IUCN Conservation Outlook Assessment 2014 **(archived)**
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Please note: this is an archived Conservation Outlook Assessment for Wadi Al-Hitan (Whale Valley). To access the most up-to-date Conservation Outlook Assessment for this site, please visit https://www.worldheritageoutlook.iucn.org.

Wadi Al-Hitan (Whale Valley)

SITE INFORMATION

Country:
Egypt
Inscribed in: 2005
Criteria:
(viii)

Site description:
Wadi Al-Hitan, Whale Valley, in the Western Desert of Egypt, contains invaluable fossil remains of the earliest, and now extinct, suborder of whales, Archaeoceti. These fossils represent one of the major stories of evolution: the emergence of the whale as an ocean-going mammal from a previous life as a land-based animal. This is the most important site in the world for the demonstration of this stage of evolution. It portrays vividly the form and life of these whales during their transition. The number, concentration and quality of such fossils here is unique, as is their accessibility and setting in an attractive and protected landscape. The fossils of Al-Hitan show the youngest archaeocetes, in the last stages of losing their hind limbs. Other fossil material in the site makes it possible to reconstruct the surrounding environmental and ecological conditions of the time. © UNESCO

SUMMARY

2014 Conservation Outlook

Good

The conservation outlook for Wadi Al-Hitan is good overall.
Wadi Al-Hitan comprises exceptionally rich values related to the record of life, in a generally very good state of conservation. An appropriate management framework is in place and could be further strengthened (e.g. vehicle access, resourcing). An as yet unresolved issue is the possible inclusion of the Gebel Qatrani site, which would considerably complement the values already comprised by Wadi Al-Hitan. This site is close to the requirements for the highest rating in relation to its management, and this would be achieved if the key issue of sustainable finance were resolved.

Current state and trend of VALUES

Good
Trend: Stable

Overall status of whale skeletons and other fossils very good. Different stages of weathering and some limited impact of damage/removal by visitors observed.

Overall THREATS

Low Threat

Damage, theft and vandalism by rapidly increasing numbers of visitors (including damage by 4x4 vehicles) are the main threat. Natural wind erosion also affects exposed fossils, and there is a potential threat from illegal mining operations.

Overall PROTECTION and MANAGEMENT

Mostly Effective

Strong framework for protection and significant progress regarding management of threats from visitors and interpretation since nomination in 2005.Financing

and resource allocation remain a challenge to management.

FULL ASSESSMENT

Description of values

Values

World Heritage values

► **> 400 skeletons of a wide variety of fossilized Eocene whales and other marine fossils**
Criterion:(viii)

Wadi Al-Hitan is the most important site in the world to demonstrate one of the iconic changes that make up the record of life on Earth: the evolution of the whales. It portrays vividly their form and mode of life during their transition from land animals to a marine existence. It exceeds the values of other comparable sites in terms of the number, concentration and quality of its fossils, and their accessibility and setting in an attractive and protected landscape (SoOUV, 2012). Iconic assemblage of fossilized skeletons of Archaeoceti (primitive whales documenting cetacean transition to marine life), sirenians and reptiles, as well as shark teeth from Gehannam Formation (40-41 million years ago). Additional whale skeletons from Birket Qarun Formation. 4 classes, 15 families and 25 genera of vertebrates represented. Largest concentration of intact skeletons worldwide. Qasr El-Sagha Formation (39-40 million years old), with fossilized marine and shallow marine invertebrate remains (UNEP-WCMC, 2011).

Other important biodiversity values

► **Flora and fauna of local importance.**

Present day flora and fauna at the property are reported to be sparse and

merely of local importance (UNEP-WCMC, 2011).

Assessment information

Threats

Current Threats

Low Threat

Damage, theft and vandalism by rapidly increasing numbers of visitors (including damage by 4x4 vehicles) are the main threat. Natural wind erosion also affects exposed fossils.

▶ **Tourism/ visitors/ recreation**

Low Threat
Inside site

Whale skeletons are physically fragile. Threefold increase of annual visitor numbers to ca. 12,000 between 2005 and 2008 (UNEP-WCMC, 2011).

▶ **Tourism/ visitors/ recreation**

Low Threat
Inside site

Some inofficial access tracks to site (e.g. from northern Baharia road) lead through areas containing fossils, may lead to destruction. Destruction case documented in 2007 (UNEP-WCMC; 2011).

▶ **Erosion and Siltation/ Deposition**

Very Low Threat
Inside site

Destruction by natural erosion is slow and overall not significant (UNEP-WCMC, 2011). It is a natural process that is part of the dynamics of the site, but the fragility of skeletons means that they should be protected against additional destruction, e.g. from cars. Exposed parts have been protected

through polymer embedding by site managers in the past.

Potential Threats

Data Deficient

There have been reports of unsuccessful attempts to establish illegal quarries on-site. This may continue posing a potential threat although specific information is not available.

► Mining/ Quarrying

Data Deficient
Inside site

There have been reports of unsuccessful attempts to establish illegal quarries on-site. This may continue posing a potential threat although specific information is not available (Pers. comm., 2011).

Protection and management

Assessing Protection and Management

► Research

Highly Effective

Strong scientific interest since 1980s. Exploration continuing; more fossils expected to be discovered in the future (UNEP-WCMC, 2011). One geologist employed on-site (2007). Exemplary research collaboration between EEAA, Egyptian Geological Survey and University of Michigan, with site staff training component, agreed 2005 and ongoing (Debonnet, 2007, Sameh, pers. comm.., 2011).

► Relationships with local people

Mostly Effective

Locals involved as guards, in management and tourism. Plans to involve local stakeholders more in ecotourism business making progress – 15 families benefiting from site (related to tourism activities) in 2010 (Sameh, pers.

comm., 2011).

▶ Legal framework and enforcement

Mostly Effective

Site protected as part of Wadi El-Rayan Protected Area (WRPA) under Egyptian Law No. 102 (1983) for Protected Areas. Enforced by Nature Protection Sector of Egyptian Environmental Affairs Agency. 28 rangers and guards 2011 in overall WRPA. 8 staff on-site in 2009. Logistics challenging due to remote location of site (UNEP-WCMC, 2011).

▶ Integration into regional and national planning systems

Data Deficient

Site protection supported through prime-ministerial decrees but no detailed information available.

▶ Management system

Mostly Effective

Managed as special protection zone within WRPA – no separate plan or administration. WRPA management plan prepared 2002 and revised in 2010. Separate management plan for Wadi Al-Hitan in preparation 2011 (Sameh, pers. comm., 2011). Business plan prepared but not endorsed by 2007 (Debonnet, 2007).

▶ Management effectiveness

Mostly Effective

No formal management effectiveness assessment published but overall management of key aspects appeared to be effective and improving at least until 2010 (IUCN, 2010).

▶ Implementation of Committee decisions and recommendations

Some Concern

Recommendations from 28.COM regarding visitor infrastructure and vehicular traffic management mostly met by 34.COM. Recommendations from 28.COM regarding inclusion of Gebel Qatrani and extension of buffer

zone still pending at 34.COM (IUCN, 2010).

▶ Boundaries

Mostly Effective

Boundaries generally adequate but were poorly manageable - adjusted based on natural features in 2010 (Sameh, pers. comm., 2011). Extension of buffer zone (of currently 5,885 ha) has been recommended. Potential added value of inclusion of Gebel Qatrani and Gebel Abiad site (west of site) noted 2010 (IUCN, 2010).

▶ Sustainable finance

Some Concern

Budget funding from EEAA in 2007 ca. $28,220, together for overall WRPA and Lake Qarun PA. No visitor income retention to support sustainable financing by 2010 (Debonnet, 2007). Italian-Egyptian Environment Programme had committed $518,000 for 2004-08, continuation past 2008 unclear (UNEP-WCMC, 2011). Conservation fund planned and “Friends of Wadi Al-Hitan” NGO tested as part of sustainable funding by 2007 – status unclear (Debonnet, 2007). Limited resources (electricity, water, communications, vehicles etc.) still a challenge to management effectiveness 2010 (El-Hennawy et al., 2010).

▶ Staff training and development

Data Deficient

No information available.

▶ Sustainable use

Mostly Effective

No significant resource use other than tourism.

▶ Education and interpretation programs

Highly Effective

Adequate education and interpretation facilities (visitor centre, signposting, information panels, leaflets, brochures and video) in place (Debonnet, 2007,

El-Hennawy et al., 2010).

▶ Tourism and interpretation

Mostly Effective

Visitors restricted to pre-arranged tours along prescribed trail by foot or camel (UNEP-WCMC, 2011). Extensive interpretation and visitor guiding facilities established by 2010. Additional visitor facilities (camping site, eco-lodge) planned 2007 (Debonnet, 2007). Cooperation with interested tourism/trekking companies offers added value. Possible need to further improve 4x4 access management was noted 2010, but unauthorized access from north reduced to non-significant levels 2010 (Sameh, pers. comm., 2011, IUCN, 2010).

▶ Monitoring

Highly Effective

Inventory works since 1980s, monitoring programme since 1998: photo-monitoring of state of whale skeletons twice a year (2007). Documentation and monitoring of new finds ongoing. More extensive geological survey twice a year. Visitor monitoring since 2005 (El-Hennawy et al., 2010).

Overall assessment of protection and management

Mostly Effective

Strong framework for protection and significant progress regarding management of threats from visitors and interpretation since nomination in 2005.Financing and resource allocation remain a challenge to management.

▶ Assessment of the effectiveness of protection and management in addressing threats outside the site

Data Deficient

N.A.

▶ Best practice examples

The visitor and interpretation facilities established at Wadi Al-Hitan have not only made this site more attractive and informative to visitors, but also

greatly contributed to reducing unregulated access with potential negative impacts on the site. These facilities and the underlying plans and concepts are a best practice example for other similar sites.

State and trend of values

Assessing the current state and trend of values

World Heritage values

► **> 400 skeletons of a wide variety of fossilized Eocene whales and other marine fossils**

Good

Trend:Stable

Whale and vertebrate skeletons generally well-preserved. 40% of known fossils in good condition, 42% weathered, 18% severely weathered in 2009 (El-Hennawy et al., 2010).

Other important biodiversity values

► **Flora and fauna of local importance.**

Present day flora and fauna at the property are reported to be sparse and merely of local importance (UNEP-WCMC, 2011).

Summary of the Values

► **Assessment of the current state and trend of World Heritage values**

Good

Trend: Stable

Overall status of whale skeletons and other fossils very good. Different stages of weathering and some limited impact of damage/removal by visitors observed.

Additional information

Key conservation issues

▶ Need for effective visitor management

Local

Visitor management is crucial to both a positive experience of visitors and the minimization of damage to the property. While significant improvements have been made in this regard, further efforts are needed to maintain and increase standards.

▶ Boundaries

National

A boundary extension (inclusion of Gebel Qatrani and Gebel Abiad site) was in preparation in 2011.

Benefits

Understanding Benefits

▶ Does management of the site provide jobs (e.g. for managers or rangers)?

28 direct conservation jobs and 15 families benefiting from tourism and visitation of site, in an area with little other income sources.

▶ Importance for research

The outstanding paleontological values of the site are recognized by its inscription on the World Heritage List under criterion viii.

▶ Outdoor recreation and tourism

Visitation of the site still limited (ca. 12,000 visitors in 2008) but increasing, and attractiveness of the site supports potential further growth in visitation.

► Contribution to education

The number and diversity of fossil remains at the site offer an impressive insight into evolution and the history of Earth, which is of high educational value and has potential to be realized to a greater extent as visitation increases.

Summary of benefits

The rich benefits of the site are based on its paleontological values and are mainly in the area of tourism, knowledge building and education. However, given the remoteness and desert environment of the property, it also provides significant socio-economic benefits to the local population.

Projects

Compilation of active conservation projects

№	Organization/ individuals	Project duration	Brief description of Active Projects
1	None known		None known

REFERENCES

№	References
1	Debonnet, G. (2007). ’Mission report of field visit to Wadi Al-Hitan World Heritage Property (Egypt).’ Paris: World Heritage Centre.
2	El-Hennawy, M. T., Sameh Anter, M. (2010). ’State of World Heritage Site, Wadi El-Hitan, 1st 5 year report’. Wadi Al-Hitan, Wadi El-Rayan Protected Area, Nature Conservation Sector, EEAA, Ministry of State for Environmental Affairs.
3	IUCN (2010). ‘State of Conservation Report: Wadi Al-Hitan (Egypt) (N1186)’. [Electronic reference] . Accessed 1 June 2013.
4	Personal e-mail communication on the State of the Wadi Al-Hitan World Heritage property. Unpublished, 2011.
5	UNEP-WCMC (2011). ‘Wadi Al-Hitan (Whale Valley), Egypt.’ UNEP-WCMC World Heritage Information Sheets. [Electronic reference] . Accessed 29 May 2013.