detail their history of descent for these 30 generations in the area, while others claimed that they could trace their genealogy in detail for 15-20 generations. The longstanding presence of the Saho in Qohaito can be confirmed by historical records, from which it appears, that the Saho moved into the foothills of Akele Guzai²⁸ during the ninth to twelfth centuries AD. Here they incorporated other ethnic groups from the remnants of the Aksumite Empire and by the fifteenth century they had settled in the eastern highlands of Akele Guzai including the plateau around Kohaito²⁹ (Killion 1998). Originally the Saho were pagans but today the majority are Muslims (Killion 1998).

2.3.2. Livelihood pattern practised by the Saho

Traditionally the Saho were mainly pastoralists who moved with their flocks during winter towards the coastal region and returning to the highlands during summer (Lewis 1955). Today a third of the Saho population is still considered to be mainly pastoral (<http://www.allsaho.com>), while the rest mainly derive their livelihood from agro-pastoralism and trade. For the Saho living in Qohaito the agro-pastoral way of life, combined with some trading activities and for an increasing number of people also some wage work, is dominant today, but the tradition of seasonal movements between the highlands (Qohaito Plateau) and the plains along the Red Sea, still continues (local interviews).

The use of the highland and the lowland respectively among the Saho living in Qohaito has changed considerably over time. While the Saho previously migrated between the two areas mainly to utilise pastures during different seasons and maybe to do a little trade on the way, the Saho presently living in Qohaito now increasingly also rely on cultivation for their livelihood.

It is not only in economic terms that the interaction between the lowland and the highland has changed. The way the Saho migrate today has also changed. From previously moving in larger units (whole families and groups of families tied together through kinship) the main pattern today is that only a few members of each family (mainly male) move and the rest remain on the plateau permanently. There are also examples of families who hire herders to bring their animals down to the plains, herd them while there, and bring them back again during the summer period.

For the Saho in Qohaito the use of resources seasonally in the highland and lowland respectively has been and still is crucial to sustain their livelihoods. Access to pastures in the lowland is crucial especially for the cattle during the winter period, and today access to arable land for some of the Saho in both areas is important. Many claim that they only survive because they are supplementing the economic activities in the highland with those in the lowland.



²⁹As mentioned Qohaito is spelled in different ways in different sources

According to local informants the incorporation of cultivation activities in the economy of the Saho was initially mainly a summer activity carried out during the stay in the highlands. However, now several people are also cultivating some land in the lowlands during their stay there. As the Saho in Qohaito are now considered (and considering themselves) as permanent inhabitants of the village communities in Qohaito they are granted access to pastures and arable land in accordance with local land management systems. In the lowlands the available pastures are still used by all herders in common and they all perceive that they have a right to use these pastures (local interviews), but in relation to access to arable land people have to pursue various strategies: they can rent/borrow from 'friends' or relatives³⁰ or engage in sharecropping arrangements, or maybe manage to buy some land. People who 'own' arable land and permanent houses in the lowlands usually hire people or arrange with relatives to take care of their property while they stay in Qohaito during the summer period (local interviews).

2.3.3. Change of livelihood patterns

Based on local interviews alone it is difficult to say exactly when the changes in the migration pattern of the Saho started to occur. However, it appears from Lewis (1955) that some of the Saho migrating between the plateau and the lowlands practised some agriculture in the lowlands already in the 1950s, but were cultivating more intensively at the plateau and tried to limit their stay in the lowlands to as short a period as possible. Lewis also mentions that the Saho by then had widely adopted the *hudmo*³¹ at the plateau (the traditional stone houses with flat roofs, which are common at the plateau) and that the *hudmo* was gradually replacing the traditional Saho conical shelters with thatched roofs, which they used to live in before (Lewis 1955). The Saho consider the plateau as their permanent home today and argue that they started building more solid houses there quite a while ago, whereas many of them say that while in the lowlands they stay in temporary shelters or stay with some relatives who live there more permanently.

There are several reasons why the changes in the migration pattern among the Saho have taken place. First of all there is an increased pressure on pastures as well as arable land in the highlands, and it has become increasingly difficult for people to get access to sufficient land to sustain their livelihood. The increased pressure on land and other resources has several causes. First of all there has been an increase in the population living more permanently in the area, and who now need arable land and pastures. Apart from natural increase in general, the population increase is also due to the fact that only few members of each family now move to the lowland during the winter period compared to previous times. A major reason is that the children are now going to school and have to stay in one place throughout the year. Their mothers and other female relatives are of-

³⁰ Many informants said that they have relatives staying permanently on the plains who have land and from whom they are able to rent/borrow land. Some also said that they themselves own some land there which they have inherited from their grandfathers or great grand fathers who used to stay there more permanently

³¹ *Hudmo* is spelled *hidmo* by other authors. *Hidmo* is the word most commonly used in Qohaito today.

ten those who stay and take care of the children, although there are examples of women taking the animals to the Red Sea area, while their husbands, who may have a salaried job in Qohaito, stay with the school children.

The fact that some Saho now permanently settled in Qohaito, manage to make claims to arable land in the lowlands, must imply that they are able to trace patrilineal decent there. However it is not known to which extent people in the lowland may claim the same right to land in Qohaito. Generally there seems to be a need for in-depth analysis carried out by people with a professional background in anthropology or rural sociology of the interaction between the lowlands and the highlands to generate more specific knowledge about the history of the Saho people and their interaction with other ethnic groups in – and around Qohaito, in particular how people living in the lowland and the highland are related to each other and how they provide the basis for their livelihood.

The increased number of resident people who stay on the plateau throughout the year make the best possible use of the available natural resources. The exploitation of natural resources in Qohaito has also increased during the war, whether it is firewood, building material for shelters, military camps, etc.

2.3.4 Income generating activities

Both peasants and pastoralists produce primarily for their own subsistence, and only small surpluses are available for trade. There are in fact very few alternative sources of income in the local communities in Qohaito. Apart from a few salaried jobs (administrators, 2 guards in Safira, schoolteachers and a few businesses) there are no other sources of income than subsistence agriculture and livestock keeping. There is some local production of handicraft products, but until now they are mainly exchanged as gifts. There is also some local production of honey, and in fact the Saho have a reputation as skilled beekeepers. However, only very few households seem to engage in these activities and then mainly for home consumption.

In terms of development activities very little is going on in most of the communities. There is some house construction and the younger people prefer to stay in 'modern' houses built from cement blocks and with corrugated iron roof or these houses are also considered as investments in the future. But otherwise there are very few job generating activities in the area and the ongoing road construction only involves skilled workers and technicians, and there are no local people with the required qualifications (local interviews).

A few NGOs have been trying to assist the communities with various activities, such as water supply, organising women's groups for income generating activities, etc., but with very little success. The experiences show that what initially for an NGO may seem to be simple (construction of a water pump, organising women) are in fact complicated processes presupposing a number of factors. For example one NGO managed to construct a water pump in Safira, but as the community generate very little public income they are not able to pay for the diesel to keep the pump running continuously and to pay the salary for a person to guard the place.



To start income generating activities with women's groups is not so easy either. During our discussions with the women it became clear that to the extent women do things together it is mainly in small informal circles of friends and relatives, who once in a while come together for coffee in their homes. It is not easy for women to get together in larger groups implying meetings and activities outside the home. The already existing handicraft production mainly involves individual women, who spend their leisure time working on it, although a few close friends/relatives may occasionally sit together and chat while they work on their respective items. It was emphasised that if, in the future, women should try to produce more handicraft items, also for sale to tourists, it would be important that they find their own organisational structure which is compatible with their gender roles in a Muslim community.

2.3.5. The Saho and their attachment to Qohaito and the ancient history

The Saho have a long history of presence in Qohaito, although their more permanent settlement in the area has been a gradual process.

They are very well aware that Qohaito is an important historical place and that there has been an ancient history of a flourishing economy and close interaction between Qohaito and ancient civilisations in various parts of the world³², as well as interaction between different religions, and a lively long distance trade.

Information and stories have been passed on between the generations and informants say that they used to be told stories by their grand parents and great grand parents about the ancient history of the place. Because of that the Saho feel much attached to the plateau and feel proud of living in an area with such a rich history.

There are also some legends about what the place was like previously. One of such legends tells that when the Saho first came to the area they did not meet any of the people who used to stay there, but there were some terraces and grave yards illustrating that people had been living there and engaged in agricultural activities. According to the legend the people who used to live there were very rich, but due to natural disasters with several years of severe drought there was famine and during that time people were willing to pay "a handful of gold for a handful of grain". It is believed that this natural disaster had undermined the prosperity of the place, and that survivors from the disaster then had left the area.

2.3.6. The Saho and their attitudes to preservation of the ancient sites.

There is generally an expressed interest to collaborate about preserving the archaeological remains in the area. According to a local anecdote the elders used to emphasise that only people with education would be able to know exactly what the archaeological remains could tell about the past. They therefore told the youngsters to become educated so that they could become involved in interpreting



³²Reference was made to Turkey, Egypt (the Queen of Sabah) etc.

the ancient history of the place in more detail, and in the meantime, they were told, they had the obligation to take good care of the sites to prevent them from deteriorating.

There are in fact also local rules, which protect the sites. For example there are local rules prohibiting ancient terraces are being used for cultivation or housebuilding sites. As people previously were buried on the family land, the terraces have to be treated like graveyards, which belong to the people buried there and their spirits there should be left in peace (local interviews).

However, it was mentioned again and again that in order that the Saho could become more involved in taking care of the sites they needed more knowledge about how to distinguish between the archaeological remains found in the ground and just ordinary stones and other more recent traces of human presence in the area. Therefore, they argued, it was difficult for them to play an active role in conserving the place unless they were given the necessary information to make them in a position to do so. It was also mentioned that generally very little had been done so far to uncover the remains, and that the authorities in general had shown very little interest in taking care of the place.

The only activities related to the archaeological sites referred to by local people were the activities undertaken by GAME in the late 1990s. The local people claimed however, that they were not at all involved in these activities. They were not involved either, when some of the sites were fenced, and they were told to keep away from these sites at a distance of 100 m. even if the fenced area and these buffer zones were on their farmland.

Another incident giving rise to some bitterness among the Saho is that a certain TV programme had portrayed the Saho as having a very destructive behaviour in relation to the archaeological sites. They did not feel that this was a fair picture, and referred to several other factors, which had contributed to the deterioration, among other things the military camps, which were built right on top of the ruins and also destructive activities taking place during the wars. It was argued that generally the Saho were welcoming initiatives to preserve the place, but they needed to be given the right information as to how they could contribute to that, and also asked for more guards to be employed to help taking care of the place.

At several occasions the Saho were welcoming that something was now going to happen in relation to the sites, and they are looking forward to participate and also to benefit from the future development.

2.3.7 Handicraft products

Production of some high quality handicraft products in Qohaito, especially made by women, although the team was told that men are also involved in producing various items especially woodcarvings and some leatherwork.

The team had the opportunity to visit some women in their homes and view some of their products. All the products are traditionally produced in the area and are for example household utensils such as plates/round trays (*safo*) used to serve the traditional bread,



injera and other food items, jars/pots (*ifoita*) with lid, tightly woven from plant fibre and used for goat milk, and various other containers used to bring food in the fields (*mesobe*) or to store food items. The traditional variation of these utensils are made from pure plant fibre, but now often decorated with synthetic yarn of rich colours and put on the walls for decoration in the homes.



Other examples of items made by many women are containers used to store cosmetics (*kobe*) The container is made from plant fibre (the inner part) and covered on the outside with beautiful leather strips in different brown and black colours, plaited into the plant fibre, and some containers are further decorated with beads and seashells.

There are several other handicraft items especially used by women: For example, beautifully decorated mirrors with leather strips, beads and seashells (*maratsan are*); small bags made from beads of rich colouring and used as container for eyeliner; hair slides made from local silver and leather; leather bags nicely decorated also with leather strips, beads and seashells and used by the bride to carry her belongings (*sibole*), when she moves from her own home to the husband's place; a special leather backpacker used to carry babies (*mahza*), also beautifully decorated with beads and seashells; and a special bride groom stick decorated with colourful beads is also made by women to be presented as a gift to the bridegroom for use at the wedding ceremony.

2.3.8. Traditional settlements and traditional Hidmo houses

The change of migration pattern of the Saho has led to more people settling on the plateau, where they are now becoming sedentary cultivators, living in permanent stone built houses. *Hidmo* (also *Hudmo*) is the term used for both Tigrean and Eritrean vernacular housing typically build as rectangular buildings with flat roofs.



The settlements and villages have developed as an informal, organic structure of individual properties surrounded by low stone walls or fenced off by hedges made up of thorny twigs or cactus to create privacy and to keep cattle and goats away from the gardens. Frequently the villages are perched along the slopes of the escarpment, at times so steep that the houses are built into the steep side of the mountain and blending completely with the surroundings.

External wall are constructed of stone masonry set in mud-mortar or laid dray. The flat roofs are composed of compacted earth resting on twigs and branches and supported by a system of irregularly distributed wooden columns. Often the roof is protruding a few feet with the rafters supported by large wooden poles, which are secured in the ground in front of the walls to take the load away from the walls. The logs used for the roof support are of local origin and the thickness of the posts and beams indicate that junipers of great age have been growing on the plateau in the past.



The village setting and the vernacular architecture is so far pre-

served practically undisturbed my modern changes. However, the cost of building traditional houses has become prohibitively high and the timber for the construction is no longer available in the required dimensions. These houses are now precious historic houses that need preservation as examples of an indigenous vernacular building tradition, which may not survive in other places.

The modern houses are of a more ordinary type used in many parts of Eritrea, typically divided into two compartments and constructed within a private compound. Constructed on a high stone foundation the walls are build of concrete blocks and plastered, while the shed roof is covered with corrugated iron sheets on sawn wood joists spanning from wall to wall, according to a cheap, simple and ship-shape design.



2.4. Natural resource management systems

2.4.1 Land rights

Local interviews made it possible to establish a general picture of the land tenure systems existing in the communities of Qohaito. These systems reflect a mixture of what may be termed customary local rules and norms, colonial policies, and more recent reform policies introduced by the independent Eritrean Government.

2.4.2 Traditional land tenure systems

In the literature there are generally no descriptions of traditional land tenure systems adopted by specific ethnic groups, but more generalised analyses of some main categories of customary systems found in various geographical areas in the country do exist. To what extent these general systems are in fact traditional or being influenced by colonial and postcolonial policies is difficult to say (Rock

2000). However, there seems to be agreement among scholars who have written about customary tenure forms in Eritrea, that one can distinguish between at least the following three major forms³³ :

1. *Diesa*³⁴:

Here rights of access to land are based on village residence and land is viewed as the common property of the village. Land is allocated by the village for individual or household use and reallocated periodically also by the village (from between 3 and 7 year) (Rock 2000, Nielsen 2000).

According to Rock (2000) variants of this system, which was based on equal allocations to all households, was found in the agricultural highlands of Hamasien, in northern and southern Akele Guzai, and in parts of Seraye before the 1950s. The systems were not the traditional systems everywhere but were spread by the Italian colonial government (Rock 2000). Other variants of the *diesa* system have been spread by the Eritrean People's Liberation Front (EPLF), the Eritrean Liberation Front (ELF), and by the Ethiopian Government to other parts of the highland provinces. In contrast to the first mentioned variant of *diesa* households under the last mentioned type were allocated holdings according to family size. There are elements of both these variants in the presently existing system in Qohaito.

While the *diesa* right generally is allocated to the male head of the household (through patrilineal descent), women are not denied land rights under the system. Nielsen (2000) mentions that unmarried women have rights to land at an equal footing with male heads of households, and that divorced women get half of the land jointly held by the household.

Another general customary land tenure form often mentioned in the literature and found in other parts of the highland provinces is:

2. *Tsilmi*:

This form is described by Rock (2000) as follows: "...ownership of land by the immediate family or larger kinship group ...with rights of use going to individuals through inheritance, but involving no right of sale or other alienation ...In some variants of this system, sons and daughters have equal rights of inheritance, in others daughters only inherit land when the deceased has no sons or brothers, or when the daughter, usually for reasons of poverty, receives no dowry on marriage, in which case she has equal inheritance rights to that of the deceased's sons." (Rock, 2000, pp. 223)

A third form often mentioned in the literature is:

3. *Domeniale*:

This is in fact not an indigenous tenure system but describes state-owned land, namely tracts of land designated state land by the

³³ In Tronvoll (1998) there is a much more detailed analysis of the mentioned forms and also a description of a number of other tenure forms found in highland areas of Eritrea. However it is beyond the scope of this report to enter into a more detailed discussion of this.

³⁴ In some parts of Eritrea also referred to as *meret shehene*, see Tronvoll 1998

Italian colonial government. According to Rock (2000) large tracts of land in the western and eastern lowlands and to a lesser extent in parts of the highlands were granted as concessions to Italian settlers. The land was deemed officially to be unoccupied, although in practice it was under jurisdiction of one village or another. So in practice much of the *dominiale* land remained de facto subject to traditional claims of villages in spite of its *de jure* status as government land. (Rock 2000, pp. 223).

Based on information obtained at interviews there are elements of all these land administration systems in Qohaito, especially of the *diesa* system. The way the system was described by local people in Qohaito can be summarised as follows:

Land belongs to the village and each village has its own boundaries and administers the land within these boundaries. Land is allocated to each family residing in the village and reallocated after 6-7 years³⁵. Each family gets land in accordance to family size. When land is reallocated it is divided into different categories depending on fertility, where it is situated, etc., and each family draw lots. This system prevents that the most fertile land is monopolised by the same families continuously.

Generally land is granted to the male head of the household. Women have rights to use the family land through marriage. In polygamous households it is common that each of the wives are assigned their own individual plots by the husband. Widows have a right to inherit land from the husband. Divorced women also have a right to get land, whereas unmarried women only get land if given some by their father/brothers.

Based on the information obtained it seems that people from outside have previously been granted rights to land if they wanted to reside in a village in Qohaito. However, now it appears that only people with agnatic decent in a village can be granted a right to reside and a right to land in the villages. It is mentioned specifically that people from outside were never allocated land. They might be able to rent land – or to do sharecropping, but not able to own land.

This corresponds with developments in the *diesa* system described by Tronvoll (1998). According to him: “The right to usufruct of the land is exclusively restricted to individuals residing in the village. However, certain qualifications have to be fulfilled before an individual or family acquires the right to habitation (*tisha*). It is believed that originally any outsider who had made the village his permanent home by building a hut (*hidmo*) was entitled to a share of the village land. But with the passing of time came population growth, increased migration, and all land expropriations by the Italians, which resulted in land scarcity. As a consequence outsiders were disqualified from acquiring *tisha*, thereby denying them access to the village land, by the rule that only those who could trace agnatic decent to the village could settle and build a *hidmo*.” (Tronvoll 1998, pp. 222)

In fact one of the major problems defined when discussing land issues with local people in Qohaito is the ever increasing pressure on

³⁵There seems though to be a tendency that the periods between redistribution are becoming longer. In one of the villages it was mentioned that now redistribution only takes place after 12 years

land and other natural resources in the area. It is argued that they try to share whatever land they have, and to ensure that the young people can be granted their *tisha* rights (right of habitation) and *diesa* right to a piece of land. However, as there is not enough land for the residents in the villages to sustain their own livelihoods, with the implications that the interaction between the highlands and the lowlands has to continue, claims to land can only be made by people with agnatic decent.

2.4.3. Rights to Land for habitation

All nationals have *tiesa*³⁶ right to a piece of land for habitation in the birthplace, implying that any citizen by the age of 18 can claim customary rights to a plot of land in immediate relation to the house owned by the family and this right is also afforded to girls. Some villages have set aside special *tisha* land, referring to land to be distributed as building plots to those who can claim such a right in the village. The required land is allocated according to decisions taken by the Regional Sub-Zone Administration in consultation with the Department of Lands and the National Museum. It appears that allocation of new *tiesa* land in Qohaito has been suspended temporarily. The future problems relate to achieving a sustainable balance between the resident population and the productive assets in Qohaito.

2.4.4. Rights to other resources

Grazing land – and bush areas is commonly owned and administered by the village, and each household has a right to graze their herds on this land and to utilise resources on bush land. There are fixed boundaries between all the villages and each village is dividing its area in different types of land: agricultural land; pastures; forestland; bush land, etc.

There are local rules and regulations related to the use of all types of forest products, and certain areas with plantations are strictly reserved and nobody is allowed to use any products from these areas. Cutting of trees for housebuilding etc. from forests needs permission.

Generally there have been traditional rules and norms related to use of resources in forested areas, but now the Eritrean government is also issuing rules. Such rules are welcomed by local administrations, who find it increasingly difficult to make sure that overexploitation due to the increased pressure on resources is not taking place.

In fact there has been excessive felling of trees in many parts of Qohaito. Old people tell about the not too distant past when the place was very green with plenty of trees and forested areas. However, the increased demand for building material, firewood, commercial timber exploitation - of which there has been quite some over the times (local interviews), military purposes, etc. have taken their toll. Several of the communities have plans for tree planting and some have managed to establish small plantations, but there is indeed a long way to go.

³⁶ Land Proclamation Art. 6,3. Here the *tiesa* right is defined as land for housing, which differs from the term *tisha* used by Tronvoll 1998 as referred to above. Thus it appears that *tiesa* should not be confused with the *diesa* right .



2.4.5. Land tenure and the Land Proclamation of 1994

It has appeared that the local land tenure systems, and mechanisms adopted for the management of other natural resources, are influenced by customary rules and norms (as they have changed over time) as well as by colonial and post-colonial policies. In spite of this plural legal situation, it is fair to say that there is a fairly high degree of communality in the way village land is managed (village ownership of land, land redistribution, communal rights to grazing areas, etc.).

There is every reason to believe that communal tenure forms are bound to change with the implementation of the 1994 Land Proclamation. The very title of the proclamation sends a strong signal that the state will be playing a much more active role in the management of land also in the rural areas: "A proclamation to reform the system of land tenure in Eritrea, to determine the manner of expropriating land for purposes of development and national reconstruction, and to determine the powers and duties of the land Commission" (Proclamation No. 58/1994, frontpage).

The Land Proclamation is meant to do away with local systems of land redistribution to encourage private investments in land, to promote a more equal land distribution, and to enable the state to acquire land for public and private purposes.

Basically the Land Proclamation vests ownership of all land in the state, and provides for the issuance of usufruct rights or leaseholds over land to individuals (Rock 2000). Three categories of land rights are recognised:

1. Usufructuary rights to arable land in rural areas to be governed by written statutory law. Such rights are issued for life-time to individuals (Rock 2000), with no right of sale and re-lease, but if granted to a family the right may be transferred to a second generation (Tronvoll 1998 b)
2. State leasehold: Land granted by the state on a concession or contractual basis to be governed by the terms of the individual contracts or by private law (Rock 2000)
3. Customary land tenure: which will continue to govern grazing lands woodlands and water rights.(Rock 2000)

The Land Proclamation grants usufructuary land rights to every Eritrean over the age of 18 irrespective of race, religion, gender or nationality, who wants to live by farming (Rock 2000).

While agreeing that there are many pressing land issues, which need attention in Eritrea, including large numbers of returning refugees, many landless people and a need for increased agricultural production, some observers are expressing concerns in relation to the Land Proclamation. It is seen as focussing too much on individual private rights and as viewing land resources as a commercial factor – a means to increase production output – and to disregard the importance of decent ties and the cultural and social relation people have to the land (Tronvoll 1998b).

Another main aspect seen as problematic in the Land Proclamation is that pastoral land rights are not clearly defined and may easily be compromised, for example by the right to fence usufruct land (art. 19). Grazing rights are to be governed by customary rights, but as there are no specific legal provisions protecting such rights in the Proclamation, there is nothing to prevent the state from expropriating communal land (used for pastures) and to lease it to commercial farmers for example. There is a fear therefore that cleavages between farmers and pastoralists may be the result and that such cleavages may be further strained by the religious and cultural differences existing between these groups (Tronvoll 1998).

If implemented fully in Qohaito the Land Proclamation may have serious implications for the Saho, who depends heavily on the migration between the highlands and the lowlands, and in the worst of cases the cultural heritage represented by traditional livelihood patterns will not be preserved.

2.5. The National Tourism Development Plan 2000-2020

The *National Tourism Development Plan 2000-2020* of July 1999 outlines policies and strategies for tourism development, highlighting on the main attractions including archaeological and historic heritage. The plan envisions a total of one million international tourist arrivals by the year 2020 and forecasts a range of between 5000 to 9000 new hotel rooms. The major conclusions of the plan derives from a series of special reports and surveys completed in 1997 and many of the assumptions have changed during the intermediate time.

The Plan has been prepared within the context of national perspectives reflecting the objectives of the National Economic Framework and Programme (NEFP) emphasising on the direct economic benefits of employment, income generation, foreign exchange earnings and government revenues as well as helping to justify and pay for infrastructure improvements. In addition to the economic benefits, tourism development is being considered as a stimulus for conservation of the country's natural environment and cultural heritage because these features comprise the primary attractions for tourists. Finally the concepts of sustainable tourism development is being emphasised. However, implementation of the plan is being constrained and the Ministry of Tourism is currently considering to produce a revised plan.

The Tourism Development Plan has a special section dealing with a tourism development in Qohaito, including the archaeological sites of major significance in the Southern Region, namely Adulis, Dahlak Kebir Necropolis, Qohaito, Tokonda, Kaskase and Matara. The two archaeological sites of Qohaito and Matara have been selected as priority projects and, as such, detailed concept plans for their development are presented. The plans are aimed to be the first step in establishing a common vision of the opportunities that the sites pres-

ent for the creation of unique, high quality national heritage centres that are capable of generating substantial cost recovery revenues as visitor attractions.

The ideas expressed in the Plan shall be viewed in the context of the ambitious scheme for the Asmara- Zalambesa Corridor Tourism Development Concept connecting the capital city with the border town with a string of visitor attractions, emphasising on various historic themes such as the 'Holy Grail or the Ark of Covenant Trail', 'Sahaba Route of Mohammed's Companions', 'Syrian Christian Missionaries Route', 'Napier's Campaign Route of 1856 to Magdala' and other historic events focusing on specific sites that link the coastal areas with the hinterland.

A major development of the Asmara – Zalambesa tourism concept will be realistic only when the border conflicts with Ethiopia is being finally resolved and a common bilateral tourism development strategy can be developed across the border connecting the ancient harbour of Adulis at the coast with the ancient capital city of Aksum.

The National Tourism Development Plan section on Qohaito is based on an 'Archaeological Park Concept', which seems outdated by subsequent developments after the Plan was drafted in 1999. In the intermediate time Eritrea accepted the UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage in 2001. As a consequence Qohaito is proposed for inclusion on the Tentative List for World Heritage Nomination. This implies that the stipulations of the Operational Guidelines will be binding to the State Party and provide the basis for the future management of the heritage values in Qohaito.

On this background it does not seem relevant to maintain the plans of constructing the proposed Archaeological Park Lodge and Visitor Interpretation Centre in a very sensitive and conspicuous location on the very crack of the northern escarpment of the plateau. Neither is a policy of relocating the mosque to be desired. About 37 modern villages, settlements or clusters of houses are now existing on the plateau with a resident population of almost ten thousand⁴⁰ and any extensive policy of resettlement is not relevant. However, implementation of the Zoning Plan is essential to regulate future development and land use.

The official tourist statistics indicate a considerable drop in number of arrivals during the last years. International tourist arrivals to Eritrea reached to about 400.000 in 1997 dropping to about 85.000 in 2005, and only 358 visitors arrivals have been recorded for Qohaito in 2006⁴¹. This number is likely to raise only when the security situation in the area improves.

⁴⁰ population census 20.4.2006 Adi Keih Sub Zone Administration

⁴¹ Ministry of Tourism, *Statistical Report 2005* (March 2006)

Part II

The management planning process



3. The Management and Implementation Plan.

The management planning process and implementation strategies are treated in under the following main headings:

- The management planning process
- Management of land use and urban change
- Administrative structures
- Legal framework and international networking
- Archaeological site management
- Tourism development and strategies for presenting the natural and cultural heritage to visitors

3.1. The management planning process

The Management Plan is an effective means of providing the focus on the aims and objectives of heritage preservation and outline the projects and activities that will be needed to secure that the heritage assets are preserved for future generations. However the Management Plan is not just about preservation. It is about facilitating change to ensure a sustainable and thriving development that will continue to provide a livelihood to the local communities in Qohaito.

The Management Plan describes the vision for the future development of Qohaito and provides directions including recommendations for specific works to be done in partnership by all stakeholders who have a vested interest in the future development of Qohaito.

The plan describes the process by which the partnership has decided to preserve and to develop Qohaito as a Cultural Landscape, in which the archaeological remains are being preserved and presented to the visitors in an interesting and intelligible way, at the same time as the integrity of natural environment is being preserved and a sustainable livelihood of the local inhabitants is developed.

The Plan is aiming towards maintaining a lasting harmony between preservation of the archaeological landscape and an ecologically sustainable development of the area based on traditional farming and pastoralism.

A key factor in the implementation of the Plan is the formation of a Board of Trustees to give the Plan political credibility and a Management Committee representing the concerned parties at all administrative levels ranging from the Central and Provincial Government to the Local Administrations and the Local Communities. The Committee shall outline the strategies and take the relevant initiatives.

The key components of the implementation strategy are:

- Co-ordination of projects, initiatives and funding
- Regular monitoring of the state of conservation of the site
- Annual review of the Implementation Plan

- Review of the Management Plan every five years

The practical implementation of the Plan is co-ordinated by the Site Manager, who shall facilitate the work on a day-to-day basis and give inspiration to a continued commitment of all the organisations and individuals concerned.

His/her role is a crucial one because the success of the Plan is to ensure the active involvement and participation of all stakeholders into an inclusive and fruitful process of co-operation, which provide for free prior and informed consent to any proposed activity.

The underlying principles of free, prior and informed consent can be summarised as follows: (i) information about and consultation on any proposed initiative and its likely impacts; (ii) meaningful participation of indigenous peoples; and, (iii) representative institutions. The World Bank has contributed to the emergence of those principles and practices with regard to the rights of indigenous peoples, cf. World Bank Procedures OP/BP 4.10 on Indigenous Peoples.

The management planning process and implementation strategies are treated in under the following main headings:

- Management of land use and urban change
- Administrative structures
- Legal framework and international networking
- Archaeological site management
- Tourism development and strategies for presenting natural and cultural heritage



3.2. Management of land use and urban change

3.2.1. The cultural landscape in transition

One of the first descriptions of the site by J. T. Bent refers that the plateau was covered by more or less dense forests of mainly juniper trees and at his time 'entirely uninhabited'³⁷. This observation is possibly not entirely correct and should be measured against the current assertion, that the Saho tribe has been living on the plateau for 20 - 30 generations adopting to the site specific conditions by utilising the scarce resources for traditional farming, cattle herding and seasonal nomadic pastoralism. This traditional livelihood has continued almost unchanged by more recent technological developments as a pre-industrial symbiotic interaction between man and nature. The most significant changes have so far occurred in Safira, where the new mosque is most in evidence, but also the change of traditional building methodology in favour of modern constructions of cement block walling and corrugated roofing sheets is an irrevocable fact, showing that traditional livelihood at Qohaito is in a transition period.



Preservation of the archaeological remains is not generally affected by the traditional farming methods and there is no need of further restrictions as long as mechanical ploughing with tractors is not be-

³⁷J.T.Bent, The sacred city of the Ethiopians, London 1893, p. 215 and 217; as referred by Dieter Eigner (2004) p. 107.

ing used.

When it comes to traditional settlements and building methodology the situation is more critical. Apparently there is an ambivalent attitude in the local community to the traditional - versus the modern housing. The younger generation at least appreciate the new houses and the construction is cheaper, easier to maintain and considered 'modern', however, the small plots of 15 x 20 metres are hardly providing space for the most essential vegetal gardening to sustain a subsistence living. The older generation of the extended families is deeply attached to the traditional settlement and will continue to occupy the old homesteads with more space for gardening, stables and storing of farm products in spite of the inconveniences.

The old houses relate to the traditional values in the society and they are important vestiges of the traditional culture creating a feeling of identity and continuity. The maintenance cost is high, however, and in a longer perspective encouragement and possibly some sort of economic incentive may be necessary, if the old *hidmo* houses shall survive unchanged.

3.2.2. Modern housing and urban development

For a number of reasons there is a considerable increase of the population in Qohaito. Whereas the population figure was estimated at about 6 thousand in 1998 the recent census of 2006 shows a total population of 9.753³⁸. According to information obtained from the Adi Keih Sub-Zone administration it is estimated that only about half of the people who have legitimate rights to *tiesa* land have actually put forward their claim, which imply that the population is likely to increase in the future, if no specific restrictions are applied in Qohaito.

Village expansion, as practised at the moment, seems to follow two different principles:

3.2.3. Village expansion in the northern part of the plateau

In the northern part of the plateau *tiesa* land is allocated within a new urban development zones separated from the traditional settlements. This principle seems to apply for Karibosa, Subiraso and Safira:

For the whole of Safira the new urban development is situated between the main road and the western escarpment.

Following a low key approach the new *tiesa* land is distributed as plots of equal size set in parallel rows within a right-angle grid system. Whereas this system is easily applicable and facilitate infrastructure supply at a later stage, the lay out is made without much consideration of the spatial relationship to the landscape. Likewise, there seem to be no special consideration for community



³⁸The 1998 estimate is made by GAME. The old census data cannot be compared with the recent sencus of 20.4.2006 due to changes of administrative disticts. For details of the popula-tion distribution, households and population figures please confer with the table included as appendix II

amenities such as a central square and other basic urban structures that contribute to shape a social and attractive environment, including establishing of a green environment. Interviews with the newcomers indicate that the eastern winds can be harsh and some screen planting would be desirable, possibly as a green belt along the road and around the mosque.

In Safira the allocation of new land for development has encroached upon an archaeological site, at least in one case. This mistake can still be readjusted before the actual construction starts. Fortunately a private property development allegedly intended as a future hotel, situated about two km south of Safira has been stopped in the course of construction, but measures need to be taken to demolish the unfinished structure, in agreement with the intentions outlined in the proposed Zoning Plan.

In the case of Subiraso, two new areas have been allocated for development separate from existing settlements, one immediately to the north of Safira (250 plots) and another new site at Ungulé (300 plots). Both from the point of view of infrastructure supply and conservation of nature and cultural heritage, the centralised village expansion is very wisely keeping the northern part of the Qohaito plateau free of urban sprawl. This development policy facilitates the desired preservation of the vernacular architecture, the traditional village settlements and the natural and cultural landscape within the northern part of the plateau in agreement with the proposed Zoning Plan for archaeological and nature development.



3.2.4. Village expansion in the southern part of the plateau

It appears that existing settlements within the southern areas of the plateau, including the administrative zones of Masagolesula and Igila, are allowed to expand more freely with new houses being built within the old settlement compromising the truly vernacular character of the village.

As long as the housing development is not allowed to spread indiscriminately over a large area, this mix of traditional and modern houses can in the best of cases take place without destroying the sense of space and enclosure, which is one of the qualities in the traditional settlements.

However, from direct observations it appears that several of the smaller villages are being allowed to expand in a very dispersed pattern without any apparent planning control. And the actual application for building permit to construct a new mosque between Guribtya and Daro does not seem to fit into an overall plan for the expansion of the villages.

All settlement on the plateau, new and old alike, lack provision of electricity, water and drainage, apart from Igila, where electricity is available. These basic amenities will be in demand in the future, when the economy improves. Planning for a controlled development



is therefore conditional to keep the cost of new infrastructure at an affordable level.

The type of control that so far has regulated the urban development do not include a rural architectural policy, which need to be adopted for the future.

On this condition controlled expansion of the villages in the southern part of the plateau can take place in agreement with the proposed Zoning Plan for agro-archaeological development.

Igila is strategically situated at the southern end of the plateau, easily accessible on the main road from Adi Keih to Zalambesa and with relatively easy access to infrastructure. All issues considered Igila would be the only settlement in Qohaito suitable for a major urban development.

3.2.5. Land use planning and management

Three types of urban development planning are practised in Eritrea with a increasing level of detail:

- At village level allocation of land for new development is based on customary rights exercised by the local communities and no formal planning documents are being prepared
- Sketch plans are being drafted in some instances indicating the road system and the location of the public service and utility buildings
- Formal Master Plans are being worked out for the urban development in more complex urban environments

Department of Lands, Ministry of Land, Water and Environment prepares development plans for the major towns in Eritrea, but there is no resources also to prepare plans for the minor towns and villages in the rural areas.

In the case of Qohaito the allocation of land for development and regulation of land-use is based mainly on local customary rights, which are administered by the Local Sub-zone Administration. However, in view of the significance of the natural and cultural resources in Qohaito it would be advisable to draft appropriate Site Development Plans to regulate the new development in Qohaito, including the formulation of a set of recommendations for appropriate building construction.

Action:

- *Prepare Site Development Plans for the major settlements and villages on the plateau in accordance with the recommendations set out in the National Environmental Management Plan.*

3.2.6. Land use planning and GIS

Geographical information system (GIS) technology is one of the most important technical components to establish sound and up-date information for environmental management as well as to guide social and economic development. A series of separate overlays can be developed to show the relevant physical features of the environment, including archaeological sites, arable and pasture land, vegetation and urban development. This information, in the setting of a GIS, will give a useful picture of the present day occupation of the territory and provide a management tool for future programmes of development, which will greatly improve future management of the natural and cultural heritage resources.

In order to establish the relevant base maps to be used for general mapping and monitoring a partnership co-operation is being initiated between the National Museum and the Department of Land, Ministry of Land, Water and Environment for the production of the relevant maps based on digitised satellite images.

Action:

- *Preparation of a land use map to serve as a platform for further environmental planning and development in Qohaito.*



3.2.7. Road building and access

The route from Adulis to Aksum must have been the most important in East Africa in ancient times, and the development of a complex society at the Qohaito plateau must have benefitted from the location between the main trade routes along the valleys of Haddas and Komailé. At one and the same time the topographical conditions have created the economic basis for the development of the ancient society and impeded accessibility and development according to modern standards. However, the isolated location according to modern standards is the very reason that the archaeological sites are so well preserved and create an exceptional sentiment of wilderness, which to day is a fundamental quality of the site.

Historically, moving on foot has been the only means of travelling to and from the plateau and walking remains predominant. Main access has been via foot paths leading down to Adi Keih on the western slope of the plateau, and an ancient road leads the way down from the plateau at the south-eastern edge. Additionally there are narrow foot paths leading down to the isolated settlements located along the slopes. The feeling of wilderness and undisturbed natural environment is one of the attractive experiences at the plateau at a time, where very few cars come to Qohaito. This pastoral picture will inevitably change in the future when the living standard increase.



The only vehicular access is by an unpaved road running the full length of the plateau connecting Karibosa in the north and Igila in the south, from where it deviates from the paved asphalt road connecting Asmara with the border town of Zalambesa. The dirt road is

rough and the track is often changed to avoid pot holes. The road is currently extended by the BDHO General Construction Company in the northern direction connecting the plateau from Karibosa with the valley of Komailé via Demihno and further on to Massawa on the Red Sea coast. Engineering construction drawings have been completed, however, the road is intruding on the very sensitive cultural landscape and the plans should be accompanied by a landscape plan, indicating the existing vegetation as well as appropriate measures to harmonise the construction with the natural and cultural setting. The road on the plateau is scheduled for improvement during the next three years. The road is being constructed as a five-metre wide gravel surface road, while the internal tracks will be improved with some spot grating and drainage where necessary. When completed by 2010 the new road will considerably improve accessibility to Qohaito and the direct connection to the lowlands will have a marked impact on future development opportunities.

At the moment very few cars arrive to the plateau and tourist coaches and private vehicles are allowed to drive all over the plateau on the existing roads and trails without restrictions. The future development strategies for Qohaito should balance the different and conflicting interests of maintaining a peaceful natural landscape and providing for unlimited vehicular access.

Vehicles should not be allowed to drive away from the main road without special authorisation, which would imply that vehicular access is only permitted in relation to activities of the legitimate users of the land and by residents in that particular area. Parking grounds can be spaced at strategic locations along the main through road to provide a variety of possibilities to leave the vehicle and visit the attractions on foot.

The siting of the road in relation to New Safira and Safica Dam is particularly critical and should be planned as part of an urban development plan, possibly moving the road closer to the mosque giving way to communal amenities, including planting of trees and scrub to improve townscape qualities and shelter the town against the eastern winds. The new road should also be relocated further away from Safira Dam. Likewise it is suggested that the landscape plan takes into consideration the future tourism and includes the lay out of the required parking grounds, road signposts and tourist information panels.

The National Environmental Assessment Procedures and Guidelines, prepared by the Ministry of Land, Water and Environment, Department of Environment, March 1999, stipulates that a full Environmental Impact Assessment (EIA) is required for 'Category A Projects' before environmental clearance can be granted. The relevant flowchart provides information on procedures etc., including public consultations. The Qohaito Plateau is listed as a special Environmentally Sensitive Area (ESA) due to its archaeological remains, and completion of the EIA is the responsibility of the Project Owner, but will need co-ordination with the Department of Environment and the National Museum.

Action:

- *The BDHO General Construction Company and the Zoba Dehub Regional Administration shall be informed in writing about the need*

of respecting the authentic qualities in the cultural landscape and be informed about the requirement of preparing an Environmental Impact Assessment (EIA) report and related landscape planning.

3.2.8. Development of the natural resources

The widespread deforestation and depletion of scrub juniper as well as the general reduction of the vegetation cover in the cause of the last century and especially during the last 30 years of war, is a matter of concern in Qohaito and elsewhere in Eritrea.

Cutting of trees is now formally prohibited, but not fully respected and overgrazing and trampling by livestock affects tree recruitment. Possible regeneration of the vegetation is an important issue that need special attention. The Ministry of Agriculture has introduced a nation wide 10 years campaign for reforestation, *Warsay Yikalo*, which may also apply to Qohaito conditional to the overall concept of the Management Plan.

A small plantation of Eucalyptus trees is located in the western part of the plateau in an area between Safira and Masagolesula. However, this tree is not indigenous to the area and further study of the vegetation history and the site specific condition of the plateau is needed for possible introduction of a reforestation programme based exclusively on indigenous species.

The Zoning Plan is emphasising on the different qualities and opportunities in the landscape emphasising on the development of the natural resources specifically in the northern part of the plateau and in the buffer zone. Some regulation of current land use will be advisable to allow for the desired regeneration of natural plant growth in designated areas.

Considering the special historic significance of Qohaito only indigenous plant species shall be used, which may also make economic use of the marginal areas on which other species cannot grow. On the lower grounds *Boswellia* species famous for the production of frankincense, could possibly be introduced and there is a potential to grow various *Commiphora* species, which are used to extract Myrrh.

The current restriction on tree cutting needs to be reinforced and monitored by the guards, who shall not only look after the archaeological monuments, but likewise attend to the protection of natural resources within the plateau and declared buffer zone and report to the concerned authorities.

If the mountain areas in and around Qohaito develop as an international mountaineering and trekking destination pressures from tourism may possibly have a negative impact on the vegetation, and further protective measures will be needed, which will involve improvement of the existing foot paths for the benefit of the local inhabitants and the tourists alike.

The United Nations Development Programme (UNDP) for Post-War Emergency Rehabilitation (POWER) has previously funded the repair of about 64 km of footpaths through otherwise inaccessible



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Qohaito Management Plan
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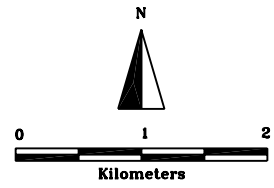


Fig. 4 Zoning Plan :

- Zone I : Archaeological Development Zone
- Zone II: Nature Development Zone
- Zone III: Agricultural Development Zone
- Zone IV: Buffer zone including the mountain slopes and adjacent land administered by the five Administrative Districts in Qohaito

countryside and a possible continuation of this programme would further improve the communication lines to the most remote areas of Qohaito.

The most serious threat to the natural environment at the moment is the extensive quarrying of stones and natural rock surface, which take place all over the plateau. This activity needs to be restricted and controlled in the future by allocating specific areas where quarrying can take place without harming the archaeological sites and the integrity of the cultural landscape.

As part of the land use planning, studies of the vegetation distribution and composition will form an important tool for managing the natural resources in the future. Forest landscape restoration is a collective venture if it is going to succeed. The Management Committee and the Management co-ordinator have an important role play in bringing the stakeholders together and facilitate appropriate action.

Action:

- *Initiate partnership with the Ministry of Agriculture and the College of Agriculture, Department of Land resources and Environment concerning the production of a vegetation map that can serve as an ecological development base map.*

3.3. The site boundaries and zoning

3.3.1. Zoning regulations

The primary objective of a Zoning Plan is to establish a coherent spatial framework for different future uses and to guide and co-ordinate future planning initiatives.

In order to address the site specific conditions and different development potentials the Management Plan introduces specific development zones. These zones are defined on basis of an assessment of the main characteristics of the area and the specific development potentials. The distinct objectives will provide the basis for the future land management, establishing limits of acceptable use and development goals for each zone. It is expected that the Zoning Plan will minimise future conflicts between different users and interests.

The definition of permanent protective boundaries and a buffer zone ensures that both the archaeological sites and the cultural landscape are protected by removing the risk of excessive and uncontrolled development and urban sprawl, safeguarding the interests of agriculture and forestry, as well as satisfying recreational and tourist requirements.

The specific development objective of each zone is outlined under the subsequent headings together with proposals of the general restrictions, while specific restrictions need to be detailed and enforced through subsequent physical planning.

The absence of digitised satellite images and suitable maps the Zoning Plan is therefore a preliminary map based on a digitised map provided by the Eritrean Demining Authority, and the extent of the buffer zone is not shown at this stage, but includes the total area of the five administration districts.

3.3.2. Zone I: Special archaeological development zone

This zone includes the landscape east of the modern town of Safira, which contains the highest density of mounds and the majority of the archaeological remains with architectural features, including the Safira dam and related watering points, the so-called Egyptian Tomb as well as three sites with standing pillars. The high concentration of archaeological sites may relate to a major urban settlement in Antiquity and these attributes form the main cultural tourist attraction of Qohaito, which can be combined with the scenic view at the eastern escarpment to the Komailé Valley and the Amba Soyra mountain range.

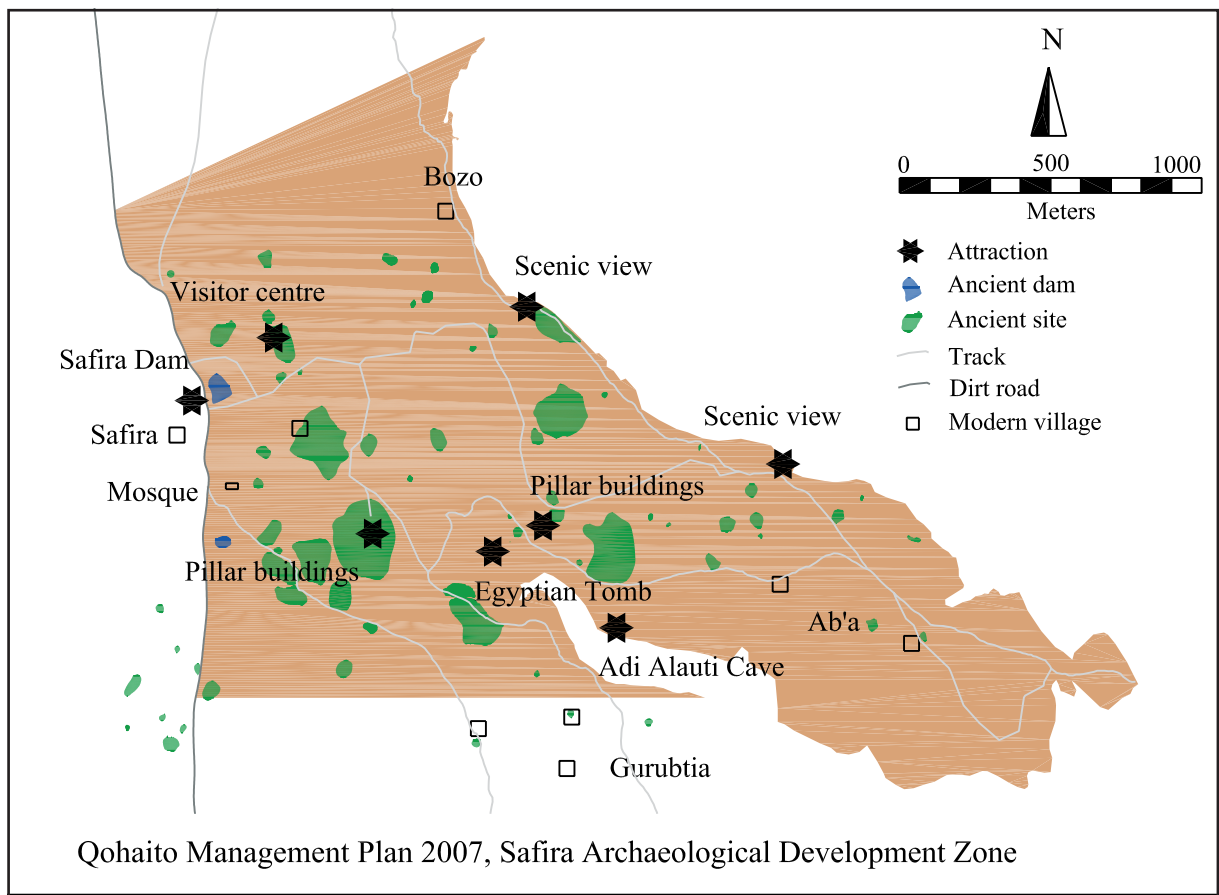


Fig. 5

The development and presentation of the archaeological resources is part of an integrated approach including preservation of the traditional settlements and the vernacular architecture within the zone.

Main objectives:

- Long-term conservation of the archaeological remains
- Archaeological excavation and maintenance of a number of priority sites.
- Preservation and maintenance of existing traditional *hidmo* housing
- Reduce visual impact of new town development in Safira from the archaeological sites.

Restrictions:

- No stone quarrying
- No cutting of trees or branches
- No new constructions or expansion of existing settlements
- No new road/track development
- No deep ploughing or changes of existing land-use
- No ground disturbing activities apart from traditional farming techniques.
- No vehicular access without special authorisation

3.3.2. Zone II: Special nature development zone

This zone comprises the northern part of the Qohaito Plateau, including Karibosa and parts of Subiraso Sub-Zones, representing the most spectacular scenic attributes of the Qohaito Plateau. The most remarkable natural features are represented by the weathered rock surfaces at the north-eastern corner of the plateau from where there are stunning views to the distant villages of Abae' and Dematiyo far below the edge of the escarpment.

It is part of the vision for Qohaito that the inherent qualities in the environment are being enhanced to maintain the feeling of wilderness in this part of the plateau and the identity and type of human intervention is reduced, allowing natural processes greater freedom to operate. Natural vegetation succession and the impact of native flora and fauna become increasingly important components in this northern zone. Also wildlife including wild baboons and other endemic species will benefit from the creation of a wildlife sanctuary that provide for protection of the bio-diversity of the site.

The fertile land and verdant vegetation around Karibosa, including plantations of olive trees is unique in the otherwise dry landscape creating an extraordinary ambience of very high beauty. In combination with the well preserved and authentic vernacular settlements the verdant valley is a specific attraction with potential for development of eco-tourism.

The designation of special areas for allocation of *Tsesa Land in Karibosa*, Subiraso and Safira Administrative Zones have favourably avoided expansion of the existing settlements. This wise decision facilitates preservation of the authentic qualities in the landscape and the creation of a natural development zone in the northern part of the plateau.



The northern zone of Qohaito could be established as a National Park and Nature Reserve emphasising on the protection of wildlife and the preservation of the outstanding natural environment with a very high scenic significance. Loosely defines this would imply that future human activity is limited and disturbance or extraction of resources is not allowed.

Main objectives:

- Long-term conservation of the archaeological remains
- Archaeological excavation and maintenance of a number of priority sites
- Preservation and maintenance of existing *hidmo* houses and settlements
- Vegetation reconstitution and reforestation using indigenous plant species
- Conservation of bio-diversity and wildlife habitat

Restrictions:

- No cutting of trees or branches
- No stone quarrying
- No new constructions or expansion of existing settlements
- No new road/track development
- No changes of existing land-use.
- No ground disturbing activities apart from traditional farming techniques
- No vehicular access outside the through road without special authorisation

3.3.3.Zone III: General agro-archaeological development zone

This zone includes the largest part of plateau located to the south of Safira Town including the sub-zones of Masagolezula, Igila and part of Safira. This area is being utilised extensively for farming, and the subsequent expansion of the major settlements in the area can already be observed as a mixture of traditional *Hidmo* houses with modern constructions. Whereas the change of the traditional architecture is accepted within this zone, there is a need of development planning including the formulation of guidelines to preserve a harmonious change of the built environment.

New roads should not be located within 100 meters preservation zone around archaeological sites. Change of farming techniques implying mechanised ploughing is only permitted after detailed archaeological investigations documenting possible buried traces of ancient hydraulic constructions and terraced fields. Investigations and mapping of ancient terracing may be conducted by georadar, magnetometer, electro magnetometer or similar sophisticated prospecting techniques.

Main objectives:

- Implementation of sustainable agro-pastoral techniques with rotative pasture and regenerative growth preservation including overgrazing control.
- Maintain a dense settlement pattern to diminish impact upon surrounding landscape and keep costs of infrastructure low.



- Encourage plantations in the village areas and the regeneration of perennial vegetation cover
- Encourage reforestation using local tree species
- Establish and put into effect village and town development plans with recommendations to harmonise construction with the natural setting.
- Survey and mapping of hidden traces of terraced fields and ancient hydraulic constructions.

Restrictions:

- No cutting of trees or branches
- No stone quarrying outside designated areas
- No new constructions without building permission
- No new urban development or expansion of exiting settlements without planning permission
- No new road/track development without planning permission
- No deep ploughing or changes of existing land-use without prior consent.
- No ground disturbing activities close to the archaeological remains.

3.3.4. Zone IV: Buffer zone

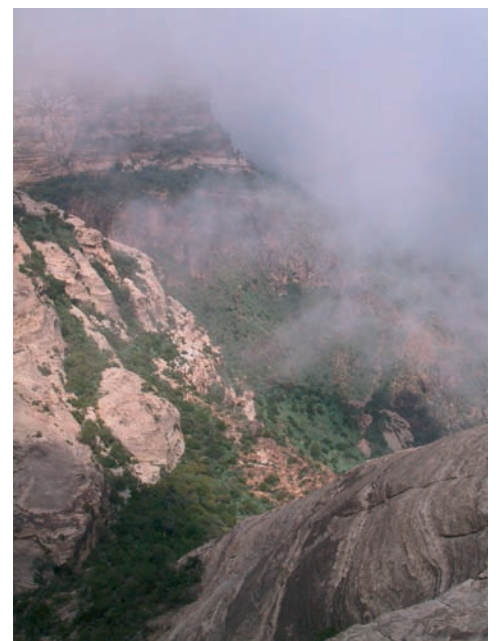
This zone includes the areas naturally relating to the escarpment and mountain slopes to all sides of the plateau. The external delineation is coinciding with the boundaries of the respective five Administrative Zones of Karibosa, Safira, Subiraso, Masagolesula and Igila. At present the borders are commonly recognised, but not mapped. The buffer zone mainly include inaccessible land and it seems probable that very little change will occur in the immediate future. Due to its scenic attractions the buffer zone has a high potential as a natural preservation zone together with Zone II and particular emphasis should be placed on identifying the invironmental qualities associated with the wildness and tranquility.



Main objective:

- Maintain the landscape features and scenic beauty undisturbed by modern developments
- Diversification of tourism activities and quality improvement of heritage and nature trails especially with a view to developing eco-tourism
- Encourage local residents to develop simple bed and breakfast accommodation as part of eco-tourism development.
- Preservation of wildlife and development of bio-diversity and habitat.

Restrictions: as set out for Zone II



4. Management Structure

4.1. The National Museum of Eritrea

The National Museum of Eritrea is the responsible institution for cultural heritage preservation in Eritrea. NME was established with direct reference to the Department of Culture, Ministry of Culture and Information in 1992 and remained under the auspices of this Ministry until 1995. Subsequently NME was established as department of Asmara University with reference to the Ministry of Education.

As a direct consequence of this administrative change, the Department of Archaeology was created at Asmara University in 1997. During the intermediate time 130 students have been trained in archaeology and anthropology, six of those have obtained a M.A. and four are currently working on a Ph.D. Additionally the Department has provided short term training in cultural heritage preservation to 26 people working in various institutions and ministries engaged in ground disturbing activities in one way or the other.

The current staff of 28 has primarily competence within archaeology, anthropology and cultural heritage management. Additionally there seems to be a need of staff trained in architectural heritage conservation in order to cover the many diverse fields of activities undertaken by the NME.

In view of the capacity of Eritrea's natural and cultural heritage in shaping identity and cohesion in the society, it seems relevant that the role of the National Museum should be strengthened.

It is proposed in the Management Plan that a Regional Museum is set up in Adi Keih in order to put special focus on the rich heritage in the Southern Region of Eritrea and thereby support the efforts of developing the cultural resources in Qohaito and the affiliated archaeological sites.

Additionally it seems relevant that the organisational structure is changed in favour of Directorate of Eritrean Cultural Heritage headed by a Director General, who are referring directly to a Minister with responsibility to advance the course of cultural heritage in Eritrea. This organisational structure is outlined in the UNESCO Report of 1995 concerning reinforcement of priority areas and adoption of the relevant national legislation on protection and preservation of the physical heritage in Eritrea.

4.2. Qohaito Board of Trustees

The Management Plan for Qohaito sets out the guiding principles, vision and policies for managing the Cultural Landscape and the Archaeological Site of Qohaito. Implementation of the multi-sectorial, interlinked activities needed for the implementation of the Management Plan requires a single structure acting with enlarged responsibilities and a high degree of autonomy within the site's boundaries.

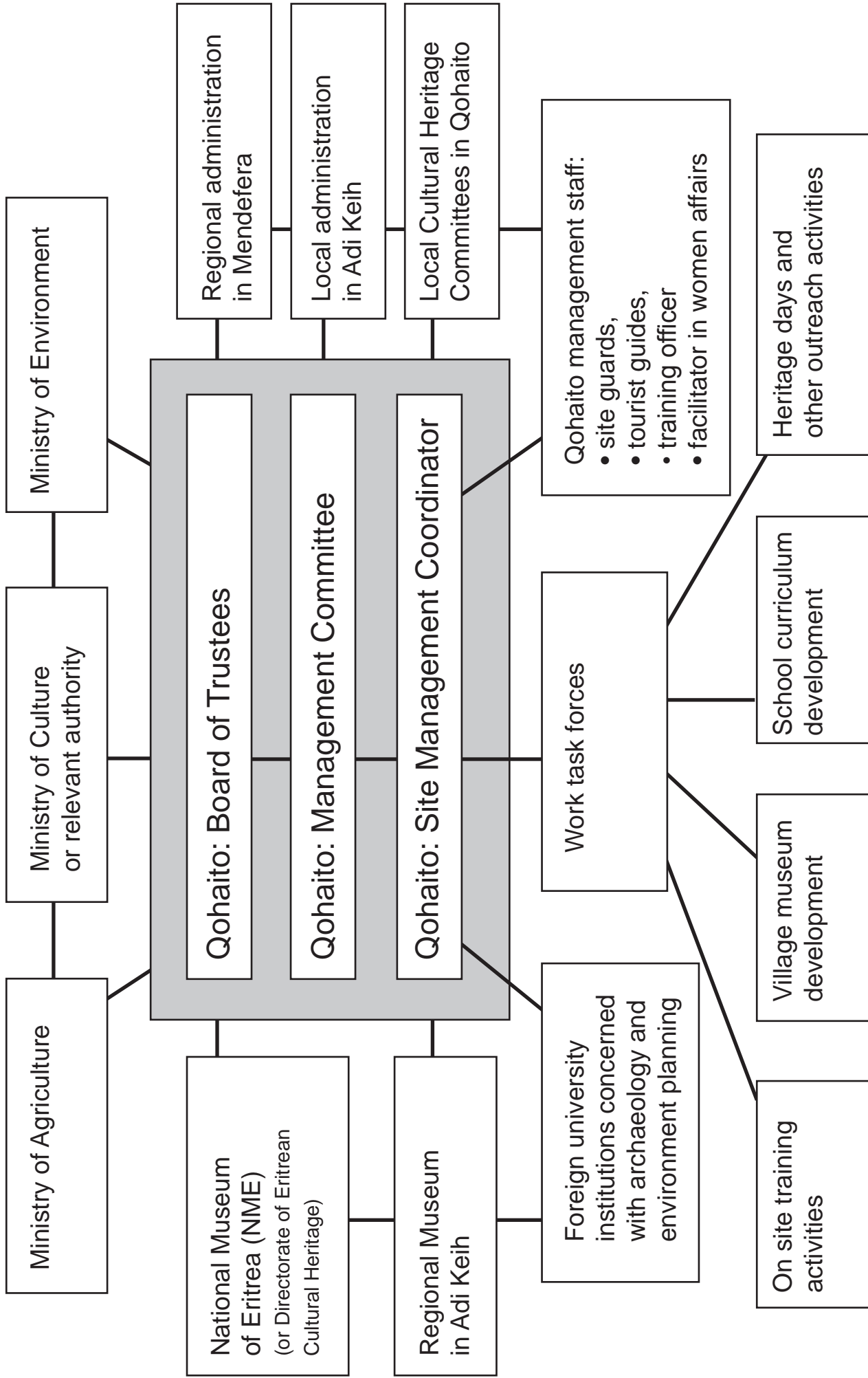


Fig. 6. Chart of management structure for the Archaeological Site and Cultural Landscape of Qohaito

There is a need for a body of high political status to act as champion for the Plan and to co-ordinate activities between the various partners and stakeholders in Qohaito. The governor of Zoba Debub Southern Region, has been suggested as Acting Chairman of the Board.

Terms of Reference are:

- To ensure the preservation of the natural landscape and cultural heritage, including the rich archaeological remains in Qohaito.
- To bring economic, social and environmental benefits to Qohaito and the neighbouring areas through the promotion and development of sustainable tourism and community activities linked with the natural and cultural landscape of Qohaito.
- To monitor the development and ensure that the integrity of the place is maintained and that the development takes place within acceptable limits of change.

4.3. Qohaito Management Committee

A Management Committee shall be established with the responsibilities of approving and supervising the implementation of the plan and the related project activities.

The following government bodies involved in or concerned with conservation and development of Qohaito are proposed as permanent members of the Committee:

- The National Museum of Eritrea
- The Ministry of Tourism, Tourism Product Development Department
- The Ministry of Tourism, Zoba Administration, Southern Zone.
- The Zoba Debub Regional Administration, Southern Region, Mendefera
- The Adi Keih Sub-Regional Administrative Zone
- Qohaito local communities representative.

Additionally, the Committee can supplement itself with individual members from partner organisations and key academics with a range of specialist backgrounds. The Committee is expected to seek specialist advises on any topic or specific activity that requires special knowledge and expertise.

The Committee formulates the statutes stipulating the duties and obligations of its members and appoints the Executive Committee.

The Committee is expected to meet in Qohaito every six months or whenever the need arises to discuss current and future management issues on site and monitor the implementation of projects on the ground in consultations with representatives of each of the administrative zones and the appointed site guards. The plan is providing the

framework, which shall be reconsidered and readjusted at an annual basis under the guidance of the Management Committee including revision and up-dating of the Plan at five years interval.

Action:

• *The Qohaito Management Committee shall be formally established within three months from the adoption of the Management Plan and subsequently the Committee constitutes itself with a chairperson and a secretary, who are responsible for the day-to-day activities and the co-ordination of the Committee's activities.*

4.4. Site Management Co-ordinator

Working under the guidance of the Management Plan Committee the primary function of the Site Manager will include the following key responsibilities:

- Co-ordination of the implementation of the Management Plan.
- Policy formulation
- Information dissemination and education
- Liaison and negotiation with stakeholders
- Donated funds management
- Consultants management
- Administration

The key responsibilities include the following specific tasks:

- Servicing and reporting to the Management Plan Committee.
- Liase with the Local Community representatives and rangers.
- Monitoring progress on the implementation of the Plan and drawing up Annual Action Plans.
- Co-ordination of specific partnership projects, including the strategic frameworks on archaeological excavation, research and conservation measures and other development programmes as required
- Initiate and co-ordinate public awareness campaigns and tourism development in co-operation with the Ministry of Tourism.
- Establish careership and programmes for education and learning
- Revision of the Management Plan at every five years intervals.

The requirements listed below are representative of the knowledge skill and/or abilities that are required for the job:

- A minimum qualification of a University degree in a field related to the conservation and management of cultural heritage
- A minimum of 3 years working experience in project management preferable in the field of cultural heritage conservation and management
- Experience in planning, coordination, and fundraising for heritage programmes

- Be fully bilingual (English and Tigrinia)
- A working knowledge of relevant national legislation and internally recognised principles and practices in natural and cultural heritage preservation and resource management
- Working knowledge of computer programmes such as Microsoft Word, Power Point and Excel
- Good proven written and verbal communication skills
- The ability to be assertive and to work independently and accurately.

Action:

- *The Qohaito Site Manager should be appointed within three months after the adoption of the Master Plan.*

4.5. Facilitator in women’s affairs

The women take an interest in general community matters, but discuss such matters during informal gatherings in connection with daily duties, in coffee drinking groups etc., and in the family. Special efforts should be made to obtain women’s views on the different elements of the plan and to understand how women’s interests can be taken into consideration in the implementation of gender related activities, which are creating opportunities for the women, such as production of handicrafts, honey and other local products. The informal networks that exists between the women can be strengthened through the assistance of a women facilitator, who can work together with the Site Management Co-ordinator.



Action:

- *Employment of a female facilitator, who can interact with women in their informal networks and make sure that their interests and views are brought forward and considered as an integrated part of the management planning activities.*

4.6. Site guards assigned in all five Administrative Zones

At present two local guides are assigned to look after the archaeological remains and serve primarily as guides for tourists arriving at Qohaito. The appointment is only on a part time basis and this seems to work well as long as relative few tourists find their way to Qohaito. Concurrent with the development of tourism in Qohaito, there is a need of specifying the duties and obligations and possibly create specific jobs as tourist guides with specific competence and obligations.



It has been emphasised during the consultation meetings with the local communities that a more equal presentation of guards is needed throughout the plateau and as a minimum each Administrative Zone needs a specially appointed guard. For want of a better designation the guards have several functions relating to preservation, presentation, interpretation and monitoring of the heritage resources (- very similar to the function as may be termed ‘park ranger’ or ‘environ-

mental interpreter'). The ambition should be that they can be trained and educated to speak authoritatively on nature, environment and cultural history. If the tourism increase there might be a future need of specialist guides.

The guards will be appointed by the Management Committee and work in close co-operation with the Site Manager, forming a pool of cultural heritage expertise in Qohaito. The work will include the following key responsibilities:

- Prevent damage to archaeological sites and the natural environment and report about any such violation of cultural heritage sites
- Carry out weeding and basic maintenance of archaeological sites
- Conduct regular monitoring of archaeological sites
- Serve as tourist guides and disseminate knowledge about cultural heritage
- Take part in stakeholder consultation meetings and facilitate contacts with local communities.

Action:

- *Formulate job description and appoint one site guard in each Administrative Zones of Karibosa, Subiraso, Masagolesula and Igila, and two in Safira.*

4.7. Local Community support

Qohaito Plateau is divided into five Administrative Zones, each with an Administrator and a Deputy Administrator appointed for an electoral period of 2 to max 3 years. The names of the current administrators are listed in appendix I.

Appointed representatives of all 21 Sub-zones in Adi Keih Sub-regional Administration participate in regular monthly meetings, where all matters of common concern are being discussed. Issues related to natural and cultural heritage preservation may be one of the important subjects on the agenda and managed successfully Qohaito may be a model for similar development in other administrative zones.

The process of community involvement through consultations with community representatives has been essential to the formulation of the Management Plan. As a result of these consultations a special Village Heritage Committee has been formed in all 5 Administrative Zones to act as an informal liaison group on natural and cultural heritage issues in Qohaito. The names are listed in appendix I.

The main function is to act as a focus group and perform an essential co-ordinating role of the partnership between all stakeholders, both to guide the realisation of the Management Plan and to ensuring that the benefits reach throughout Qohaito. The main function of the Village Heritage Committee will be to:

- Establish links and facilitate the communication between the local communities and Qohaito Management Committee



- Raise questions of common concern in the local communities
- Disseminate knowledge of conservation and preservation issues locally.
- Sustain interest and support future development planning and cultural heritage preservation.

Action:

- *Qohaito Management Committee meets with the Village Heritage Committees at least every six months to discuss issues of common concern and interest. The Site Co-ordinator will facilitate the contact whenever it is deemed necessary.*

4.8. Qohaito Management and Implementation Trust Fund

The National Museum of Eritrea being the responsible government organisation for cultural heritage preservation at a national level barely has enough resources to maintain their collections and develop the professional capacity. It is imperative that external funding is being allocated for the implementation of the Management Plan.

Local communities are concerned that they should be able to benefit from a possible increase in income from tourism and other developments in the area as a fair compensation of the restrictions on the use of resources, which are imposed as a consequence of the Management Plan. In the future it should not be necessary to issue road permits to control vehicular traffic, and entrance fees should be charged and maintained in Qohaito as a compensation and incentive to the local communities in developing tourism and create new jobs.

Funds deposited at the University of Asmara derives from accumulated amounts collected for issuing visitor permits to Qohaito and other tourist destinations in Eritrea. It would serve the purpose of developing sustainable tourism and create a sense of ownership, if these funds are put at disposal locally and administered by the Site Managers Office, serving as seed money in a revolving fund for the financing of various local initiatives, such as purchase of material for local production of handicrafts, restoration of traditional *hidmo* houses and similar projects that help to initiate a sustainable tourism development.

This is particularly critical at a time when the number of visitors to Qohaito is very low and it takes time before sufficient tourism numbers can justify community investment and provide reasonable financial returns. In the meantime financial assistance is needed to assist individuals or groups in the local communities to start new initiatives. To maximise profit all efforts shall be made to primarily purchase raw materials locally and to stimulate local crafts.

Action:

- *Establish a micro credit system or revolving heritage fund under administration by the Site Management Co-ordinator to assist individuals or local community groups to start new projects that contribute to preserve traditional crafts, conserve heritage sites and develop strategies for producing local products.*

5. National policy on heritage preservation

5.1 Legal framework

Already State Party to two key international conventions on heritage safeguarding : the 1972 World Heritage Convention since 1992 and the Convention for the Protection of Cultural Property in the Event of Armed Conflict (the Hague Convention) since 2004, Eritrea is still lacking comprehensive national legislation to regulate and preserve the national heritage.

With the assistance of UNESCO a Draft proclamation for the Protection and Conservation of the Heritage of Eritrea was drafted in 1995. The Draft Legislation attempts to reflect and incorporate all the various concerns and proposals which were expressed and made during a workshop held in Asmara in March 1995. However, several important topics concerning the future administrative structure of cultural heritage preservation in Eritrea remain unsolved and an appropriate legislation has not as yet been adopted by the Eritrean Parliament.

In the intermediate time international principles and practises have changed towards more value based heritage management as exemplified in the 1999 Burra Charter and as reflected in the latest revision of the Operational Guidelines for the Implementation of the World Heritage Convention. Also the 2003 UNESCO Convention on Intangible Cultural Heritage will have a bearing on the future cultural heritage preservation in Eritrea and readjustment of the Draft Proclamation in its present form is needed. It will also be important to reassess current goals and objectives in the future structure of cultural heritage preservation to include the concept of area preservation and protection of built heritage.

The absence of a national heritage legislation is also influencing on the future protection of Qohaito. The Management Plan carries no statutory authority and the specific regulatory control remains in the hands of the respective authorities and local communities and their representatives. In other words the Plan gains authority only to the extent to which it is adopted or implemented by the Government and concerned administrations, - especially as many activities (e.g. land uses) involves important policy decisions and potentially conflicting interests. At some later stage Qohaito may be instituted as a special preservation zone pending the enactment of a Law on the Protection of Cultural Heritage in Eritrea.

Qohaito may *de facto* be protected according to the measures provided in this Management Plan by consent of all concerned partners, but formal statutory protection is required for eventual WH nomination.

Action:

- *Concerted action of the National Museum and the National Commission for UNESCO shall secure funding and professional expertise from UNESCO for preparing a revision and up-date of the Draft Proclamation for the Protection and Conservation of the Cultural Heritage of Eritrea and subsequently urge the concerned ministry to have the legislation adopted by the Parliament.*

5.2. World Heritage Listing

Nomination to the World Heritage List is not considered unless the nominated property has already been included on the State Party's Tentative List one year prior to the submission of the application for nomination. Furthermore, The Operational Guidelines encourage the State Party to prepare the Tentative List with the participation of a wide variety of Stakeholders, including site managers, local and regional governments, local communities, NGO's and other interested parties and partners' (Operational Guidelines para. 64).

The management of the site will be further strengthened by World Heritage designation eventually.

Action:

- *The National Museum of Eritrea up-dates the Tentative List and submits the revised Tentative List to UNESCO World Heritage Centre after the adoption of this Master Plan.*

6. Local capacity development

6.1. Regional Museum in Adi Keih.

The current emphasis on management planning of cultural heritage assets and tourism development in Qohaito can be strengthened by other regional initiatives creating synergies between the cultural heritage sector, educational institutions and tourism. Especially two recent developments sustain the idea of setting up a regional cultural museum in Adi Keih: i) the Ministry of Tourism is about to open a Tourist Information Office in Adi Keih and ii) the new College of Art and Social Sciences and Teachers' Training Centre is recently inaugurated and becomes operational in 2007, opening new opportunities for learning and education. The setting up of a Regional Museum for the Debub Region in Adi Keih would further enhance the value of the rich cultural resources in the area centred around Qohaito and the affiliated archaeological sites at Heshmele, Tokonda, Kaskase and Matara.

The tendencies in museum development internationally focus on creating public spaces of engagement involving local communities in a meaningful debate about their own history and livelihood. Especially the importance of intangible heritage and its role in the preservation of cultural diversity is about to transform the relationship between museums and their audiences and stakeholders. In the case of Adi Keih the cultural museum concept would also include aspects of intangible heritage relating to language and traditions of the different ethnic groups, who have lived in the area since Antiquity.

ICOM Definition of a Museum:

"A museum is a non-profit making, permanent institution in the service of society and of its development, and open to the public, which acquires, conserves, researches, communicates and exhibits, for purposes of study, education and enjoyment, material evidence of people and their environment" (ICOM Statutes art.2 para.1)

The museum should be established and operate in accordance with the Code of Ethics for Museum (2006) prepared by the International Council of Museums (ICOM). Principles no. 4 and 6 may be of special relevance to reflect the idea of a cultural museum development in the Zoba Debub Southern Region :

4. Principle: Museums provide opportunities for the appreciation, understanding and promotion of the natural and cultural heritage.

- *Museums have an important duty to develop their educational role and attract wider audiences from the community, locality, or group they serve. Interaction with the constituent community and promotion of their heritage is an integral part of the educational role of the museum”.*

6. Principle: Museums work in close collaboration with the communities from which their collections originate as well as those they serve

- *Museum collections reflect the cultural and natural heritage of the communities from which they have been derived. As such they have a character beyond that of ordinary property which may include strong affinities with national, regional, local, ethnic, religious or political identity. It is important therefore that museum policy is responsive to this possibility.*

6.2. Professional Capacity in cultural heritage development

The adoption through UNESCO of the Intangible Heritage Convention in 2003 has very important implications for the preservation of cultural heritage at a global scale, but specifically at a local level in Qohaito. Additional to the ancient archaeology there is the vast amount of traditional knowledge, skills and pursuits that the Saho people still practise, but the transformation of cultural traditions and livelihood in face of the technological progress and globalisation is underway.

The changing paradigm of the role of the museum put new challenges to the members of museum profession, who can adopt to an open and inclusive approach and work in close co-operation with local communities. Many of the competencies needed for presenting and documenting intangible heritage are already included in the ICOM *Curriculum Guidelines for Professional Development* complementary to more traditional skills that are required in archaeology, anthropology and museum management (Please confer with the separate Training Programme in Natural and Cultural Resource Management).

Appointment of a Site Manager for Qohaito and the support staff of local guards in the sub-zones will be an important start for the sustainable management of the cultural heritage resources within that specific area, but the team needs to work in a stimulating professional multidisciplinary milieu that may be created only by the setting up of a Regional Cultural Museum in Adi Keih, which can serve to put cultural heritage on the agenda in Qohaito as well as the whole region.

Action:

- *The Qohaito Management Committee shall among its first activities take the initiative to launch a wider discussion about establishing a Regional Cultural Museum in Adi Keih in a co-operation between the local, the regional and the central government institution and local stakeholders.*

7. International networking and co-operation

International networking is an important means of generate information and new ideas, as well as to co-operate on specific projects and activities. Indeed the commercial and cultural links that flourished in Antiquity may have formed the very basis for the prosperity of Qohaito.

The following intergovernmental organisations and international NGO's are all important actors and co-operation partners in natural and cultural heritage preservation relevant to Qohaito:

7.1. The World Bank

The Eritrean Cultural Assets Rehabilitation Project (CARP) is a World Bank Project Office set up to support the Government of Eritrea in the task to test out and develop means for integrating conservation and management of cultural assets into local and national economic development under financial assistance by loan agreement with the World Bank. The project office closes in July 2007, however, the members of the Steering Committee to CARP will remain as an important professional network on cultural heritage preservation in Eritrea. In the case of Qohaito management planning project an intermediate advisory Management Committee is established and it may become permanent as a result of the proposals set out in the Management and Implementation Plan. The names of the members of these two committees are listed in Appendix I.

7.2. United Nations Development Programme

The UNDP funded Post War Emergency Rehabilitation Programme (POWER) was established to help rehabilitate displaced people and to provide sustainable living conditions, especially in border areas affected by the war. A total of 74 projects were initiated covering a wide range of different areas of assistance according to local conditions and priorities. The Saho living at Qohaito has received UN funding of about 250.000 USD in three priority areas, as proposed by the local communities: i) Poultry production ii) red honey production and iii) repair of footpaths (about 52 km of trails have been repaired providing income possibilities at the same time as access between settlements and the main town of Adi Keih have improve marketing possibilities and access to health. The actual work on site was organised by NGO's. Further co-operation may be sought from UNDP.

7.3. UNESCO

The World Heritage Convention was accepted by Eritrea on 24.10.2001 (but not as yet ratified). So far only *The Historic Perimeter of Asmara and its Modern Architecture* has been included on the Tentative List in 2005. To further assist in the implementation of the Convention the National Commission for UNESCO, the National Museum and CARP in close co-operation with UNESCO World Heritage Centre organised an Awareness Raising Workshop on the World Heritage Convention in 2005.

UNESCO has previously assisted in reinforcing cultural heritage preservation in Eritrea on various occasions: A report on *Preservation and Presentation of the Cultural Heritage* was prepared in 1994 by Francis Anfray and a *Draft Proclamation for the Protection and Conservation of the Heritage of Eritrea* was prepared in 1995 by Richard Crewdson at the basis of a workshop, but the draft law has not been ratified and changes in international approaches to heritage conservation has changed in the intermediate time.

World Heritage listing of Qohaito Archaeological Site and Cultural Landscape eventually may possibly be conditional upon the adoption of appropriate national legislation on cultural heritage preservation. As a State Party to the Convention Eritrea may seek further assistance to develop the appropriate legislation. There might be other areas within the cultural sector which could possibly benefit from assistance by UNESCO, for example to undertake awareness campaigns, development of school curriculum and prepare teaching material in cultural heritage.

In relation to a possible nomination of Qohaito to the World Heritage List as well as in view of the rich and diverse ethnic composition of the Eritrean population it may also be in the interest of Eritrea to accede to the Convention for the Safeguarding of the Intangible Heritage

7.4. ICCROM, IUCN, ICOMOS and ICOM.

The professional networks that are established through the membership of such intergovernmental organisations and NGO's like The World Conservation Union (IUCN), the International Council on Monuments and Sites (ICOMOS), the International Council on Museums (ICOM) and the International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM) are all very important partners in the field of cultural heritage preservation.

Eritrea is not a member of ICCROM or IUCN and there is as yet not established National Committees to ICOMOS and ICOM.

7.5. International Mountain Day:

Under the motto 'Mountains Sustain Livelihoods' the World Conservation Union (IUCN) celebrates an International Mountain Day that is organised to call attention to the mountain communities, who are directly affected by ecosystem degradation and climate change, leading to failure of production cycles, difficulty in predicting seed and

harvest times, and greater variability in water resources. The overall result is mounting stress on traditional livelihoods in the Andes, Himalayas, and Eastern Africa. In response, IUCN is undertaking several initiatives for mountain peoples and ecosystems to adapt to global change. IUCN is also promoting water resource management as part of an integrated ecosystem management in regional development and conservation processes.

Participation in this type of international networking may also prove beneficial to the development in Qohaito. More detailed information can be obtained from IUCN on Mountains:
www.iucn.org/themes/cem/ecosystems/mountains/



8. Archaeological site conservation

8.1. Local custodians

The ancient buildings on the Qohaito plateau were abandoned and eventually collapsed when the ancient society died away. Subsequently the desolated ruins have largely been left untouched and the archaeological remains are preserved in a relatively good condition, because husbandry and traditional farming techniques have interfered very little with the archaeological remains.

It needs to be recognised that the people living in Qohaito are the best custodians of the archaeological heritage, which they have inherited from their forefathers. Intentional destruction or vandalism does not seem to take place and examples of thoughtless or destructive action are hardly seen. Inevitably, increasing population pressure and more intensive land-use, that may include mechanised farming techniques, are threatening the archaeological heritage and the cultural landscape.

8.2. Integrated conservation

The Management and Implementation Plan is describing the conditions, identifying the problems and providing a systematic approach to an integrated preservation and development of the archaeological remains in Qohaito.

The first and obvious step in limiting damage to archaeological remains is :

- to know the extend and location of the archaeological sites
- to create knowledge and apprehension of the importance of preserving these sites as an integrated part of the cultural environment
- to establish the means to develop the cultural assets and ensure a sustainable development of the site.

8.3. Archaeological site survey and documentation.

The digitised data processing of the archaeological records is an essential management tool for the identification and future management of the sites. Based on the surveys carried out by the German Archaeological Mission to Eritrea a supplementary survey has been conducted as an integrated part of the management planning process in co-operation with staff from the National Museum. The information gathered from the site registration is digitised into a database using a Microsoft Access platform and combined with geographic references. The interconnection between the GIS system and all the data obtained in the different areas of study result in a detailed site information system, which forms the basis for all subsequent study and management of the sites.



In lack of appropriate satellite images of the Qohaito plateau a digitised map has kindly been provided by the Eritrean Demining Authority for use as an intermediate base map. A detailed explanation of the survey techniques and methods is provided in Appendix IV.

Action:

- *At the moment all data is treated and stored at the National Museum. When a Site Management Office is established the Site Manager will have the responsibility for recording all activities on site and up-date the Data Archive. A safety copy shall be kept at the National Museum having the overall responsibility for the documentation.*

8.4 General conservation guidelines

In addition to the general development regulation stipulated in the Zoning Development Plan, there is a imminent need of preservation of individual archaeological sites along the following principles:

- Condition survey shall be conducted of all sites with special high preservation value such as standing pillars or other visible architectural features. These high priority sites shall be monitored on a regular basis each year.
- Traditional *Hidmo* houses situated within or occupying an ancient site can remain in situ provided that no further degradation occur to the archaeological remain and the owner of the property contributes towards preservation of the ruins. New developments are being restricted according to the zoning plan regulations.
- Sites located in areas designated for urban development shall be protected from encroachment by a 100 metres preservation zone. This provision is applicable to sites located within the New Safira, and building plots already allocated within this preservation zone shall be relocated. Likewise the military camps of the Brigade 52, Masagolezula, occupying ancient sites shall be relocated.
- Ground disturbing activities, ploughing and planting are not permitted within 2 meters from the base of an archaeological site.



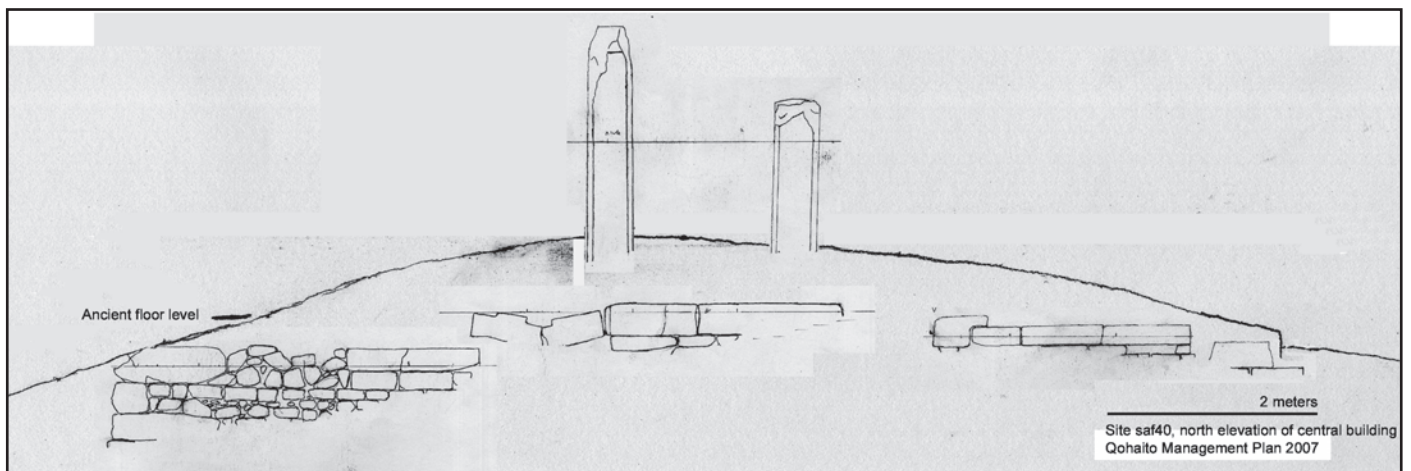


Fig. 7: Condition survey of archaeological site with standing architecture (Saf. 40), plan and elevation, Dec. 2006.

8.5. Archaeological Site Markers

Community consultations have emphasised on the need of specific site identification to raise awareness of the existence of the individual archaeological remains and secure their protection as a national heritage site. Recognition of values and the existence of the sites reduce the risk of vandalism due to sheer ignorance. Deliberate destruction is not an issue in Qohaito.

Site markers can be used to indicate the location of the registered archaeological sites and each site can be identified by a serial number that refers to the respective number in the archaeological register. The related maps are kept in duplicate at the Site Managers Office and at the National Museum. Whenever needed the list can be printed out to the site guards with specific instructions for maintenance and monitoring of site conditions.

Action:

- *Develop the design in preparation for a public tender for the production of the markers; complete contract and production procedures. Place markers in the field and include related information into the archaeological data sheet file with reference to serial numbers.*

8.6. Regular maintenance, condition assessment and monitoring

The area may experience significant environmental, social and economic change due to human activities and natural processes. It is important to examine the impacts of development and monitoring changing conditions through annual and five-year review cycles in order to avoid negative impacts that may gradually undermining the integrity of the place and threaten the archaeological resource base.

The appointment of a Site Manager and site guards with stated duties and responsibilities shall ensure regular inspection and maintenance of sites based on informed judgement according to well established principles in conservation that preventive maintenance is better than restoration at a later time: "One stitch in time save nine".

Generally the mounds are well preserved and no direct conservation is required, however, special attention is needed for all sites with standing pillars or visible architectural details.

Three sites with standing pillars (the so-called Littmann no.1, 6 and 8) have been fenced by GAME in 1998 with iron t- rods connected by wires up to a height of 1.60 m above ground. At the moment the wires are missing at the northern site (Littmann no 6) located within the Subiraso zone and the padlocks used for the gates at the two other sites are being constantly obstructed by curious kids and the wires are anyhow not preventing the cattle and goats to get inside. From the point of aesthetics the fencing is in visual conflict with the monument. Protection from vandalism is extremely difficult and railings can themselves be a provoking challenge. In fact it may be reconsidered to which extend the fencing is necessary.



Everything considered the height of the fence could probably be reduced to only about 1 meter to make the fencing less visually obstructive and still provide a demarcation of the site. Then the wire replaced and repaired and a stile for access by humans is probably a sensible answer to prevent the cattle or goats using the pillars as rubbing stones and still allow visitors to enter the site.

While it is important to maintain a vegetation cover to avoid soil erosion, it is important that the grass within the enclosure is being cut not to attract special attention by the animals and to allow better growth of herbaceous plants.

Actions:

The interventions shall be carried out according to the following recommendations:

- *Any intervention shall be recorded in the digitised data sheet file.*
- *Recent houses constructed within ancient ruins shall be recorded and recommendations for their preservation and maintenance be worked out in co-operation with the owner of the property.*
- *Excavated ruins, which are not presented and maintained at a permanent basis, shall be refilled and covered with rubble above a separation layer.*
- *Exposed features shall be conserved according to an individual evaluation of the needs. The intervention may include consolidation of the upper courses of the walling with a layer of lime mortar to avoid further deterioration. This consolidation work shall be carried out only when detailed documentation has been completed.*
- *Sites with visual architectural features shall be weeded during the growing season and the condition monitored at regular intervals.*

8.7. Specific conservation guidelines

The archaeological monuments with standing monolith pillars and visible architectural features require special attention and two ancient monuments need special treatment, due to their uniqueness: The so-called Egyptian Tomb and the Safira Dam.

8.7.1. The Egyptian Tomb

The Egyptian Tomb is cut out of the bed rock on the edge of a ravine with an exposed structure of dressed stone masonry worked to a fine finish set on top. The grave chamber itself is hewn into the rock base.

Weathering and human destruction, however, has caused severe harm to the monument and only few ashlar are left *in situ*. Many of the ashlar seem to have been thrown into the grave chamber and others are spread on the ground just below the tomb site. The condition is very precarious and the deterioration continues.



Actions:

- *Complete condition survey including a precise and detailed documentation of the original ashlar and other details contributing to a possible reconstruction of the monument. Comparison with the 1906 photographs by Theodor von Lüpke and other historic documentation is required.*
- *Excavate the grave chamber and recover original ashlar.*
- *Preserve and restore the tomb through anastylosis carried out by use of the original stones. In case some ashlar are missing the original coursing should be completed by new stones that can be distinguished from the original. No arbitrary reconstruction should be attempted. Only hydraulic lime mortar shall be used without any cement. The NME is advised to seek assistance by foreign expertise for this task of high priority.*

8.7.2. The Safia Dam

The Safira dam is associated with a visit of Queen Saba to Qohaito adding to the fame of the historic water reservoir on the plateau. The dating of the monument is not certain, but it is believed to be pre-Aksumite and have construction details similar to hydraulic systems in Yemen possibly indicating an early Sabaen relationship. The dam was first recorded by Stanislaw Russell in 1860, J. Theodore Bent in 1892, by Max Scholler and Georg Schweinfurth in 1894 and by the Enno Littmann expedition in 1906. The dam was rebuilt about 30 years ago to provide water for the population and the work did not respect the authentic appearance and function of the reservoir³⁹.

However the wall is back filled and there is no immediate threat to the original part of the monument. A restoration proper of the Dam is costly and requires specialist expertise. On this premises restoration is not a high priority project as compared to more urgent work.

Actions:

- *Complete condition survey including a precise and detailed documentation of the original ashlar and other details contributing to a possible reconstruction of the monument.*
- *Monitor the conditions of the monument over the coming years awaiting a full scale restoration.*
- *Conduct archaeological excavation, which can help to determine the position of the original outlets and the function of the buildings originally situated at the south-eastern corner of the dam.*
- *Prepare reconstruction drawings of the possible appearance of the original dam, including identification of original stones. Comparison with the 1906 photographs by Theodor von Lüpke and other historic documentation is required.*
- *Work out a restoration proposal including landscaping of the surrounding area and seek out international assistance for the preparation and execution of the project.*



³⁹Ueli Brunner, Die Zisterne von Safira, *Im Kaiserlichem Aufdrag*, 2006, pp. 381-387.

8.7.3. Rock art

The rock art sites form an important part of the cultural heritage in Qohaito, but only little is known about their dating and therefore their significance remains unknown. A large number of new sites have been identified in the course of the site surveys conducted as part of the management planning process and it becomes evident that the rock art sites require special attention by professional experts.



The paintings are found mainly in rock shelters where the overhanging cliff provides some protection against weathering, but they are vulnerable to further decay and a study of the condition and need of conservation is required.

Likewise, the rock art is found in plenty in other areas close to Qohaito and comparative studies of ethnic and regional character within the whole southern region are required to give a true picture of the chronological development and interpretation of these sites.

Action:

- *Complete the identification and documentation of rock art sites.*
- *Make contact to other rock art sites in Africa and elsewhere and establish networking for exchange of knowledge and know how on preservation and maintenance.*
- *Seek international assistance for dating and classification of the rock art in relation to a regional development.*

8.8. General conservation guidelines: Short-term initiatives 2007

The most urgent activities should be carried out within a year with the aim of recording the monuments that can be identified by traditional means and ensuring the consolidation of these monuments to prevent unnecessary deterioration.

The following actions are expected to be carried out and completed:

- Complete and up-date archaeological site registration
- Conduct condition surveys for sites with standing architecture
- Consolidate standing walls
- Conduct land use and settlement mapping.
- Seek expertise to evaluate the rock art paintings
- Identify resources – economic and professional expertise - for the restoration of the Egyptian Tomb
- Place site marker at all registered archaeological sites
- Continue community work in order to increase local awareness and participation
- Clearing of the military camps currently sited next to archaeological sites

8.9 General conservation guidelines: Mid-term initiatives 2008-2012

The midterm initiatives for the period 2008 to 2012 shall further consolidate and develop the cultural assets in Qohaito and the relating sites in the Southern Region, both in terms of knowledge and financial income. These activities include research into the history of the archaeological landscape of Qohaito in co-operation with foreign partners, who can contribute with financial and technical support, including development of expertise and exchange of knowledge.

The investigations and excavations shall be followed by appropriate conservation of the exposed ruins and measures for proper interpretation, presentation and maintenance of the sites. It goes without mentioning that any research projects need a thorough scientific approach and the results are being published in internationally recognised scientific journals.

The following activities are expected to be carried out and completed:

- Restoration of the Egyptian Tomb
- Excavation, consolidation and presentation of one or two archaeological monuments with standing pillars, possibly 'Littmann no. 6 and/or 8'
- Regular monitoring and maintenance of archaeological sites continues
- Emergency consolidation and preservation of endangered rock paintings

8.10 General conservation guidelines: Long-term perspectives after 2012

In a long-term perspective after 2012 the research into the history of Qohaito continues. At this stage the basic chronological framework and interpretations of basic categories of monuments will be established. Possible activities will include Eritrea hosting scientific conferences on topics relating to the material culture of Qohaito and affiliated sites, including studies on the regional context of the Qohaito civilisation, transboundary research and co-operation.

If the number of visitors exceeds the bearing capacity of the Visitor Centre it is suggested that the existing school is substituted by an alternative facility and the buildings are adapted for re-use as archaeological site project offices, visitor facilities and educational purposes related to the interpretation and presentation of the natural and cultural heritage of Qohaito. For the time being the Management Plan envisages a more simple and modest approach

The following activities are expected to be carried out and completed:

- Restoration of the Safira Dam
- Excavation of ruins incorporated in the *Hidmo* settlement of Old Safira and the site consolidated and presented as part of the Visitor Centre and Historic Village.
- Excavation of at least one larger archaeological site with compounded settlements.

9. Natural and cultural tourism development

9.1. Tourism as a potential income earning activity

Tourism is regarded as having the greatest potential for income generation to support national as well as local development initiatives in Eritrea. The tourist activity can develop in a number of key areas that form the country's network of cultural heritage sites, national parks and protected areas. Given the significance of these areas it is in both national and global interest for Eritrea to develop methods of tourism that preserve and enhance these critical resources.

Qohaito archaeological site and cultural landscape has a central importance to the development of tourism in the Southern Region of Eritrea. One of the challenges is to ensure that Qohaito and associated archaeological sites are developed in a self-sustaining manner, whilst simultaneously generating revenue for wider needs of the country.

In the time of globalisation the name 'Qohaito' pops up with some 800 hits, when searched on the internet. However, much information is misleading and repeating the same mistakes, but the sheer number of hits testifies to the international attention to this specific site in the highlands of Eritrea. Inclusion in Eritrea's Tentative List as a potential World Heritage Site further enhances Qohaito's attraction to tourists.

9.2. Tourism development strategies

The promotion of sustainable tourism requires strengthening of institutional capacity by involving and empowering community groups, building on partnership agreements as well as on collaborative management strategies. There is a particular need to invest in new infrastructure and work towards the improvement of hotels and other local tourist accommodation sustaining a new tourism strategy for the region.

Development of tourism in Qohaito should make full advantage of the rich and diverse cultural heritage and market the place as a short break option rather than a half day stay to view the archaeological heritage. One of the aims is to get more visitors to stay overnight and to explore the spirit of the place. When overnight stays increase, then also local revenue capture will increase.

Bearing in mind that the tourist strategy of tourism development should encourage visitors to stay longer it will be necessary to :

- Intensify the attractions
- Diversify the products offered to tourist both outside and inside Qohaito

There are strong local sentiments related to the development of tourism in Qohaito. While there is an interest in providing food and refreshments for the tourists in teashops and provision of similar basic tourist amenities, including outlets for local handicraft products, there is an outspoken resistance against the establishment of hotels



with accommodation and bars, etc. Neither is the required infra structure sufficiently developed to sustain such developments.

The Management plan proposes therefore that accommodation and tourist facilities, which are not considered compatible neither with local customs nor with the tranquillity of the site are established outside the local communities of Qohaito.

The provincial town of Adi Keih is within easy reach of Qohaito and it has much to offer in terms of local restaurants and bars, which may easily meet the demands when tourism increase. There is also an agreeable urban environment around the central square and the market place nearby. However the hotel capacity is inadequate at present and much is needed to develop comfortable accommodation including agreeable outdoor recreation grounds as previously offered by the Adi Keih Hotel.

If demands make it affordable tourist operators can be authorised to run a shuttle bus between Adi Keih and Qohaito, which would make it optional to walk the two hour journey up to the plateau and drive back or possible choose another means of transport such as riding a horse, camel or donkey.

Action:

- *Private sector initiatives for marketing and development of tourist sustainable facilities should be encouraged in partnership with the Adi Keih Sub-regional Administration and the Ministry of Tourism.*

9.3. Eco-tourism and nature-based tourism

In addition to its archaeological treasures, Qohaito is a place of great scenic beauty and nature attractions as emphasised in the Statement of Significance. The northern zone, designated as a nature development zone, and the buffer zone that includes areas of marginal interest for agriculture, has high potential for developing nature related sustainable tourism. The steep escarpment with stupendous views, deep valleys with wooded slopes and occasionally isolated homesteads and terraced fields are attractive settings for a growing demand for outdoor appreciative activities.

A number of itineraries based on different nature and heritage themes can be developed as alternative options for the visitors according to individual preferences and the time available. They can be created by linking existing local footpaths providing continuous routes of both long and short distance walks through stunning landscapes.

A variety of different heritage trails based on different themes and degrees of difficulty can be suggested, as for example archaeological heritage trails, rock art trails, nature trails, school trails and pastoralist heritage trails from Qohaito to the lowlands.

People in Qohaito walk long distances and the journey on foot involve a slow, intense and direct experience of the place. The appropriate routes can be devised by local people to provide the best possible adventures at the same time as job opportunities are cre-



ated for local guides. The trail leading down to the Adi Alauti rock art site is already a well known attraction close to Safira and a visit to the Maiwerki rivulet at Karibosa provides a similar potential attraction. An opportunity to follow the schoolchildren on the way back to their home village down the cliff would no doubt have a very special appeal to many foreign tourist and contribute to cross cultural understanding.

In the present situation it seems realistic to rely on sections that can be walked in a day with convenient resting points along the trail. A more ambitious scheme can be developed to meet the demands of long distance hiking trails at some later stage, including horse, donkey and camel trekking. Such routes can be sensitively way marked including provision of descriptive folders and a good choice of village bed and breakfast accommodations. Specialist assistance could also be sought f.ex. from the French organisation 'Grande Traverseé des Alpes' (www.randoalp.com) having experience in commercialised products for rambling.

The settlements situated on the steep slopes with difficult access are not easily sustainable and the occupants are more likely to move to new habitation at the plateau and the cost of maintaining the old houses is becoming prohibitive high. The result will inevitably be that the vernacular architecture in these places is prone to decay and tourist related activities may be the only alternative way to ensure the preservation of traditional *hidmo* houses in the future.

A key objective is to stimulate different tourism initiatives, offering a variety of attractions, which will lure the visitors to stay longer in Qohaito, and make it possible to involve the surrounding communities according to their interests.

Action:

- *Initiate partnership with one or several private tour operators, who are sympathetic to the idea of developing the concept of adventure tours and ecotourism in co-operation with local communities in Qohaito.*

10. Tourism linked to archaeology and Saho traditional life.

10.1. Information and interpretive facilities

The concept of eco-museums has adopted world-wide for a variety of different purposes, including the conservation of natural and cultural heritage, as a new kind of museum focused on the identity of a place, largely based on local participation and aiming to enhance welfare and development in the local communities and to foster a sense of local pride by representing and promoting cultural identity.



The European Network of Eco-museums defines an eco-museum “as a dynamic way in which communities preserve, interpret, and manage their heritage for a sustainable development. The focus on preservation, interpretation and management means that communication of heritage values is an essential part of the activities including presentation of the history of the place and its inhabitants including tangible as well as intangible heritage values”.

This philosophy and practice is well suited to the local conditions Qohaito. Especially the Old Safira village provide an ideal setting of vernacular *hidmo* houses and ancient ruins, which can be adopted as a Village Museum according to the eco-museum concept. The specific circumstances create a unique opportunity to demonstrate on site different phases of human interaction with the environment in Qohaito. A combination of archaeological excavation, preservation of ancient ruins and restoration of traditional housing for museum purposes will provide a true feeling of historic continuity that no doubt will appeal to visitors. The opportunity to exhibit the vernacular architecture in one designated place may also prevent tourists to roam around indiscriminately intruding on the privacy of the local residents elsewhere.

The authentic qualities of the ancient ruins being preserved in the original setting is in full accord with international archaeological principles and the process of restoring the traditional *Hidmo* houses helps to maintain traditional building techniques as an example of best practise.

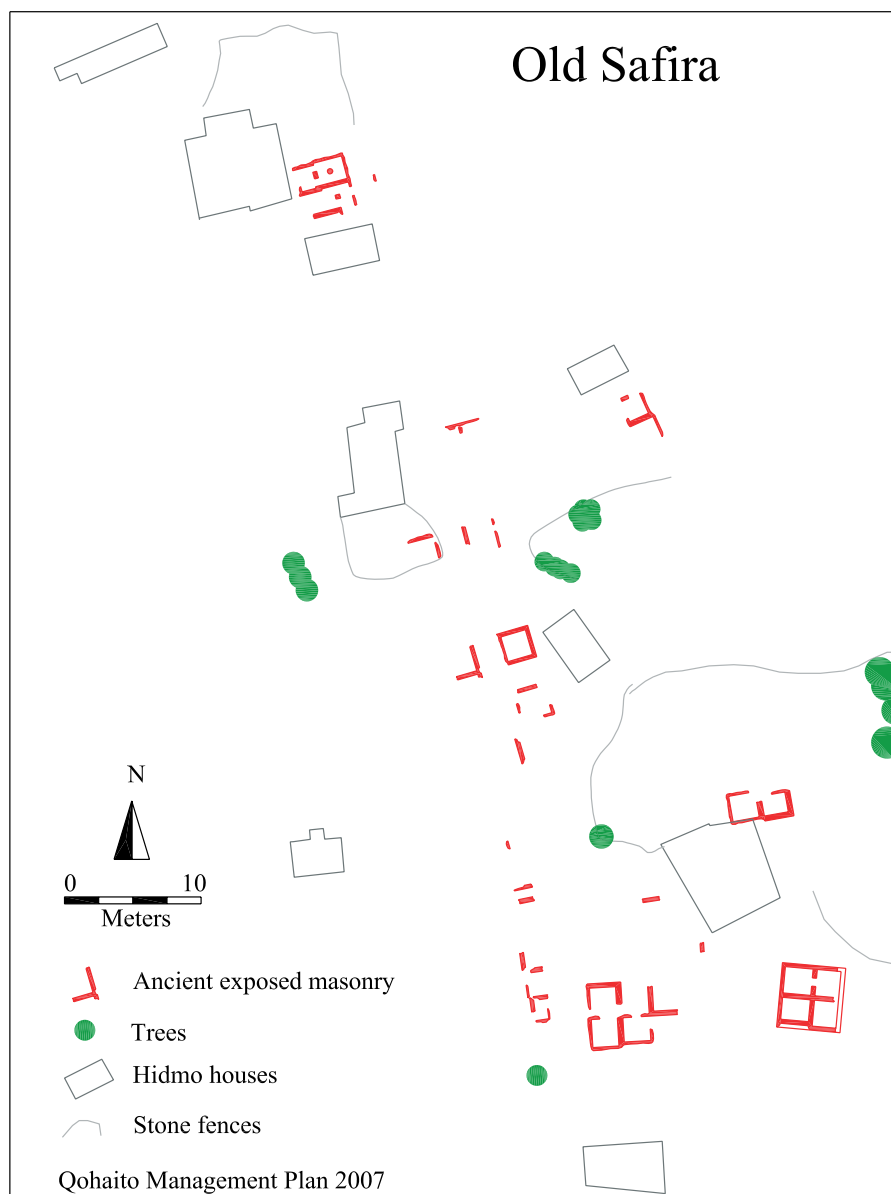


Fig. 8 Map of Old Safira showing location of ancient masonry and traditional Hidmo houses

The process of transforming of the traditional settlement into a Village Museum can be combined with the prospects of creating an outlet for traditional handicrafts and other local products such as honey and possibly a revival of incense production. The activities shall be decided in a dialog with the host community in Safira and may develop to include coffee making ceremonies and similar local traditions. The women in Safira have already demonstrated that they produce a number of traditional high quality items that will no doubt appeal to tourists, and they are interested to start a production provided that there is a place to sell such items.

The planning for visitor amenities and interpretation facilities will include the following activities:

- Design and construction of a Visitor Centre located in intermediate relation to the main archaeological sites in the Safira Archaeological Development Zone including the required parking space and visitor amenities.
- Development of parts of Old Safira as a Village Museum by adopting the traditional *hidmo* houses immediately to the east of the school compound for museum purpose centred on traditional culture of the Saho people and exposure of the archaeological remains that are incorporated in these houses, cf. fig. 9 opposite page.

The first work can be implemented in a short-term perspective, whereas the work of the Village Museum involves continuous activities over an extended period of time, which may be implemented gradually in agreement with the local community along with the increase of visitation.

10.2. Visitor Centre

The function of the visitor centre is primarily to bring into focus the significance of the place, which the visitor has come to experience. This is done by means of interpretation, that is to *make out the meaning* of the site and to give information about where to go and what to see. The centre is not a museum, but intended to be a place that will stimulate the visitor to go out and see the sites on location.

The Visitor Centre is planned to be sited conveniently close to the old Safira village immediately east of the School complex and constitutes a central part of the archaeological development zone. The existing teachers house is a point of departure for developing this area to serve the needs of the visitors. The location provides for an extraordinary view to the green and attractive valley running in the south-east direction and collecting rainwater from an extended catchment area. Subject to an integrated restoration project this particular setting may develop as a striking example of harmony of a human settlement in an arduous environment.

The existing building has no specific quality in its present shape and appearance and needs to be refurbished and extended to serve the new function as a Visitor Centre. The design shall be simple and direct in character and may serve as a model on how to improve the

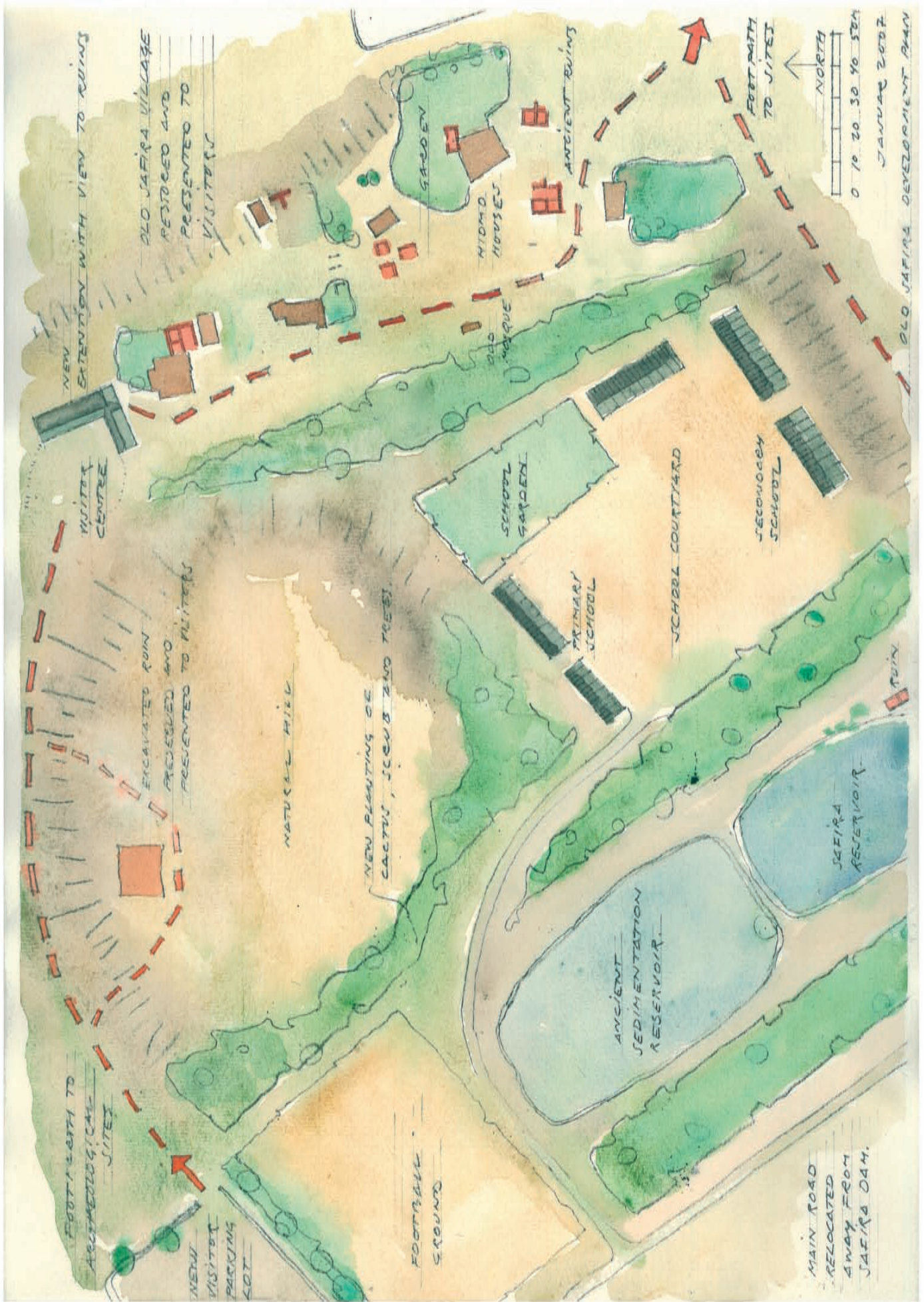


Fig. 9 Old Safira village restored and developed as part of a visitor interpretation scheme

new building tradition in Qohaito by use of cheap, modern materials. Presently the building is owned by the Ministry of Education and used as accommodation for school teachers.

Action :

- *Negotiate conditions for purchase of the property and identify alternative accommodation for the school teacher's. Secure the funding and work out a building programme that satisfy all the needs and expectations of a Visitor Centre; obtain public consent to the plan; appoint an architect to prepare design proposals as well as the required construction drawings that comply with all statutory regulations; and make appropriate arrangement for the construction.*

10.3. Village Museum

According to local informants the traditional *hidmo* houses in this part of Old Safira may have been built within the last 30 years as a result of a more permanent settlement of Saho people as sedentary farmers on the plateau in the wake of the Eritrean liberation war and change of livelihood pattern. This history adds a new perspective to the many different 'stories' and values, which can be attributed to the cultural landscape of Qohaito.

The close vicinity to the traditional *Hidmo* houses of Old Safira settlement that incorporate ancient masonry, makes up an authentic historic settlement and this setting provides an eminent opportunity to present 'past and present' history of Qohaito cultural landscape by preserving the vernacular architecture at the same time as part of the ancient masonry is excavated, consolidated and presented to the visitors, cf. fig. 8 and 9.

Preserved *in situ* the setting of the Village Museum meets the requirements of authenticity as stipulated in the Operational Guidelines (art. 82) and expressed through a variety of attributes relating to:

- form and design
- material and substance
- use and functions
- traditions, techniques and management systems
- location and setting
- language and other forms of intangible heritage
- spirit and feeling

Having experienced the settlement and the ancient ruins the visitors can choose to follow one of several heritage trails leading through the archaeological landscape east of Safira. These trails include various aspects of the archaeological and natural landscape and shall provide different options according to the time the visitors want to spend in the field. What matters most is that the visitors enjoy a day spent in a unique environment, get informed and maintain a good memory of the place.

Returning to the Visitor Centre and its village setting several income-generating activities can be developed by the local community to serve the needs of the visitors, who choose to relax in the pleasant



environment. Refreshments can be served in the shade of the trees already matured and additional shade trees can be planted to make a leafy outdoor ceiling within the enclosures of the stonewalls of the gardens.

The responsibility for the maintenance of the houses should be entrusted to local villagers, while the community can be engaged to develop outlets for handicrafts and other local products, which may provide a source of income. Products on sale should be of local origin stimulating local crafts and production. The Saho women produce a number of traditional items of high quality made of local material as plant fibres and leather, sometimes decorated with sea shells, which will undoubtedly appeal to tourists, cf. para. 2.3.7.

The implementation of the village museum approach involves re-settlements of two to six families. Proper compensation needs to be paid to these families and it is imperative that a common understanding is being reached with the Safira community about the aim and purpose of the project through a process of community participatory planning. A development along these lines may provide a possibility for developing the site in a true partnership between all concerned stakeholders.

Action:

- *The development of this idea for a Village Museum is a process of thorough discussions, planning and design integrating all elements in a short term, a medium term and a long-term perspective.*

10.4. Educational aspects

The Process of gradually transforming Old Safira into an attractive visitor experience through archaeological excavation, consolidation, restoration and implementation of other aspects of cultural heritage preservation is drafted as a learning project creating an eminent opportunity to demonstrate practical archaeology on site. Conceived as an educational project, creating awareness and understanding of cultural heritage values the attractions are not only directed towards foreign tourists. Also the local communities and school parties will have an opportunity to follow the work as a first hand experience, making the history and quality of the site an educational issue generating knowledge and awareness.

Other aspects of inclusive approaches to heritage preservation may involve special learning programmes at the schools in Qohaito that relate directly to experiences in the field. This type of interactive learning processes may not be practised in the schools at present, however they contribute to creating more awareness about the cultural heritage in Qohaito. Schooling programmes may also be planned to engage the parents and the local communities at large in satisfying and enjoyable events that will enhance the appreciation and understanding of the cultural heritage in Qohaito.

Action :

- *The local schools are encouraged to arrange an annual Heritage Day or similar outreach programmes that will engage pupils and*



students and their families directly in matters relating to identification, conservation, management, presentation and interpretation of their heritage resources.

10.5. Presentation of archaeological digs

An archaeological site as important as Qohaito, not yet excavated, should be able to propose to the visitors, particularly schoolchildren, commentated visits to explain the progress of the digs, the stratigraphy, important finds, techniques of dating, conservation problems, etc. .

Action:

- *This type of visit could be developed as a 'cultural tourism products' which would be particularly appreciated by specially interested tourists and answer a real, if expressed, need for a deeper understanding of the site.*

10.6. School curriculum and teaching material

Consultations with the Curriculum Division of the Ministry of Education emphasise the need to incorporate knowledge about cultural heritage in the national school curriculum. There are currently efforts to revise the curriculum for both primary, secondary and high school levels and the Ministry is in the final editing process of some information material about historical sites in Eritra, including Qohaito. However, only scant information is readily available from some general tourist information in the Ministry of Tourism and specialist assistance from the National Museum or other University Departments would qualify and improve the curriculum and the teaching material.

Action:

- *Collaboration between the Ministry of Education, Ministry of Tourism and the National Museum is required for the production of relevant educational material about natural and cultural heritage preservation and to include this subject in the curriculum at various levels of the educational system.*

10.7. Traditional Saho handicrafts and outlets for local products

So far there is very little sale of locally produced handicrafts partly due to the absence of outlets and local demands. No doubt several of the items will be of great interest to tourists in the future. It is however important that care is taken firstly to make sure that the production continues to take place within the women's informal circles with which they seem to be most comfortable. Secondly, that the quality of the products is not compromised if the production is increased, and finally that assistance is provided for the women to estimate sales prices for the products, taking into consideration the real costs of production, including the production time.



While some of the materials used for handicraft production are locally available, other materials are obtained from outside at fairly high prices. There may be a need to assist the women with small credit

Part III

Supplementary information



facilities to ensure a continuous supply of materials.

Action:

- *The women facilitator proposed as part of the local management team is encouraged to organise the production and sale of handicraft products at the Visitor Centre/Village Museum. These sale products can be supplemented by traditional foods such as honey, bread and other food related crafts including new initiatives related to growth of traditional medicinal plants and fragrant herbs or production of incense or essential oils. Rightly marketed such products made in Qohaito would be highly appreciated.*



10.8. Oral tradition of the Saho

Random interviews with people in Qohaito have revealed a detailed knowledge about genealogy and relationship. To what extent there are more such legends about the ancient past and the fate of the people, who lived in Qohaito for centuries is difficult to tell. It is however seen as very important to follow up on such issues. First of all it is important for the socio-cultural history of the Saho that different traits of the Saho culture are recorded to contribute to the ongoing research in Eritrea about oral history, but such legends may also be important to include in tourist information in order to give examples of the oral history existing in Qohaito.

Action:

- *Continue anthropological studies about local legends pertaining to the attachment of the people in Qohaito to the cultural landscape and ancient sites in Qohaito.*

11. Access and signage

11.1. Car and coach parking

Foreign visitors are arriving to Qohaito primarily by car or coach, however visitor's vehicles are spoiling the scene and should not be allowed to enter the archaeological zone. The siting of a car park for visitors arriving to Safira is proposed close to the main road immediately to the north of the football ground. No vehicles should be allowed to roam away from the main road without special authorisation. Sited in an open field the parking area can be extended concurrently with the demand.

An appropriate landscaping will help to minimise the impact of the car park on the surrounding landscape. As a start already some trees grow in that area and planting of more trees and shrubs will help to improve the visual impact of the parking lot. Screened off by low stone walls or cactus hedges the cars and coaches will be out of sight of what the visitors have come to enjoy.

From the car park there is only a few minutes' walk to the Visitor Centre and the Museum Village via a footpath in a slight land depression. Visitors will have a possibility to feel the spirit of the place before arriving to the centre without the view of more recent urban development and a mound located close to the footpath can provide

a first introduction to the archaeological sites after excavation.

Action:

- *The car parking area and the footpath to the visitor centre shall be planned and the work executed in conjunction with the planned road improvement scheme envisaged for 2008-2009, including the related signage and tourist information boards.*

11.2. Admission charges

The archaeological sites are situated on government owned land, which in principle are freely accessible to the public. Admission charges to the archaeological sites can only be justified, if there is 'value for money'. This implies that the tourist shall enjoy the benefits of visiting the centre and receive the help and services provided by the tourist guides, including the handing out of information material, which explains the history and significance of the site and contains a map of the area.

At the moment special permission is required from the National Museum to get access to archaeological sites and tourist attractions in Eritrea. This bureaucratic procedure is time consuming and not encouraging the tourism development in Qohaito. Once the management regime is functioning and the Visitor Centre is operational, it is recommended that access is authorised locally and admission fee is paid on site and retained for preservation purposes.

The income now goes into the general revenue of the Ministry (presently the Ministry of Education). Site income should however stay at the site and benefit both the local communities and the agency directly responsible for management of the site. This can most conveniently take place by dedicating admission income to a local Heritage Fund put under administration by the Site Managers Office.

Action:

- *Adjust present policy for collecting admission fee.*



11.3. Signage

At a time when only few tourists arrive in Qohaito in organised tour groups all visitors are guided to the desired places of interest and information can be provided together with the ticket.

The recreational atmosphere of tranquillity and beauty in the archaeological landscape of Qohaito creates a genuine feeling of experiencing the intrinsic qualities of the archaic setting. Signs and notices in the field should therefore be introduced with great reticence in order to avoid visual conflict with the archaeological monuments and sites. This approach is even more relevant at a time, when scientific knowledge about the site is meagre and no individual site has been excavated, conserved and presented to visitors. On this condition written information presented in pamphlets and books is more easy to update along with the new information that may appear, when archaeological research get started. Descriptive panels, if ever considered necessary on site, should be conditional to any concession given to



archaeological digging. Information is welcome and needed during actual work in the field, since the process itself is especially interesting to visitors.

Warning signs should generally be avoided, and the policy 'that the obviously dangerous is seldom dangerous', makes sense. Many of the footpaths leading down from the plateau present a potential danger of stumbling and falling down the mountain slopes and certain precautions must be observed by anyone, local as well as visitors, who use these trails. However, there might be a few exceptions where public safety is at stake and it can be argued that some warning is required at the special view points at the eastern cliff edge with a sheer drop of about 500 meters. Possibly a roped-off edge in these specific places will be an appropriate way to warn visitors of the dangers.

Directional signs and other road signs should be prepared and put up in conjunction with the scheduled road construction 2008-2010, including indications of parking grounds and road signs inhibiting random vehicular traffic away from the main through road.

Action:

- *Repair and repaint the trilingual sign board presently situated at the road junction next to Igila, where the road to Qohaito deviates from the main asphalt road; set up simple fence along part of the cliff edge designated as special tourist viewing points.*

11.4. Cultural heritage emblem

Any signage relating to cultural heritage in Qohaito and elsewhere in Eritrea should be easily identifiable by the use of a common emblem. The symbol of cultural heritage should be simple in design, easily applicable and easily recognisable.

The sun disk above the moon crescent engraved in deep relief on the famous stele of Matara originally served as a symbol for both Aksumite and South Arabian rulers in the pre-Christian period. This particular monument has become especially important to the modern state of Eritrea and the sign may possibly be an appropriate sign for the national identification of cultural heritage.

One of the wood panels with ornamental motives in high relief originating from the Old Church in Asmara and now deposited in the National Museum, can be selected as an alternative or possibly a motive originating from Qohaito, where a four leafed cross in deep relief has been identified on one stone fragment by GAME. However, any symbol may turn up as a controversial choice. The process of identifying and selecting an appropriate cultural heritage emblem may possibly be launched as a national awareness campaign that will bring attention to the importance of protecting and preserving cultural heritage.

In case the World Heritage nomination materialises in the future the WH logo will be included in an overall design manual for Qohaito. The principles on the use of the WH emblem is outlined under section VIII of the Operational Guidelines.

Part III: Supplementary information

Appendix I.	Partnership contacts
Appendix II	Population Distribution in Qohaito,
Appendix III	Select bibliography and references
Appendix IV	Archaeological field registration and information storage.

Appendix I. Partnership contacts

Cultural Assets Rehabilitation Project (CARP)

- . Mr. Dawit Hailom, Acting Coordinator/archaeologist
- . Mr. Yemane Ghebreselassie, Procurement Officer
- . Mrs. Akberet, Chief Accountant

Members of the Steering Committee of CARP:

1. Mr. Alemseged Tesfai, Head of Oral History Project Cultural Bureau of the People's Front for Democracy and Justice (PFDJ)
2. Dr. Yoseph Libsekal, Director of National Museum of Eritrea.
3. Ms. Azeb Tewelde, Head of Research and Documentation Center, Cultural Bureau of the PFDJ.
4. Mr. Negasi Gebredngil, Head of Cultural Affairs Bureau, Ministry of Education .
5. Ato Haiemichael Misginna, Advisor of CARP
6. Ato Zemhret Yohannes, Head of the Cultural Bureau of the PFDJ
7. Ato Semere Abay, Zoba Maekel Administration

Members of the intermediate Qohaito Management Committee:

- . Dr. Yoseph Libsekal, Director, National Museum of Eritrea.
- . Mr. Oghe Beyene, Director of Tourism Product Development
- . Mr. Yohannes Asgedom, Ministry of Tourism, Zoba Adm., Southern Zone,
- . Mr. Resene Russom, Deputy Director
- . Mr. Yoseph Mobae, Museum Curator, NME Local Project Co-ordinator.
- . Mr. Dawit Hailom, Acting Coordinator CARP, archaeologist
- . Mr. Yemane Ghebreselassie, Procurement Office, CARP

International Organisations

UNDP – United Nations Development Programme for Post-War Emergency Rehabilitation Programme (POWER)

- . Prof. Techeste Ahderom, Senior Technical Advisor on Transition and Early Recovery

National Institutions

Eritrean National Commission for UNESCO, Ministry of Education,

- . Mrs. Mehret Iyob, Secretary-General
- . Mr Osman Saleh, Chairperson

Department of Land, Ministry of Land, Water and Environment

- . Beyene Russom, Head of Department
- . Bereket Kidane, Head of Land Use and Cathography
- . Mulgita Asmelash, Land Survey officer

Water Resource Department, Ministry of Land, Water and Environment

- . Mr. Tekle Habte, Head of Department.

National Museum of Eritrea

- . Dr. Yoseph Libsekal, Director, National Museum of Eritrea.
- . Mr. Resene Russom, Deputy Director
- . Mr. Yosef Mobeza, Curator, Qohaito management planning coordinator.

Ministry of Tourism

- . Mr. Oghe Beyene, Director of Tourism Product Development
- . Mr. Mesfin, Tourism Development Officer
- . Mr. Yohannes Asgedom, Mendefera Sub-Zone Office

Ministry of Education

- . Mr. Abraham Russom, Director of the Curriculum Division
- . Mr. Fessah Abraham, History Department
- . Mr. Amenai Tekle, Geography/Social Studies Department Department

University of Asmara

- . Prof. Abebe Kifelyesus, Department of Anthropology and Archaeology
- . Mr. Zersenay Habtezion, Lecturer, Faculty of Law
- . Dr. Woldeselassie Ogbazghi, Ass. Dean, Hamelmalo College of Agriculture

Eritrean Defence Force (EDF)

- . Colonel Kahsay Hagos, Commander of Brigade 52, Masagolezula

Peoples Front for Democracy and Justice (PFDJ)

- . Mr. Zemhret Yohannes, Head of the Cultural Bureau of the PFDJ

Regional and Local Administration

Zoba Debub Regional Administration, Southern Region, Mendefera

- . Mr. Mustefa Nurhusen, Governor
- . Mr. Rezene, Head of Infrastructure Administration
- . Mr. Abdu, Administrator of Adi Keyih Sub-Regional Zone
- . Mr. Goitom, Engineer

Adi Keih Sub-regional Administration

- . Mr. Abdu Idris, Head of Sub-Zoba Administration
- . Mr. Tekhezgi Giday, Deputy Administrator

Qohaito Plateau Administrative Districts

Listed in order from north to south they are:

Karibosa :

- . Mohammed Said Omar, Administrator
- . Osman Salih, Deputy Administrator

Subiraso:

- . Mohammed Ali Ismail, Administrator
- . Abdelah Osman, Deputy Administrator

Safira :

- . Omar Muhamed Shiefa, Administrator
- . Abdallah Thahir Omar, Deputy Administrator

Masagolezula:

- . Ali Husein, Administrator
- . Mohammedini Sulaiman, Deputy Administrator

Igila

- . Omar Ibrahim Mohammed, Administrator
 - . Mohammed Ali, Deputy
- Cultural Heritage Management Committees

Karibosa:

- . Mohammed Ali Ismail; Mohamud Mohammed Ali; Salah Omar Ibrahim

Subiraso:

- . Mohammed Ali Ismaiel; Mohamud Mohammed Ali; Abuberker Osman Sumai

Safira:

- . Hajj Osman Ahmedin; Hajj Suliman Omer; Salh Omer Ibrahim

Masagolozula:

- . Mohammed Ahmed Ibrahim; Ahmed Mohammed Darasi; Shekh Mohammed Ibrahim Hasen

Igila:

Omer Ibrahim; Mohammed Ali; Ali Husein

National Museum guards employed in Safira

- . Ibrahim Mohammed Omar
- . Hadid Suleiman

Appendix II. Population Distribution in Qohaito,

Administration Zone	Villages	No. of Household	Total Population
Igila	Igila	219	974
	Sarwa	90	422
	Adolay	57	245
	Sanako	108	445
	Hagagit	47	208
	Bukura	53	183
	Adi Ageb	146	772
	Gadiba	72	364
Sub total	8	792	3613
Masagolozula	Masagolozula	46	274
	Dengolol	30	183
	Sahnen	18	84
	Arigot	33	179
	Dakanamo	35	168
	Bohale	23	89
	Waewa	24	108
Sub total	7	209	1085
Safira	Safira	76	272
	Eshka	67	283
	Dalo	49	182
	Mashur	78	318
	Daero	37	131
	Guribtya	64	243
	Aba'	28	115
	Medhlo	58	223
	Arbabae	33	147
	Ma'edyia	42	118
	Gerdwa	40	190
	Sarwa	57	314
Sub total	9	629	2536
Karibosa	Karibosa	80	374
	Abae'	42	189
	Dematiyo	39	154
Sub total	3	161	717
Subiraso	Subiraso	47	219
	Deria	64	312
	Tahtai Saro	25	103
	Lae'lay Saro	37	178
	E'ngule	27	115
	Htseyto	29	171
	Sivide	26	155
	E'bukhia	16	67
	Asbato	24	127
	Entikako	24	107
	Alil	24	125
	Arid	24	123
Sub total	11	367	1802
Grand Total		2158	9753

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2257.1 – 2257.7	Tokonda
2258.1 – 2258.5	Qohaito, the cistern
2259.2 – 2259.6	Qohaito,
2260.1 – 2260.6	Qohaito
2261.1 – 2261.2	Qohaito
2262.1 – 2262.4	Qohaito
2263.1 – 2263.3	Qohaito, socalled Egyptian Tomb
2264.1 – 2264.3	Qohaito, inscription
2265.1 – 2265.3	Matara
2266.1 –	Matara
2267.1 – 2267.6	Matara
2268.1 – 2268.8	Kaskase
2268.a.1 – 2268.a.2	Kaskase

Appendix IV. Archaeological field registration and information storage.

Archaeological field registration

Staff of the National Museum of Eritrea (NME) has for the last 9 years conducted systematic field surveys to locate ancient archaeological remains using printed forms for site registration. A few members of staff have produced digital maps using ArcGIS in combination with Trimble Global Positioning System (GPS) equipment. However, a consistent terminology to describe all categories of archaeological remains have not yet been fully developed and the data format previously used by NME is based on text descriptions rather than formal classifications. It was therefore decided to create data-formats and a suitable terminology for systematic registrations of the ancient remains in a digital environment and have these data entered into a database optimised for immediate data entering. This database is supplementary to the digital mapping already conducted by the museum, which ensures a consistent processing of the data providing a powerful analytic tool for managing the archaeological heritage of Eritrea.

When the fieldwork started in Qohaito it appeared that the previous survey conducted by GAME was incomplete missing sites especially in more remote areas. This is very understandable in view of the vast scale of the site considering the available resources. As a consequence a more detailed survey is needed with a higher resolution than previously including specific records of the site boundary with GPS.

The registration system is created as a dual phased recording system – i.e. first Site Registration, secondly Condition survey - for proper documentation and evaluation of the complexity of each site.

Site registration.

The 'site registration' is used to identify the visible archaeological sites within a certain area using Geographic Information System (GIS) technology. All specific 'site features' are recorded using the specific terminology, including the information on the size and the category of the site. Furthermore specific threats to the site are noted. The Site Registration Form is limited to one side of an A4 sheet of paper, in order to maximise productivity in the field, cf. the Site Registration Form and the List of Site Features.

The area close to the modern settlement at Safira was selected as a pilot project due to the very high concentration of sites representing a variety of different categories. As a precursor to the survey, a significant time was spent walking through the site to familiarise the surveyors with the type of problems occurring and to ensure that surveyors were consistent in the use of the terminology. Experience show that a team of three people, with two closely examining the structures and measuring the site boundary, while the third filling in

the form after discussion, produces the most consistent results in the shortest time, eliminating errors resulting from an individual surveyor missing a crucial detail.

During the first survey an area of 7.4 square kilometres was covered recording 128 sites. The site registration has subsequently been continued at the plateau and within the buffer zones by staff in the National Museum. The final outcome of the registration is not yet available and a more detailed presentation and discussion of the results is pending. However, based on the digitised information of 128 sites a preliminary quantitative estimate indicate that about 80 % are categorised as mounds, complexes of mounds or walls/buildings and only 16 % of these sites have standing architecture of visible walls or pillars; 10 % are categorised as rock art sites while the remaining 10 % are hydraulic installations (dams and cisterns), tombs and ancient terrace walls.

Condition survey.

Based on the results of the general survey, detailed recording can then be conducted on sites identified for interventive conservation, especially the relatively few sites with visible standing architecture. Ideally, a condition survey shall record individual stones and all architectural features, which requires preparing of drawings on site in scale not less than 1:20. This practice was trained on a number of sites in the course of the consultancy and one example is presented in the Management Plan. The graphic documentation shall as a minimum include a plan and elevations and be supplemented by a photographic documentation and a description of the general characteristics of the site as well as individual features.

However, due to limited resources a lower level of detail can be applied eventually, using photographic documentation only. The primary record shall consist of high-resolution digital photographs taken of all parts of structures. Subsequent to any conservation treatment the same structure shall be documented again from the same vantage points.

Condition surveys shall be carried out according to a list of priorities related to an assessment of the actual condition and the significance of the architectural details as well as the general threats to the site. The criteria for assessment of threats are related to the uniqueness and contextual importance and possible land development projects or change of land-use. However, in the short term all sites with standing architecture have high priority for immediate preparation of a condition survey.

The assessment of immediate threats can best be made on basis of a land-use map covering the whole of the plateau. Significant time was spend in search of useful base maps. However, the relevant maps were not readily available and can not be prepared at short notice. Subsequently, a partnership co-operation is being initiated between NME and the Department of Land, Ministry of Land, Water and Environment for the production of the relevant maps based on digitised satellite images and for reparation of a land use map to

serve as a platform for further environmental planning and development in Qohaito.

Data base and information storage

Computers have been available to the NME staff for the last 2 years and mainly used for word-processing. The computers have all Microsoft Office Professional installed and have limited access to the Internet via an unstable and overloaded broadband connection. The current plans for establishing a network with a server at the museum has not yet materialised.

A short term course on database management was organised at NME in November 2004 as part of the Greater Asmara Survey Project (course director Dr. Andrea Manzo), but the related database systems were not implemented prior to the start of the Qohaito Management Planning Project.

The development of a database for immediate use in Qohaito is based on the Microsoft Access platform readily available at the Museum (and previously introduced to the staff by Dr. Andrea Manzo). Information on the individual sites is entered on the Site Registration Entry Form numbered in succession including relevant information of the various archaeological components entered under a list of Site Features.

At the moment circa 100 different types of features are identified and additional features may be added according to needs. The list of site features is supplemented with digital photos of the site and particularly significant features (The database system contains a limited amount of simple Visual Basic Codes in order to increase the functionality of the system. Some antivirus programs may, however, react against these codes, but the codes are harmless to any systems and other programs).

This database, along with the photographic documentation, will be an invaluable resource for future research, long term monitoring and maintenance of the site.

Because of the vast scale of the site it is an enormous, if not impossible, task for an individual or team of archaeologists and conservators to form an objective opinion of the existing condition of the site without a systematic survey.

Subsequently, when a digitised base map of Qohaito is available, it will be possible to create a comprehensive picture of the distribution of the archaeological sites and the state of their conservation across the site. Within the GIS, individual map layers can be produced to show the condition of particular sites and areas according to any of the survey criteria. These data can be used to formulate strategies for conservation and cultural resource management in combination with data of modern land use and future development plans.

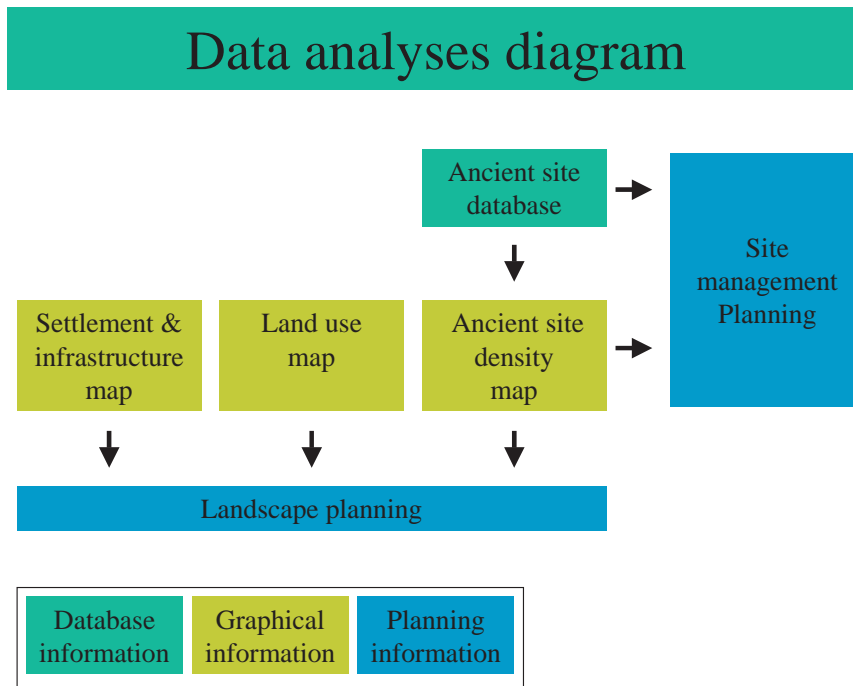


Fig. 1. Data analyses diagram.

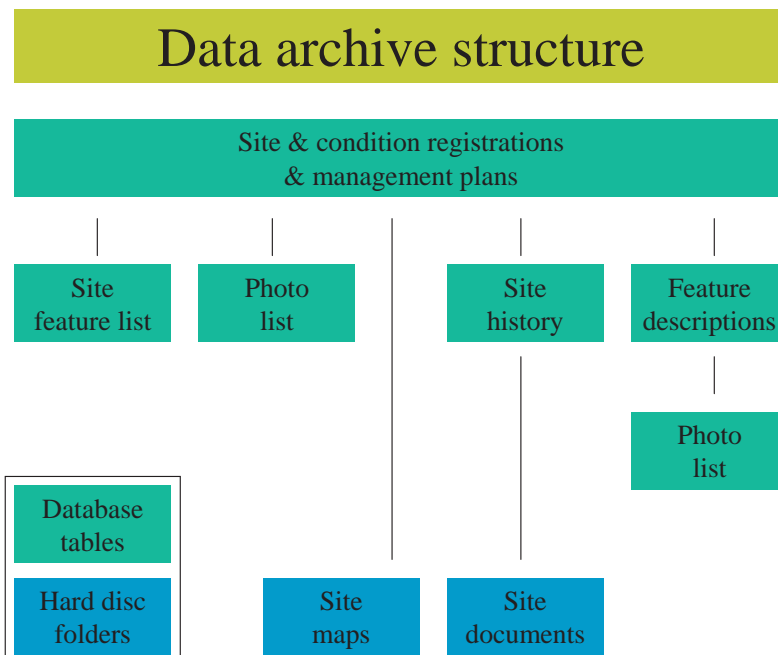


Fig 2. Data archive structure

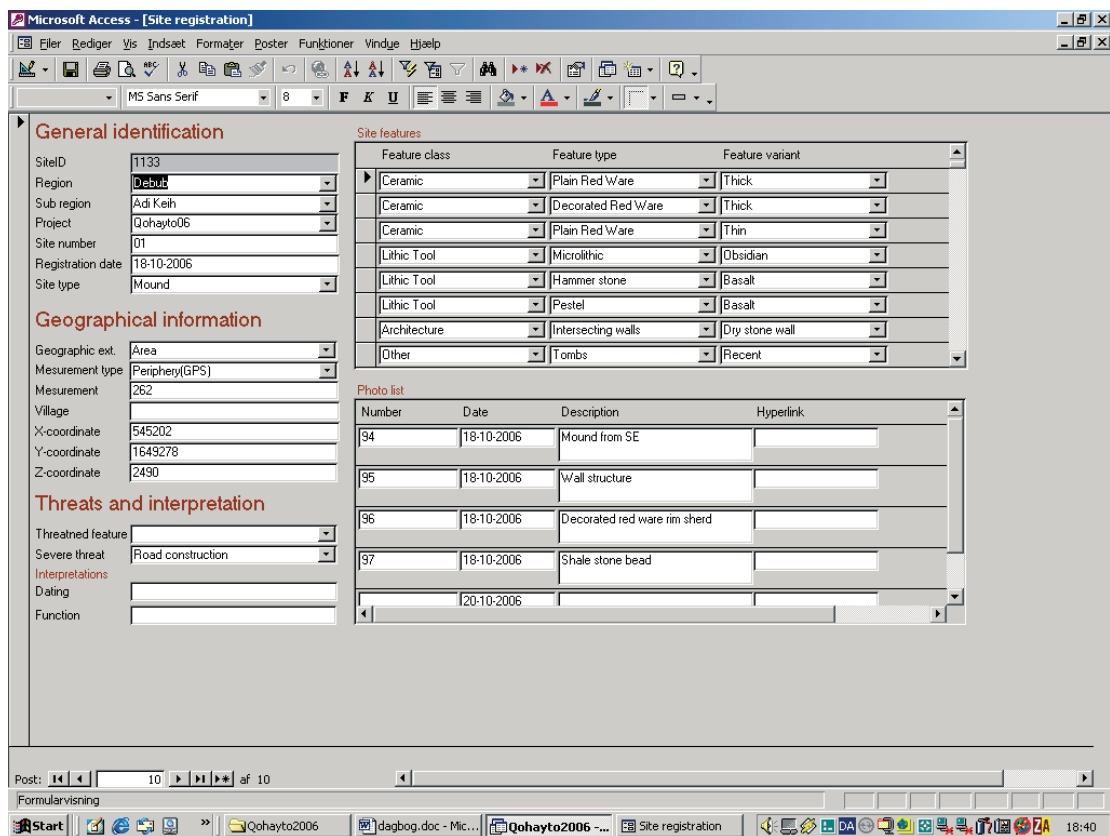


Fig. 3. Screen print of the Site Registration Entry Form.

Database entry diagram

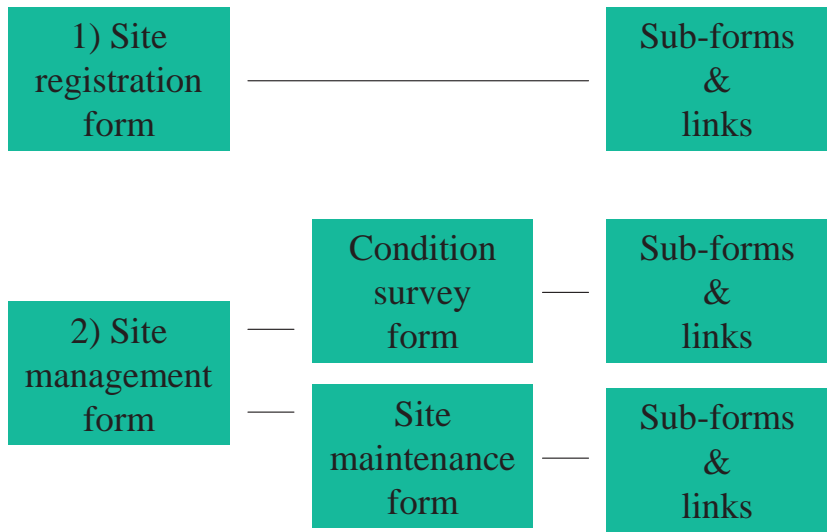


Fig. 4. Data entry diagram.

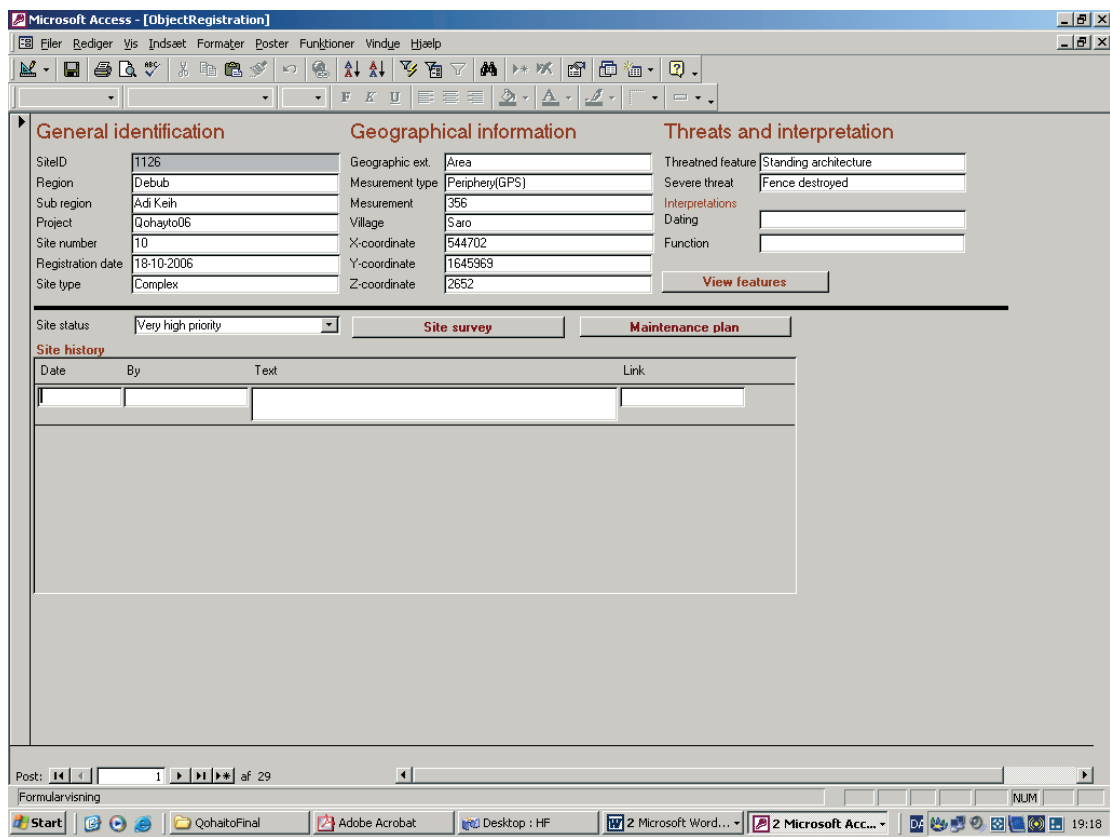


Fig. 5 Screen print of the Site Management Form.

SITE REGISTRATION FORM

By: _____ Date: _____

Region: _____ Sub-region: _____

Project: _____ Site no.: _____

Site type: _____ Nearest village: _____

Geographic extension	Measurement type	Measurement/meters

PDOP: _____

X-Coordinate	Y-Coordinate	Z-Coordinate (altitude)

Threatened feature: _____ Immediate threat: _____

Site dating: _____ Site function: _____

Number of site features:

Photo number	Photo description

CONDITION SURVEY FORM : Site survey

By: _____ Date: _____

Region: _____ Sub-region: _____

Project: _____ Site no.: _____

Site area: _____ Wall length: _____

Pavement area: _____

Vegetation: _____

Landscape: _____

Remarks: _____

Features:

Number	Type	Remarks

CONDITION SURVEY FORM : Feature survey

Region: _____ Sub-region: _____

Project: _____ Site no.: _____

Feature no.: _____ Feature type: _____

Description: _____

Condition: _____

Documentation: _____

Photo number	Photo description

Threats man: _____

Threats nature: _____

Suggestions: _____

List of site features

Feature class	Feature type	Feature variant
Architecture	Circular walls	Ashlars
Architecture	Circular walls	Bricks
Architecture	Circular walls	Rubbles
Architecture	Decorations	Groovings
Architecture	Decorations	Rosettes
Architecture	Elements	Architraves
Architecture	Elements	Bases
Architecture	Elements	Capitals
Architecture	Elements	Pilasters
Architecture	Elements	Pillars
Architecture	Elements	Rubble
Architecture	Elements	Slabs
Architecture	Elements	Slate
Architecture	Elements	Steps
Architecture	Foundation	Podium
Architecture	Intersecting walls	Ashlars
Architecture	Intersecting walls	Bricks
Architecture	Intersecting walls	Rubbles
Architecture	Linear walls	Ashlars
Architecture	Linear walls	Blocks
Architecture	Linear walls	Bricks
Architecture	Linear walls	Earth/Stone
Architecture	Linear walls	Rubbles
Architecture	Others	
Architecture	Rooms	
Ceramic	Decorated Black Ware	Thick
Ceramic	Decorated Black Ware	Thin
Ceramic	Decorated Brown Ware	Thick
Ceramic	Decorated Brown Ware	Thin
Ceramic	Decorated Red Ware	Thick
Ceramic	Decorated Red Ware	Thin
Ceramic	Plain Black Ware	Thick
Ceramic	Plain Black Ware	Thin
Ceramic	Plain Brown Ware	Thick
Ceramic	Plain Brown Ware	Thin
Ceramic	Plain Red Ware	Thick
Ceramic	Plain Red Ware	Thin
Coin	Arabic	Bronze
Coin	Arabic	Gold
Coin	Arabic	Lead
Coin	Arabic	Silver
Coin	Axumite	Bronze
Coin	Axumite	Gold
Coin	Axumite	Lead
Coin	Axumite	Silver
Coin	Hellenic	Bronze

Coin	Hellenic	Gold
Coin	Hellenic	Lead
Coin	Hellenic	Silver
Coin	Illegible	Bronze
Coin	Illegible	Gold
Coin	Illegible	Lead
Coin	Illegible	Silver
Coin	Roman	Bronze
Coin	Roman	Gold
Coin	Roman	Lead
Coin	Roman	Silver
Commemorative feature		
Hydraulic installation		
Lithic Tool	Heavy duty tools	Basalt
Lithic Tool	Heavy duty tools	Granite
Lithic Tool	Heavy duty tools	Quartz
Lithic Tool	Heavy duty tools	Schist
Lithic Tool	Macrolithics	Chert
Lithic Tool	Macrolithics	Obsidian
Lithic Tool	Macrolithics	Quartz
Lithic Tool	Microlithic	Chert
Lithic Tool	Microlithic	Obsidian
Lithic Tool	Microlithic	Quartz
Lithic Tool	Processing Tools	Basalt
Lithic Tool	Processing Tools	Granite
Lithic Tool	Processing Tools	Quartz
Lithic Tool	Processing Tools	Schist
Mound		
Mound	Stone accumulation	
Ornament	Beads	Bronze
Ornament	Beads	Glass
Ornament	Beads	Shells
Ornament	Beads	Stone
Ornament	Bracellets	Bronze
Ornament	Bracellets	Glass
Ornament	Bracellets	Iron
Ornament	Bracellets	Stone
Ornament	Necklaces	Bronze
Ornament	Necklaces	Glass
Ornament	Necklaces	Shells
Ornament	Necklaces	Stone
Ornament	Others	
Ornament	Rings	Bronze
Ornament	Rings	Gold
Other	Cut into bedrock	
Other	Stone chippings	
Other	Tombs	Ancient
Other	Tombs	Recent
Rock Art	Engravings	Anthropomorphic
Rock Art	Engravings	Geometric

Rock Art	Engravings	Zoomorphic
Rock Art	Inscriptions	Geez
Rock Art	Inscriptions	Greek
Rock Art	Inscriptions	Sabean
Rock Art	Others	
Rock Art	Paintings	Anthropomorphic
Rock Art	Paintings	Geometric
Rock Art	Paintings	Zoomorphic



