A proposal for a Western Abu Dhabi Coast and Islands 'World Heritage Site'

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Summary

It is proposed that much of the UAE coast and islands west from Sir Bani Yas and its satellites to the Saudi Arabian border is formally designated as a single World Heritage Site. This area holds numerous important archaeological sites and substantial populations of various Red Data species of endangered and threatened wildlife. Ecologically and culturally the area is without parallel in the UAE. Socio-economic and strategic considerations need to be included in the development of an all-embracing integrated development plan.

يقترح الكُتَّاب أن يتم اعلان الشواطىء والجزر والمياه الواقعة بالمنطقة الغربية بأبوظبي مواقع تراثية عالمية وذلك وفقاً لمقررات المؤتمر للتراث والذي نظمته اليونسكو.

Introduction

The coast and islands of western Abu Dhabi are a haven for numerous endangered and vulnerable populations of mammals, turtles and birds, retaining important and largely intact marine and terrestrial communities as well as having a wealth of archaeological sites (most yet to be excavated) dating back to at least 7,000 years B.P. A summary of recent scientific findings is presented here, together with a designation proposal which fosters only non-damaging development. In the light of current increased human activities and pressure here, there is some urgency for adoption of a sustainable integrated development programme for the area.

What constitutes a 'World Heritage Site'

Much of the Abu Dhabi coast and islands has been proposed in the past as a World Heritage Site, although the original progenitor is unknown and any reference is now lost. Nonetheless the idea still stands as the area's attraction remains extant. A World Heritage Site, WHS, is a designation established under the 1972 World Heritage Convention concerning the protection of the world cultural and natural heritage. (The UAE has yet to ratify the convention). Sites are nominated for inclusion on the World Heritage List which contain areas considered of outstanding universal natural and cultural present day and/or historical value. The United Nations Educational, Scientific and Cultural Organisation, UNESCO, adjudicates on submissions received.

Following discussions in early 1996 between UAE President His Highness Sheikh Zayed bin Sultan Al Nahyan and the Secretary General of the United Nations Educational, Scientific and Cultural Organisation, UNESCO, Federico Mayor, a site of a pre-Islamic monastery complex in the Al Khor district of the island of Sir Bani Yas, is currently being evaluated for inscription on the UNESCO 'World Heritage Site' list.

This paper suggests, however, that consideration be given to the nomination of a much broader area.

Whether or not the western Abu Dhabi coast and islands are designated as a WHS or not is a moot point providing some formal mechanism is adopted that prevents its piecemeal destruction. Much has already been lost as a result of recent development, a significant amount of which has been undertaken without any thought being given to its environmental impact.

Now that the archaeology and natural history of Abu Dhabi emirate is better known and documented, the next stage is to introduce safeguards. As intimated above, a domestic rather than international designation would be satisfactory, providing the net result is much the same.

The area singled out easily qualifies as a Ramsar site which is a designation under the Ramsar Convention, initiated in Iran in 1971, concerned primarily with wetlands (including marine) 'especially as waterfowl habitat.' Since there is much of archaeological value in the area under discussion, designation as a World Heritage Site is that which is advocated.

The principle of the WHS is to allow non-damaging activities to continue and for potentially environmentally damaging activities to be curtailed or strictly regulated in order to minimise any adverse impact. It is realised that the strategic importance of this border zone will mean certain activities undertaken in the national interest may well be outside of restrictions introduced to safeguard the site. On the plus side, however, is the potential reduction of disturbance and other development in any security zone *(see below).*

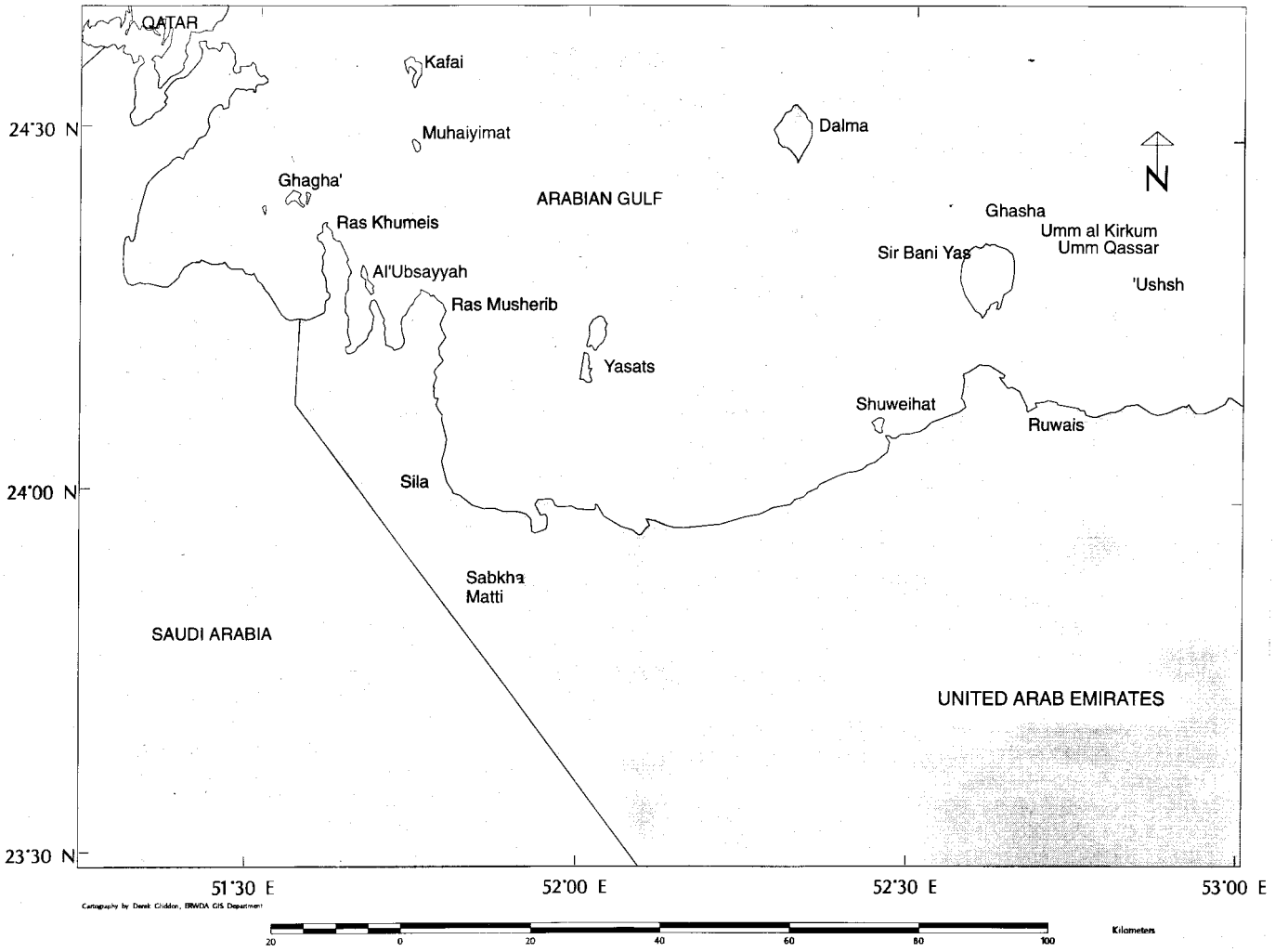
The proposed World Heritage Site (Map 1)

The map shows the area proposed for designation. Some fine tuning of boundaries and exclusion areas will be marked on a larger scale map if the proposal is accepted. There is even the possibility of the area being of a trans-frontier nature: the Meteorological & Environmental Protection Administration, MEPA, of the Kingdom of Saudi Arabia has already made calls for protection of the neighbouring waters, primarily on account of the dugong and turtle numbers present (*see* MEPA Technical Report No. 10 - Preen (1989)). Quite apart from the cultural and ecological importance of this area, it is also scenically attractive. The area has mostly a narrow rocky intertidal coast; the sea being for the most part shallow with abundant seagrass and coral development and numerous islands and islets present. Part of the coast is *sabkha.*

Research Findings

1. Geological and geomorphological studies

The geological and palaeontological history of western Abu Dhabi has been described separately, and to a considerable extent in earlier papers in ***Tribulus.*** Important references worth consulting, amongst others, are: Goodall (1994) – describing the development history of Sabkhat Matti; Whybrow *et al.* (1991) & Whybrow (1994) which give accounts of Miocene vertebrate and inverte-



nic importance of much of the area, it is necessary for some form of protection to be arranged. The related archaeology is also, of course, part and parcel of the overall picture.

The island of Shuweihat has already been earmarked for protection as a Site of Special Scientific Interest, SSSI, because of its outstanding geological and palaeontological importance, although what form this protection will take and how it will be implemented is at present unknown. A formal system needs now to be developed rather than relying on the *ad hoc* arrangements which currently exist.

2. Archaeological significance

Surveys and excavations carried out since 1991 by the Abu Dhabi Islands Archaeological Survey have already identified sites of very substantial significance on a number of the islands contained within the proposed area of the World Heritage Site.

The Ghagha' archipelago contains sites, as yet unexcavated, from the Late Stone Age and the First Millennium AD, as does the nearby island of Al Ufsaiyyah.

The island of Dalma has a site dating back to the 'Ubaid period, around 6,500 - 7,000 BP, which is not only the earliest settlement yet identified in the United Arab Emirates, but is also the largest site of the period known anywhere in eastern and south eastern Arabia.

On the island of Sir Bani Yas, a pre-Islamic monastic settlement has been identified, and partially excavated. Dating to the Sixth and Seventh Centuries AD, it is the largest site of its type known anywhere in eastern Arabia, and offers important evidence of the belief prevailing in the Emirates before the coming of Islam.

The twin islands of Yasat al Ulya and Yasat Sufla have extensive evidence of occupation from the early First Millennium AD onwards, as yet unexcavated, while other archaeological sites have been identified both on other islands, such as Muhayimat, and on the Sila'a peninsula on the mainland.

An outline of some of the archaeological work can be found in earlier papers in ***Tribulus***, *(see Bibliography)*, while an overview of the work of the Abu Dhabi Islands Archaeological Survey is soon to be published elsewhere, (Hellyer, *in prep.*).

3. Wildlife importance

a. Marine mammals

A population of Dugong *Dugong dugon* still survives in the area around Ghagha and the Ras Ghumeis peninsula west of Sila'a. It is of unknown size but as our rarest regularly occurring marine mammal (and being considered globally 'endangered'*) requires both safeguarding and further study. Individuals are still accidentally trapped by fishermen (3 reported drowned in nets here in the eighteen months up to September 1996) and 2 reported dead on the Yasat Islands and another on nearby Na'itah in March 1997. Apart from Dugong, there are large, apparently healthy, populations of both Bottlenosed Dolphin *Tursiops truncatus* and Indo-Pacific Humpback Dolphins *Sousa chinensis,* these being 'vulnerable' and 'near-threatened' respectively. The Ghagha'/Ghumeis area is once again a local hot spot. Re-

cently, two corpses of Finless Porpoise *Neophocaena phocaenoides* have been collected near Sila'a. This very poorly known cetacean is regarded as 'critically endangered' by the World Conservation Union, IUCN.

*IUCN categories are defined in the appendix.

b. Marine reptiles (turtles)

Breeding populations of the 'vulnerable' Green Turtle *Chelonia mydas* are known from several of the islands, for example Muhaiyimat, 'Ushsh and Yasat al Ulya. Only provisional population estimates are available and once again further study is needed. Numbers appear, however, to be low, with fewer than ten or twenty nest pits in any one site (some islands may now be abandoned as nesting sites). Harvesting of eggs continues illegally in many sites; some adults are also accidentally or deliberately netted, again illegally. The large quantity of plastics and other litter washed up on many nesting beaches is physically preventing turtles from coming ashore to lay their eggs. Very little is known regarding the occurrence or abundance of the other species of turtle known to frequent this area. Most, however, are pelagic to a greater degree than Green Turtle and thus are found more often around the outer isles, although much less often recorded or reported.

c. Other marine flora and fauna

Seagrass beds and coral communities are known from many sites (*see* Scott 1996). Pristine examples of coral exist around many of the smaller islands, although dredging and perhaps other activities (*e.g.* sewage discharge) is adversely affecting some areas. This and other threats are likely to increase. Seagrass is possibly restricted to the Ghagha' area & around Yasat, hence the presence of Dugong, although this is partly inferred and in need of confirmation. For most lower forms, e.g. algae, nudibranches etc., documentation is rather sparse or limited, certainly so within UAE waters (and in English). Even vertebrates are little studied; seasnakes, for example, despite being relatively abundant, remain poorly known in western Abu Dhabi waters. Sheppard *et al.* 1992 gives a useful overview for the (Arabian) region but there is clearly a great need for concerted scientific study of the UAE's marine environment, beginning with adequate mapping of major ecosystems and submarine communities.

d. Birds

Birds are easily the best known of all the taxonomic groups. Most areas have been surveyed for breeding birds at least once in the last three years; wintering and visiting populations are less well documented. The Arabian Gulf islands support internationally important seabird colonies, and in this the Abu Dhabi islands are no exception. In this single area under description here are: 16,300+ pairs of Bridled Tern *Sterna anaethetus;* 11,350 pairs of White-cheeked Tern *S. repressa;* c4,500 pairs of Lesser-crested Tern *S. benghalensis,* 35 pairs of Sooty Falcon *Falco concolor;* over 40 pairs of Osprey *Pandion haliaetus* and c. 7,500 pairs of Socotra Cormorant *Phalacrocorax nigrogularis.* All species named here are on the Red Data List for the UAE (Hornby & Aspinall 1996), with Socotra Cormorant being regarded as 'globally' threatened.

e. Fish

The UAE Ministry of Agriculture and Fisheries has a continuing research programme concerning commercial fish and fisheries. Reef fish remain, very largely, the domain of divers and academics. Nonetheless one major key to the success of the World Heritage Site proposal is that it should provide for the fisheries (stocks and spawning areas etc) to be protected, in order to allow continued exploitation and even increase the level of the sustainable harvest. The introduction of artificial reefs would be one way of improving yields. Much greater attention and applied research should be focussed on these and other aspects *e.g.* prevention of accidental netting of dugong.

Present day socio-economics

Commercial fishing fleets operate out of Dalma and Sila'a, with one or more dhows operating out of other ports or entering these waters from ports outside the area. There is no doubt that fisheries play an important socio-economic role providing employment and highly valuable fish such as the much sought after Hamour (Brown-spotted Grouper) *Epinephelus tauvina.*

Waters within an ill-defined area adjacent to the island of Sir Bani Yas have been declared off-limits to commercial fishermen for several years and there has apparently been a noticeable increase in the level of fish stocks *(Ghassan Al Ghussein, pers. comm.).*

The westernmost part of the area from Ghagha' north through Muhaiyimat to Kafai marks the UAE maritime border with Saudi Arabia and Qatar. Designation of areas on both sides of this maritime border as conservation areas, as already proposed by Saudi Arabia for its portion of the sea, may prove to be desirable.

Most development *e.g.* of housing, afforestation and so on is taking place on the mainland, around Sila'a and westwards toward the land border with Saudi Arabia. This is unlikely to be influenced or affected in any way by WHS designation. Oil and gas exploration and exploitation have considerable potential for an adverse environmental impact but fortunately the main operating company, ADNOC and its partners, employ the most stringent operational and technological safeguards and planning regulations and restrictions as well as undertaking thorough environmental assessment prior to development.

Geological surveys in the onshore areas adjacent to the proposed World Heritage Site over the past 45 years have not identified any significant hydrocarbon prospects, at least within the territory of the UAE. In plans for development of its Shaybah (Zarrarah) field south of the UAE, Saudi Arabia has opted for a pipeline route direct to the main eastern Saudi Arabian terminal northwest of Qatar, and has rejected a proposal for a pipeline, with associated terminal development, in the Khor Duwaihin, immediately to the west of UAE territory and adjoining the area proposed for the WHS.

Thus it currently seems unlikely that oil field development will impinge significantly upon the area, except, possibly, for the development of offshore fields.

Why a World Heritage Site?

The wildlife importance of many sites within the area proposed here have been documented in two internationally accredited works, namely, Evans (1994) & Scott (1995) and in official documents of the Federal Environmental Agency, in UAE journals, press and other works e.g. Anon (1994), Aspinall (1996a) & Baldwin (1995). Similarly, the results of archaeological and palaeontological examination to date have been published e.g. Hellyer (1993); King & Hellyer (1994); Whybrow *et al.* (1991). Based on historic and the most recent findings the boundary of the proposed WHS has been drawn to encompass, for example, previously unsurveyed islands when important biological or archaeological material is present, or sites previously recommended for protection but falling in another adjacent or nearby area. Thus the

presently proposed boundary incorporates part of two areas from the major inventory the 'Directory of Important Wetlands' in the Middle East, (three if Dalma is included). Four 'Important Bird Areas' (see Evans 1994) are recognised within this area, Yasat al Ulya, Dalma, Ghagha' and the satellite islands of Sir Bani Yas, although two other islands, Umm Al Hatab and Muhayimat would both have easily qualified for inclusion had data been available at the time of publication of that important work.

Housed in this one, admittedly large, area is the UAE's entire breeding population of Sooty Falcon *Falco concolor* (70% of those in the Arabian Gulf); >60% of the UAE's Ospreys *Pandion haliaetus* (c. 50% of those in the Gulf); close to 40 and 50% respectively of the national populations of Bridled Tern *Sterna anaethetus* and White-cheeked Tern *S. repressa* and 20% of both Lesser-crested Tern *S. bergii* and Socotra Cormorant *Phalacrocorax nigrogularis.* As stated earlier, all of these are formally recognised Red Data species of the UAE. The biogeographical significance of these populations is described in Aspinall (1996b). The area is of some importance for wintering and passage waterfowl and other species, but this field needs more attention.

Despite some degree of subjectivity in the IUCN Red Data species categories definition, and a degree of data deficiency especially regarding abundance and trends, there is already more than enough to satisfy even the most doubting mind that the area described is of the highest calibre, thus meriting designation as a World Heritage Site. If not that, then something approaching it is still required. Such a designation would contribute to the recognition of the cultural and social values and ecological uses of the area in the planning, development and policy-making process.

Any designation should involve the preparation of a detailed development plan, which identifies such activities as may be considered not to be damaging to the integrity of the WHS. These could include, for example, the preparation of a 'heritage trail,' including sites to visit, while there may also be some potential for the development of restricted amounts of tourism, particularly for UAE nationals, the people most likely to have access to boats in this area.

The importance of securing an appropriate designation for the area is underlined by the fact that parts of the area, and of its wildlife and archaeology, are already under threat from a variety of quarters. These include dredging, reclamation, development & disturbance, pollution, over-exploitation, the introduction of ground predators to islands and the proliferation of alien species. Action is needed rapidly to safeguard what is left. Once this position is consolidated then it is hoped that depressed populations may recover. Restoration of some seabird colonies, in particular, is one further goal.

The cultural importance of the western Abu Dhabi coast and islands, in terms of the history of the country's people, is arguably greater than that of the wildlife although clearly they are not strictly comparable. Thus the proposal for protection is all-encompassing, hence the title heritage, and the suggestion that designation as a World Heritage Site is the most appropriate.

While further scientific research in the area is required, sufficient is already known to make its significance clear. It is to be hoped that the proposal will attract the necessary national and international support, in order to safeguard the archaeology, marine environment and wildlife that this important part of the United Arab Emirates contains.

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The proposals contained in the paper are, however, the sole responsibility of the authors.

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APPENDIX

IUCN Red List categories and definitions

Critically Endangered: A taxon is considered critically endangered when it is facing an extremely high risk of extinction in the wild in the immediate future; **Endangered:** when a taxon is facing a very high risk of extinction in the wild in the near future; **Vulnerable:** when a taxon is facing a high risk of extinction in the wild in the medium-term future & **Near-threatened:** when a taxon is close to qualifying as vulnerable.

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