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# Rock Islands Southern Lagoon (Republic of Palau) No 1386

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## Official name as proposed by the State Party

Rock Islands Southern Lagoon

## Location

Koror State  
Republic of Palau

## Brief description

Set in a marine lagoon protected by a barrier reef, the Rock Islands form diverse natural habitats and include evidence of former human occupation in caves and abandoned villages. Cave burials, middens and an assemblage of red-painted rock art attest to seasonal human occupation dating from 3,100 BP. Remains of permanent villages abandoned in the 17<sup>th</sup>-18<sup>th</sup> centuries testify to the consequences of population growth and climate change on subsistence in a marginal environment.

## Category of property

In terms of categories of cultural property set out in Article 1 of the 1972 World Heritage Convention, this is a *site*.

In terms of the *Operational Guidelines for the Implementation of the World Heritage Convention* (January 2008), paragraph 47, the property is nominated also as a *cultural landscape*.

[Note: The property is nominated as a mixed cultural and natural site. IUCN will assess the natural significance and ICOMOS the cultural significance.]

## 1 Basic data

### Included in the Tentative List

6 November 2007

### International Assistance from the World Heritage Fund for preparing the Nomination

2010

### Date received by the World Heritage Centre

1<sup>st</sup> February 2011

## Background

This is a new nomination.

## Consultations

ICOMOS has consulted its International Scientific Committees on Archaeological Heritage Management and Pacific Islands and several independent experts.

## Literature consulted (selection)

Jones, S., 'The Peopling of the Pacific', in *Cambridge encyclopedia of human evolution*, Cambridge ; New York, NY, Cambridge University Press, 1992.

Lilley, E. (ed.), *Early Human expansion and Innovation in the Pacific*, étude thématique de l'ICOMOS, décembre 2010.

McKnight, R.K., *Orachl's Drawings: Palauan Rock Paintings*. Saipan, Trust Territory of the Pacific Islands: Micronesian Research Working Papers, No° 1, 1964.

Morgan, W. N., *Prehistoric Architecture in Micronesia*, University of Texas Press, Austin, 1988.

Olusdong, R., 'Cultural Heritage and Communities in Palau', in *Micronesian Journal of the Humanities and Social Sciences*, Vol. 5, n° 1&2, 2006.

Osborne, D., *The archaeology of the Palau Islands. An Intensive Survey*, Bernice P. Bishop Museum, Bulletin No. 230, Bishop Museum Press. Honolulu, Hawaii, 1966.

Parmentier, R.J., *The Sacred Remains: Myth, History, and Polity in Belau*, The University of Chicago Press, Chicago, Illinois, 1987.

Smith, A., and Jones, K.L., *Cultural Landscapes of the Pacific Islands*, étude thématique de l'ICOMOS, décembre 2007.

Vienne, B., 'Masked faces from the country of the dead', in *Arts of Vanuatu*, Crawford House Publishing, Bathurst, NSW Australia ; Éditions de la Réunion des musées nationaux, 1996.

## Technical Evaluation Mission

A joint ICOMOS/IUCN technical evaluation mission visited the property from 8 to 19 September 2010.

## Additional information requested and received from the State Party

A letter was sent to the State party on 9 September 2011 requesting clarification on the comparative analysis, boundaries, inventory, legal protection, active conservation and management. A response was received from the State Party on 25 October 2011 and the information has been incorporated into relevant sections below. A second letter was sent to the State Party on 12 December 2011 requesting information on legal protection, property boundary, name of the nominated property and management plan. A response was received on 28 February 2012 and the information has been incorporated into the relevant sections below.

## Date of ICOMOS approval of this report

14 March 2012

## 2 The property

### Description

The nominated property is a marine landscape of reef enclosed lagoon and numerous large and small limestone islands located immediately to the south of Palau's main volcanic island Babeldaob, within the waters of Koror State. The nominated area is 85,900 ha. Palau is part of

the Western Caroline Islands about 600km east of the Philippines and about the same distance north of Irian Jaya. The nominated property includes archaeological remains and rock art sites in two island clusters – Ulong and Ngemelis – and three islands – Ngeruktabel, Ngeanges, and Chomedokl.

#### Ulong

This is a cluster of six raised coralline reef islands located in the central part of the nominated property area. Ulong Island is the largest and is considered to contain the most significant set of cultural remains in the Rock Islands with evidence of occupation from 3,100 BP to early European contact in the 18<sup>th</sup> century, together with a rock art gallery. Evidence of the earliest human settlement was located in the south-west of the island, recording Paluan material culture including human use of the marine ecosystem from 3,000 to 500 BP. The remains of Ulong Village comprise a stonework village system dating from 950-550 BP with a dispersed pattern similar to other Rock Island village sites. Finds of stone tools and ceramics manufactured on the volcanic islands testify to a close relationship between Palau's volcanic and rock islands. The village was abandoned c.1600 AD. Remains of the camp established by the survivors from the shipwreck in 1783 AD of the British East India Company packet, the *Antelope* in a protected cove on the south side of the island support oral accounts of the encounter. The weapons and help of the British-Chinese crew enabled the political entity of Koror to achieve superiority over Melekeok to the north and Peleliu to the south, establishing the key position in Palau that it holds today. A large rock overhang on the island's north-west coast holds a dense and concentration of red ochre rock art thought to date from 3,000-2,000 BP. According to tradition this and smaller assemblages in five other Rock Islands are attributed to the culture hero Orachel.

#### Ngemelis

This is a cluster of eight low-lying rock islands at the south-western edge of the nominated property area. Archaeological remains have been recorded on Ngis, Belual a Kelat, Dmasech and Uchularois, of which only the last two have been investigated in detail. It is considered likely that remains will be found on the other islands – Desomel, Lilblau, Cheleu and Bailechesengel. Remnants of midden deposits linked by a stonework causeway, and a stonework village identified as 'Beluu Ngemelis', the central village of the region have been archaeologically documented on Dmasech, including the apparent remains of a *bai* (men's house), a unique find on the Rock Islands so far. The occupation of the village area has been dated to 1530-1770 AD. Stone platforms and features including a canoe dock on Uchularois may represent the home village of Uchermelis, chief of the Ngemelis cluster. Separate areas of cultural deposits in caves and rock shelters in the centre of the island have been dated to 1250-1450 AD and 650-1000 AD. The cave complex is significant as the only site where the cultural remains have been studied in sufficient detail to allow tracking of human impact on the marine ecosystem

through time, providing evidence of over-harvesting of reef resources during the stonework village phase of Dmasech-Uchularois. Examination of sensitive microbiological, isotopic and molecular indicators of rainfall in palaeocores from Spooky Lake on Mecherchar show that this over-harvesting coincided with a decrease in rainfall in Palau from 1450-1650 due to the southward movement of the inter-tropical convergence zone. Together these factors are identified as the cause for abandonment of the villages.

#### Ngeruktabel Island

Cultural sites identified on this, the largest rock island of the Southern Lagoon include the remains of several stonework villages, Yapese stone money quarries, rock art, and a complex of World War II structures and remains. Not all the island has been archaeologically surveyed and there are many sites not yet recorded. Oral history records at least five occupied villages prior to European contact: Metukerukull, Mariar, Ngermiich, Ngeremdiu and Ngeruktabel. The populations are said to have moved out due to warfare and or lack of food. Stonework village remains have been identified and archaeologically investigated at Mariar on the south-east side of the island dating from 1530-1730 AD on the southern hilltop's platform, while a midden deposit on Big Mariar beach has been dated to 990-1100 AD. At Ngeremdiu the stonework village system connects two beaches across the southern-most tip of the island. It includes remnants of a defensive wall and a stone well; also stone walls and terraces and an unfinished piece of Yapese stone money. A WWII Japanese defensive complex covers the ridge face overlooking the beach, which has disturbed some of the features of the village site.

#### Ngeanges Island

This island is located around 1,000 m south of Ngeruktabel Island. Limestone outcrops dominate the north and south ends of the island. Stonework village features on the southern outcrop have been investigated and recorded, and include remains of what is reputed to be the chief Aderdei's house. There is a possible Yapese stone money quarry and several Japanese defensive positions mingled with the Paluan stonework. Stonework features and midden deposits on the beach have been affected by WWII shelling.

#### Chomedokl Island

Located off the south-west of Ngeruktabel Island, Chomedokl is the site of a large cave used for burials from 200 BC to 900 AD. Caves and hollows are common in the Rock Islands and many have been used in prehistoric times for human burials. At least ten burial caves have been archaeologically documented, including the one on Chomedokl. The south end of the chamber contains areas of rock fall and skeletal remains including a complete human skull cemented into the flowstone. Burial goods found in the cave include ceramics, stone adzes and shell items.

### History and development

Human activity is evidenced in the Rock Islands from 3,100 BP on Ulong Island. At that time the sea level was declining after being 1.5-1.8 m higher than today. Occupation was short term and consistent with the presence of mobile camps that skimmed pristine stocks of marine food from accessible locations. In response to ICOMOS' request for clarification regarding human occupation of the islands, the State Party explained that research indicates that separate migrations were responsible for the occupation of Western Micronesia and Palau from that of the Mariana Islands and Yap. The archaeological evidence suggests that colonisation of Palau originated from Island South-east Asia/northern New Guinea. Caves and shelters were used for human burials from 2,000 BP, with smaller caves being used for individual interment and larger caves for multiple burials. These are considered to have been cemeteries for groups who occupied the volcanic islands (Babeldaob, Koror) and had rights to the Rock Islands. Territorial rights were marked by highly visible rock art in exposed locations, while other rock art is concealed in limestone caves. Additional information supplied by the State Party indicates that the red painted rock art in Palau appears to be the work of people of a different origin than the Chamorro of the Marianas, which is executed in white or black pigment and characterised by linear human/animal figures. The red rock art at Ulong is geometric, abstract with few anthropomorphic shapes.

Continued use of the Rock Island marine food resources is indicated, but there is no evidence for permanent settlement until around 1200 AD, when the first stonework villages were established. These were contemporary with villages established in the volcanic islands coinciding with abandonment of the terraced earthwork sites there c1200 AD. It appears that a number of factors including drought, increased population, competition for resources and associated warfare on the volcanic islands drove some of the original inhabitants of the terraced systems in Palau to settle permanently in their Rock Islands territories. The Rock Islands villages were built in defensive locations with high stone walls, some with an internal foot ledge allowing defenders to hurl projectiles at attackers, across beaches that provided canoe access. Large stone platforms indicating chiefly residences or the abode of priests were located on high limestone outcrops and ridges. Burials were in sand plains although some cave burial may have continued. Giant swamp taro was grown in swampy ground between limestone bedrock and the coastal plain in damp sink holes, while tree crops such as coconut were grown on sandy beaches. Village deposits include primarily marine shells used for domestic artefacts and stone tools and pottery fragments from large, flanged-rim bowls made in the volcanic islands, indicating an ongoing relationship with the volcanic islands. The subsistence economy relied on shellfish and finfish. The total Rock Island population is estimated to have reached between 4,000 and 6,000 during the period 1200-1650 AD. During the course of this occupation the size of several subsistence shell fish decreased as a result of over-harvesting. Overpopulation and resource depletion

resulted in the abandonment of the rock islands over the next two centuries as social groups relocated to Babeldaob, Peleliu and Angaur. Origin stories trace the migration of individuals, families and entire villages from the Rock Islands to contemporary villages on Babeldaob, Oreor and Ngerekebesang. The immigrants brought village names, chiefly titles and community deities from their original village sites. During this period there was considerable interaction with Yapese voyagers who came to the Rock islands to quarry calcite deposits to make stone money discs. The shipwreck of the *Antelope* on Palau's western barrier reef in 1783 and subsequent help given by the survivors to the paramount chief of Koror enabled the chief to overcome his enemies on Babeldaob and Peleliu. Palau came under successive colonial administrations: Spain 1885-1889, Germany 1889-1914, Japan 1914-1945, and United States 1945-1994.

During WWII (1939-45) Japanese forces garrisoned troops, stored military supplies, established naval positions and moored naval and supply ships around Palau, resulting in substantial impacts on the landscape. In the Rock Islands there are remains such as shrapnel fragments, abandoned equipment, unexploded ordnance, gun emplacements, troop shelters, sunken ships and planes. Earth and stone defensive features were built in Palauan stonework villages and numerous caves and rock shelters were cleared of prehistoric remains.

The first systematic surveys and excavation of prehistoric sites were carried out in 1953-4 and 1968-9 by Douglas Osborne. Since then stonework village sites have been investigated by Takayama (1979), and staff and students from Southern Illinois University (1989, 1992), and human burials and cultural deposits on Ulong and Chelechol Islands have been investigated by Fitzpatrick (2003), Clark (2005) and Liston (2005). Recent research in the Rock Islands (2006, 2007) has focused on the role of climate change and overharvesting of marine resources on the abandonment of stonework settlements; the Yapese stone money quarries and associated cultural contact between Yap and Palau (2003); first contact between Palau and the West at the *Antelope* survivors' camp (2007, 2010), and prehistoric human remains on Chomedokl Island (2008).

Palau's first formally protected area, the Ngerukewid Islands Wildlife Preserve was legislated in 1956. Following Independence in 1994, tourism development became a major economic focus for Palau.

### 3 Outstanding Universal Value, integrity and authenticity

#### Comparative analysis

The nominated property is compared in the nomination dossier with the World Heritage listed (2003: criteria (ii), (iii), (iv), (v)) Mapungubwe Cultural Landscape in South Africa, a relict landscape from which reduced agricultural capacity caused by recurrent droughts during the Little Ice Age in the 14<sup>th</sup> century forced the population to migrate

into neighbouring regions. While the impact of climate change had a similar impact, this is a savannah landscape, not comparable in terms of use and resources with the Rock Islands landscape. In terms of human impact on the marine ecosystem, the Rock Islands are compared in the nomination with the World Heritage Listed (1986, 2004, 2005: criteria (iii), (v), (vii), (ix), (x)) St Kilda archipelago in the north of Scotland and shown to have a longer sequence of human adaptation – 3,000 years versus 2,000 at St Kilda. The negative effect on the biota is compared with that at the World Heritage Listed (1995: criteria (i), (iii), (v)) Rapa Nui (Easter Island) National Park, Chile, where over-exploitation of marine resources has also been documented. However the evidence at the Rock Islands is considered exceptional, being in the form of fish and shellfish remains preserved in limestone sediments which chart human use of marine resources over 3,000 years.

The remnant stonework village sites in the Rock Islands are compared in the nomination dossier with those on the Paluan volcanic islands, in particular with Irai village on Babeldaob, and found to exhibit distinctive differences. Whereas the settlement on the volcanic islands centre around the *bai* or men's house and associated houses of high-ranking chiefs, from where paths and causeways radiate out to stone landing docks, garden areas and other dwellings, the Rock Island villages are strung out along limestone ridges or sand plains, protected by defensive stone walls along the seaward side. The Rock Islands villages depended on marine resources for their survival, and potable water is scarce, whereas the volcanic islands villages are sustained by taro gardens and other agriculture as much as fishing. The volcanic island villages are part of a regional settlement system in which there is a distinct hierarchy of socio-political power and authority. The Rock Islands villages are less formal, smaller in scale; there are relatively few bathing areas, wells, burial areas, stone uprights, canoe docks, or foundations of large community structures such as *bai*.

ICOMOS considers that these comparisons show that the Rock Islands cultural property stands out as a demonstration of human adaptation to climate change in a subsistence environment. The islands and their marine environment were used periodically over a long period of time from 3,100 BP onwards for marine harvesting by people whose rock art was different from that in the Marianas and who are purported to have arrived from Palau's volcanic islands. The people who settled in the Rock Islands permanently from the 11<sup>th</sup>-12<sup>th</sup> century had been forced out of the volcanic islands by overpopulation and consequent warfare. The layout and fortification of their villages in the Rock Islands differ from those in the volcanic islands and demonstrates awareness of possible future conflict. A few centuries later the descendants of these permanent settlers in the Rock Islands had to abandon their villages and move back to the volcanic islands because of a combination of resource depletion and lack of fresh water due to climate change. The archaeological data are comprehensive and very thorough and investigations range from descriptive and

documentary to scientific studies of subsistence and paleoclimatology.

ICOMOS notes that the Rock Islands' villages could also be compared with villages associated with the Nowon and Votwos of Ureparapara on Vanuatu's Tentative List. Nowon are the stone platform facades of former men's meeting houses and Votwos are ceremonial earthen platforms. Together these formed the ceremonial complexes associated with village settlements that stretched across the island before European settlement. However the published accounts of Ureparapara give insufficient description of any village remains to enable comparison. The sketch of village social organisation given in Vienne (fig. 286) for a village in the Banks Islands (which, like Ureparapara is part of Vanuatu's Northern Islands group), shows a circular arrangement of dwelling houses bounded by an enclosure of some kind. This seems very different from the Rock Islands villages' elongated layout.

In terms of the centrality of the Rock Islands cultural property to national identity, the State Party recounts oral histories documenting the migration of place names and chiefly titles from the Rock Islands to the volcanic islands. The State Party notes that comparable properties that have associated symbolic, cultural, historical and religious values include World Heritage Listed Tongariro National Park, New Zealand (1990, 1993: (vi), (vii), (viii)); Papahānaumokuākea, United States of America (2010: (iii), (vi), (viii), (ix), (x)), Rapa Nui National Park, Chile (1995: (i), (iii), (v)); Kakadu National Park, Australia (1981,1987, 1992: (i), (vi), (vii), (ix), (x)), and Chief Roi Mata's Domain, Vanuatu (2008: (iii), (v), (vi)).

ICOMOS considers that of these examples the most directly comparable is Papahānaumokuākea, where a seascape is associated with sacred sites. However according to the nomination dossier the cultural values associated with the seascape at the Rock Islands are related less to symbolic and religious values and more to traditional rights of marine harvesting and village settlement. Other relict cultural landscapes described in the ICOMOS Thematic Study, *Cultural Landscapes of the Pacific Islands* (2007) may have spawned similar origin stories through the migration of their peoples. The scientific work needed to investigate other sites in this respect is yet to be done. The archaeology of the Rock Islands and its relationships to oral history has a uniqueness which makes drawing a direct comparison with inscribed sites very difficult. The Outstanding Universal Value of Papahānaumokuākea and the other World Heritage listed properties do not diminish the exceptional qualities of the Rock Islands.

ICOMOS notes that the comparative analysis has been undertaken with properties bearing similar values to those of the Rock Islands Southern Lagoon, inscribed or not on the World Heritage List and at national, regional and international level.

ICOMOS notes that this nomination accords with the World Heritage Committee's strategy in relation to achieving a balanced and credible World Heritage List through filling gaps in the Pacific region.

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ICOMOS considers that the comparative analysis justifies consideration of this property for the World Heritage List.

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### **Justification of Outstanding Universal Value**

The nominated property is considered by the State Party to be of Outstanding Universal Value as a cultural property for the following reasons:

- Cultural deposits in caves and an assemblage of red-painted rock art unrivalled in Micronesia attest to seasonal human occupation dating from 3,100 BP.
- Contemporary Palauans originated from ancestral Rock Island settlements and identify with the aesthetic and cultural values of the Rock Islands Southern Lagoon.
- The abandonment of Rock Island villages in the 17<sup>th</sup> and 18<sup>th</sup> centuries AD is an exceptional illustration of the intersection and consequences of climate change, population growth, and subsistence behaviour on a society living in a marginal environment.

ICOMOS considers that this justification is appropriate because the archaeological remains and landscape of the stonework villages represent a unique adaptation of the Rock Islands Southern Lagoon (RISL) for human occupation over many centuries and relates to living myths and legends regarding the origins of the people who now inhabit the volcanic islands of the Republic of Palau.

### **Integrity and authenticity**

#### **Integrity**

The stonework village sites and subsurface deposits in the Rock Islands are substantially intact, preserving a significant archive of cultural and scientific information that details the delicate relationship between people and the climate-ecosystem in a marginal environment. Conditions on the limestone islands have maintained a range of sites not found elsewhere in the archipelago, including human burial sites, rock art, stone money quarries, European contact site, and cultural deposits dating back 3,000 years.

ICOMOS finds that the nominated property boundary contains complete representation of the features and processes that convey the value of the property. These elements do not suffer inordinately from development or neglect and are in good condition. The sites have been largely isolated from human interference since pre-European occupation ceased. Even beach level sites are difficult to access if the jungle has not been cleared for some time. Most visitors stay close to the water's edge.

#### **Authenticity**

ICOMOS considers that the authenticity of the Rock Islands' settlements and cultural deposits is clear. The results of natural and human impacts on the remains have not been such as to destroy the form and materials of village settlements, burial caves and their setting beyond that necessary to convey the cultural value of the property. Excavated deposits have been recorded and reburied, and the reports of these campaigns have been lodged with the Koror State Government. The fact that the major Ulong rock art has been partly destroyed by graffiti indicates an urgent need for protective action. The surrounding seascape continues to affirm the importance of the property's setting as a marine resource.

ICOMOS finds that the modern Palauan beliefs and practices associated with the Rock Islands are strong and authentic contemporary expressions of a living cultural tradition.

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ICOMOS considers that the conditions of integrity and authenticity have been met.

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### **Criteria under which inscription is proposed**

The property is nominated on the basis of cultural criteria (iii) and (v), and natural criteria (vii), (ix) and (x).

*Criterion (iii): bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;*

This criterion is justified by the State Party on the grounds that contemporary Palauans originated from ancestral Rock Island settlements and identify with the aesthetic and cultural values of the Rock Islands Southern Lagoon. Continuing knowledge of the lagoon ecosystem is fundamentally related to the current capture and collection of life-sustaining marine foods. Rock Island archaeological sites and culturally significant places are recorded in Palau's oral history, legends, myths, dances, proverbs, and in the traditional place names of the land and seascape. Cave burials and rock art indicate past cultural behaviour.

ICOMOS considers that the Rock Islands cave deposits, burials, rock art, stonework village remains and middens bear exceptional testimony to past Palauan settlement and marine resource harvesting traditions.

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ICOMOS considers that this criterion has been demonstrated.

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*Criterion (v): be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change;*

This criterion is justified by the State Party on the grounds that the abandonment of Rock Island villages in the 17<sup>th</sup>

and 18<sup>th</sup> centuries AD is an exceptional illustration of the intersection and consequences of climate change, population growth, and subsistence behaviour on a society living in a marginal environment.

ICOMOS considers that the combination of research into the human impact on the marine ecosystem over time with the study of the stonework villages and cultural deposits has provided adequate evidence (data) to justify this conclusion.

ICOMOS considers that the justification could be better expressed as: The remains of human settlement and evidence of marine harvesting activity in the Rock Islands Southern Lagoon are an outstanding demonstration of human adaptation and subsistence behaviour in response to population growth and climate change in a marginal marine environment.

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ICOMOS considers that this criterion has been justified.

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ICOMOS considers that the nominated property meets criteria (iii) and (v) and conditions of authenticity and integrity and that Outstanding Universal Value has been demonstrated.

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#### **Description of the attributes**

Attributes carrying the Outstanding Universal Value of the property are:

- Stonework village sites and vegetation that demonstrate the Rock Islands' inhabitants' way of life;
- Cultural deposits that demonstrate the inhabitants' reliance on marine resources and the effect of climate change and over-harvesting on those resources;
- Cave deposits, human burials and red-painted rock art that attest to seasonal human occupation dating from 3,100 BP;
- Oral traditions and origin stories relating to the Rock Islands.

## **4 Factors affecting the property**

### **Development pressures**

As a zoned Conservation Area within Koror State the property is largely undeveloped. There is a dolphin education and research facility on the northeast side of Ngeruktabel Island and small communications cells powered by solar panels have been installed on high points. There are no permanent inhabitants within the property. Development pressure relates primarily to tourism.

### **Tourism pressures**

In recent years Palau's tourist numbers have grown from around 20,000 to 80,000 annually. About 80% of these visit the Rock Islands, where diving and snorkelling are the major attraction, with the Rock Islands being ranked in the top three destinations worldwide. Tour operators take groups to some WWII sites but until now have not visited archaeological sites. Small visitor facilities such as picnic structures and composing toilets have been installed on some Rock Islands to support visitors. Palau is trying to diversify tourist attractions and activity to spread tourist pressure to other islands so that the Rock Islands Southern Lagoon does not suffer degradation from tourist-related facilities. Burial caves and rock art sites near the beach are at risk from foot traffic, fossicking and graffiti.

Palauan visitation for picnics and celebrations and short stays during fishing and diving expeditions have the potential to damage sand plain/beach areas holding stonework village remains through the construction of informal camp structures and amenities.

ICOMOS considers that a tourism management strategy is needed as part of the Management Plan in order to deal with issues such as access and waste collection.

### **Environmental pressures**

Long term effects due to subsidence of the archipelago and sea level rise due to global warming will impact on the cultural sites close to the sea. Tree growth and collapse will impact in the short term on stonework village sites. The activities of land crabs and megapodes impact negatively on archaeological deposits. Sewage pollution may become an issue in the northern part of the property closer to Koror Island, the population and commerce centre. The system is currently a non-treated ponding system. Koror State has implemented strict controls on discharges.

### **Natural disasters**

The main risks from natural disasters are tropical storms, tsunami and forest fires. High winds and substantial rainfall accompanied by wave surges have the potential to damage cultural sites through sand plain removal and tree fall. Palau is outside the typhoon belt and since the 1980s has not suffered tsunami damage. In relation to preparedness, the Palau National Tsunami Capacity Assessment which evaluates the capacity of Palau to receive, communicate and effectively respond to tsunami warnings is currently under review.

### **Impact of climate change**

Any rise in sea level or increase in storm activity due to climate change will impact on cultural sites near to the sea.

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ICOMOS considers that the main threats to the property in the long term are tourism and climate change.

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## 5 Protection, conservation and management

### Boundaries of the nominated property and buffer zone

The boundary of the property includes a vast area of rock islands, lagoon and marine lakes within an outer barrier reef such as to adequately protect those elements bearing the values of the property. The State Party considers that no buffer zone is necessary because the property boundary generally abuts open ocean or designated conservation areas. The only part of the property boundary where lack of a buffer zone might be problematic is the north-eastern boundary adjoining waters surrounding the urban area of Koror, Palau's economic centre and former capital. However discharge from landfills and sewage is strictly controlled whether or not there is a buffer zone.

In response to ICOMOS' request of 12 December 2011 regarding the exclusion from the property of Ngerechong Island to the south-east, the State Party has advised that the property boundary has now been adjusted at the south-east to include Ngerechong Island. Maps confirming this are included with the additional information provided on the 28 February 2012.

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ICOMOS considers that the boundary of the nominated property is adequate. The lack of a buffer zone is considered acceptable due to the strict controls over adjacent areas where not open ocean.

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### Ownership

Historically the property belonged to the clans of Koror, held in stewardship and guarded for the good of all by the Chiefs of Koror State. Subsequent court cases have determined that the Koror State Public Lands Authority holds title to public lands above and below the high water mark. At the time of nomination, none of the islands of the nominated property have been awarded to any individual lineage or clan, so that none of the islands are being developed for private interest.

### Protection

#### Legal Protection

Cultural sites deemed to be culturally, historically or archaeologically significant are protected under Title 19 'Cultural Resources' by the Historical and Cultural Preservation Act of the Republic of Palau. According to the nomination dossier there are currently 36 stonework villages and other archaeological sites located in the Rock Islands Southern Lagoon listed on the Palau National Register. However in response to ICOMOS' request for clarification, the State Party advised that currently seven cultural properties within the nominated property are listed in Palau's National Register of Historic Places: Rois village on Ngemelis, Rois Cave on Uchularois in the Ngemelis group, Ulong village, the Ulong pictographs, Mariar village, Metukerukull village, and the Japanese Era road to the

Ngremdiu lighthouse, and that these are also protected under Koror State Public Law No. K8-183-2007.

Underwater archaeological and historical remains are also protected under Title 19 as the 'Palau Lagoon Monument'. The natural environment is protected under the Environmental Quality Protection Act, Title 24.

National government control over historical and cultural property on national public land (including that leased to others) is exercised through Section 134 of Title 19. Under this section, each state retains ownership and control over historical sites and tangible cultural property located on state-owned land or under state-controlled waters. In case of the development of a property, Title 19, Subchapter IV Sections 151-157 require a cultural heritage impact assessment and appropriate mitigation, and impose penalties for violations of these provisions. This sort of work is done under a Historic Clearance Permit administered by the Palau Historic Preservation Office (Bureau of Arts and Culture). Any activities that require land earthmoving, alteration, or demolition must apply for a Historic Clearance Permit to ensure that cultural properties are not adversely affected.

The Rock Islands Southern Lagoon was declared a Conservation Zone in 1999 under Koror State legislation (Law No. K6-100B-99). Koror State Public Law No. K9-222-2010 prohibits any permanent construction or development in the Rock Islands (other than tourist-related facilities). The Koror State Rangers are the primary enforcers of laws and regulations protecting the flora, fauna and environment of the property.

In response to ICOMOS's request regarding a timetable for the inclusion of all the designated sites in the nominated property in the Palau National Register, the State Party has advised that this is part of the action programme of the new Management Plan, and will follow on from completion and approval of the Management Plan. The latter is expected by June 2012, and at this point will include a timetable for registration of the remaining sites by 2014. The State Party has explained that this time period is due to the fact that the lead management authority needs to build their capacity to properly manage all village and rock art sites within the nominated property.

#### Traditional Protection

Traditional cultural controls (customary law) include marine tenure and *bul*. The latter is a temporary restriction or moratorium on certain activities and is implemented when called for by village chiefs at times of natural or human threat.

#### Effectiveness of protection measures

ICOMOS finds that the individually identified cultural sites, as well as others yet to be recorded and listed are protected in practice through a combination of national, state and customary laws. Almost all sites are protected currently by isolation and the lack of non-local knowledge.

The Koror State Rangers, effectively State police, maintain a constant and highly mobile presence in the nominated property.

In response to ICOMOS' request for clarification of how sites that are not yet registered are protected, the State Party explained that under State legislation no development can take place anywhere within the nominated property without an earth moving permit, application for which triggers an investigation by the Bureau of Arts and Culture (BAC) archaeologists.

ICOMOS considers that the legal protection is not yet fully adequate because while some of the sites carrying attributes of Outstanding Universal Value are included in the National Register, not all the designated sites within the nominated property are yet included.

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ICOMOS considers that the legal protection in place is not yet adequate and thus overall the protective measures for the property are not adequate.

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## Conservation

Inventories, recording, research

Many prehistoric sites in the RISL have yet to be documented. There is no database apart from the National Register of sites and not all identified sites in the nominated property are yet on the Register. A complete inventory of cultural sites is a priority for the Rock Islands. However a number of sites have been excavated and archaeological reports of these have been published as identified in the Bibliography of the nomination dossier. In response to ICOMOS' request for clarification the State Party provided a list of 44 cultural sites (including rock art sites) in the Rock Islands Southern Lagoon that have been identified in the published literature. It was explained that the Bureau of Arts and Culture (BAC) archaeological survey has yet to include the Rock Islands because it has been concentrating on the large volcanic island of Babeldaob due to the imminent threat of development there.

ICOMOS considers that establishment of a database of all identified cultural sites, including those known from oral history, should be a high priority.

Present state of conservation

A survey of cultural sites in the nominated property in 2010 showed that the overall preservation of prehistoric sites was generally less on the sand plains, where coastal erosion and human activity had been greatest, and better at sites and features in limestone terrain out of reach of the sea and less visited.

Dmasech and Uchularois

On Dmasech Island stone features on the eastern beach flat are poorly preserved compared to stone features on the ridgeline except the large features at Beluu Ngemelis. Several megapode mounds contain disturbed

archaeological remains of pottery and food shell on the sand plain east of the limestone ridge. Several stone features and midden remains on the beach flat of Uchularois Island were removed during the construction of the tourist/visitor structure in the 1970s and 1980s. This contained showers, cooking areas, dormitory and cistern and is to be removed.

Ngeruktabel

Terraces and stone platforms on the south slopes and ridge tops appeared to have been disturbed by the extensive Japanese WWII defensive positions covering the ridge overlooking the beach. Japanese activity also modified parts of prehistoric sites by using ancient stonework to construct defences. Megapode mounds have disturbed prehistoric deposits on the sand plain as have land crabs in moist back beach areas. The preservation of stone structures on both Mariar beach flats is poor compared to the structural remains located on limestone slopes and ridges. The defensive stone wall on Big Mariar beach has been impacted by tree growth and decay which has collapsed sections of the wall and reduced its height. Stones from the defensive wall have been taken by recent visitors to make cooking hearths. On Little Mariar beach, the landward defensive wall had completely disappeared in 2010 as had most of the accompanying recorded stone platforms and other features. The second defensive wall on the beach berm in front of the steeply shelving beach has almost completely disappeared due to wave erosion and tree damage. A cooking area in the temporary wooden camp structure recorded in 2010 appears to be made from stones collected from nearby prehistoric features.

There is a visitor structure and composting toilet together with signage relating to the refurbished well on Oimaderuul Beach at Ngeremdiu on Ngeruktabel Island.

Ulong

The prehistoric sites on Ulong Island are generally well preserved. The main feature of the stonework village, the defensive stone wall, has substantially intact sections in the north and just south of the first entrance. Much of the cultural deposit on the beach flat remains intact due to the distance from the sea and the location of the visitor area some 200m north of the stonework village site. However, humic acids have eroded shellfish remains from the surface and upper levels of the site. Nearby megapode mounds contain archaeological pottery and food shell from the village site. The major rock art site on Ulong Island is partly destroyed by graffiti. Incised or painted directly onto the prehistoric red-painted art, the graffiti consists mainly of the names and dates of visitors. Rock art in a cave on Ulong Island has been partially covered by a moist mat of Algae.

Visitor facilities have been provided on the beach flat of Ulong Island, comprising a pavilion with seating and fireplace and a toilet block, together with signage carrying information about the stonework village, and memorial tablets to British-Paluan relations near the *Antelope* camp site.



## Ngeanges

Archaeological features on Ngeanges Island have been disturbed by recent human activities including a poorly preserved visitor's shelter and long drop toilet and piles of rubbish and used building materials. They have also been affected by WWII bombing/shelling. A possible Yapese stone money quarry and stonework features on the southern limestone outcrop appear to be mixed with Japanese defensive positions. Several bomb fragments were found in excavation units and a large bomb crater was recorded on the beach flat. Dense midden deposits around the base of Ngeanges' limestone outcrops are partially disturbed by land crab activity. Shallow, wide rubbish pits excavated into the beach sediments have displaced prehistoric remains.

## Active Conservation measures

There is no conservation plan for the archaeological sites, caves, rock art, stone money quarries and village sites in the Rock Islands. Active conservation and maintenance of Palau's cultural heritage sites are undertaken by the national government through the Palau National Register, whose office funds small-scale 'site rehabilitation and maintenance' projects. No project has been undertaken under this programme in the RISL to date. In response to ICOMOS' request for information on this the State Party pointed out that the strict environmental regulations in the current Management Plan have resulted in complete closure of areas of the RISL to both Palauans and visitors, consequently ensuring the preservation of the cultural sites. It is proposed to address the management of cultural properties in more detail in the revised Management Plan.

ICOMOS considers that conservation actions covering research, consolidation, and any necessary physical protection of the sites (such as barriers to prevent access to rock art) should be included in the Management Plan in the form of a conservation programme.

## Maintenance

Most of the limited amount of conservation and maintenance undertaken in the Rock Islands is by the Boy Scout movement, which is formally linked to the Koror State Department of State and Cultural Affairs through the Cultural and Youth Affairs Division.

## Effectiveness of conservation measures

Should the nomination succeed, there will need to be a significant effort to make at least parts of some sites more accessible to visitors in ways that maintain public safety while not endangering the sites. Elevated boardwalks might be most appropriate, though difficult and expensive to install and maintain, but even simple jungle trails would need constant attention. Whatever option was chosen, such an effort would necessarily require a substantial increase in active conservation and maintenance, at least in the newly-accessible areas.

ICOMOS notes that a key requirement for effective monitoring, conservation and maintenance is a database of identified cultural sites.

ICOMOS considers that a conservation programme should be incorporated into the Management Plan.

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ICOMOS considers that a database of identified cultural sites is needed as a high priority and attention is needed to conservation and maintenance of the identified cultural sites in the nominated property in the form of a conservation programme. Particular attention is required to physical protection of the Ulong rock art.

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## Management

Management structures and processes, including traditional management processes

The RISL was historically managed by traditional controls involving marine tenure. The latter no longer exists in the RISL but some decrees still restrict harvesting of marine resources in and around the property. Over the years increased tourism and harvesting activity have necessitated additional laws together with enforcement programmes. The Koror State Department of Conservation and Law Enforcement (KSDCLE) was created in 1994, leading to State regulations on general resource use, recreational activities and the designation of protected areas within the RISL. This Department works with locally based agencies and organisations on management and research activities within the property. Day-to-day management is the responsibility of an employee of Koror State. The Rock Islands Use Act was legislated in 1997 to regulate tourist activity in the islands. The laws and regulations are enforced by the Koror State Rangers.

Cultural sites included on the Palau National Register of Historic Places are controlled by the Palau Historic Preservation Office, Bureau of Arts and Culture, Ministry of Community and Cultural Affairs.

Policy framework: management plans and arrangements, including visitor management and presentation

The comprehensive Rock Islands Southern Lagoon Area Management Plan 2004-2008 was adopted by the Koror State Legislature and Governor in 2005. According to the nomination dossier it was developed in full consultation with stakeholders at every level over a two-year period and is currently under review to be in effect 2011-2015.

The proposed revised Management Plan has two objectives:

1. To nurture and sustain Palauan culture by preserving and maintaining the landscapes, artefacts and oral traditions associated with the stonework village sites in the RISL;

2. To strengthen and enhance the cultural aspect of Koror State's RISL visitor experience.

The Management Plan proposes special attention to cultural heritage interpretation and presentation. Examples of proposed actions that would be included are set out in the nomination dossier for Ulong Island and Dmasech-Uchularois Island. These cover access, visitor facilities, training of tour guides and interpretive signage. Currently there is minimal signage and few trails. According to the nomination dossier, tour guides are generally inadequately trained in cultural heritage. Tours to the RISL are run from Koror town, which has accommodation ranging from luxury to budget hotels and motels. Camping is permitted in certain areas in the RISL, but permits are required. Most tourists visit for day trips, but some take overnight kayaking and camping tours, or stay on vessels anchored at designated sites within the RISL.

In response to ICOMOS's request regarding a timetable for including actions in the Management Plan for all nominated cultural sites, the State Party has advised that this will form part of the new Management Plan which is expected to be completed and approved by June 2012. The agreed goal at this point is that *"by 2016 village sites that are in critical need of care or rehabilitation are expected to have been identified and mapped with a plan for their rehabilitation developed"*.

#### Risk preparedness

ICOMOS considers that a risk preparedness strategy is required.

#### Involvement of the local communities

There is little or no evidence of direct consultation with traditional owners during the process of preparation of the nomination dossier.

ICOMOS considers that the Palauan communities who still visit sites within the property should be involved in the protection and management of the property.

#### Resources, including staffing levels, expertise and training

An annual budget from the Koror State Government is allocated to the Koror State Department of Conservation and Law Enforcement. In 2010 this was US\$900,000 to pay for staff and implement the following programmes:

- Compliance Programme - a capacity and training programme for Koror State Rangers;
- Rock Islands Facelift Programme - a programme focused on maintaining the tourist areas within the RISL, which trains at-risk youth to maintain tourist areas (Beach Boys Programme), includes construction and maintenance of visitor amenities, and the marine lakes monitoring programme;
- Marine Tour Guide Certificate Training Programme - a capacity building programme designed to develop a

standard for tour guides in the marine recreation industry.

Additional funds are provided for special projects and financial and technical assistance is provided from various regional and international organisations.

ICOMOS notes that it is not clear whether any of this applies to cultural elements of the property.

52 staff are employed by the Department of Conservation and Law Enforcement in the RISL, none of whom are qualified in cultural heritage management or associated fields. However they collaborate with experts from other agencies including the Bureau of Arts and Culture and the Belau National Museum. The Palau Historic Preservation Office, Bureau of Arts and Culture is responsible for preserving and protecting Palau's cultural properties and collects data and oral histories as part of a state-by-state inventory. They also issue permits for research and respond to requests from developers whose activities could potentially impact protected properties. The Belau National Museum promotes interest in culture and the arts by undertaking marketing, effective research, documentation, collection and presentation of culture, artefacts, natural history and the development of activities. The Museum is the repository for all field notes, artefacts, maps and other materials recovered through archaeological and ethnographic study in Palau.

#### Effectiveness of current management

As noted above under Conservation and Maintenance, attention is needed to the conservation and maintenance of the cultural sites in the nominated property.

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ICOMOS considers that special attention is needed for the conservation and maintenance of the cultural sites within the property in the form of a conservation programme. ICOMOS considers that the management system should be extended to include involvement of relevant communities in the protection and management of the property. Furthermore, ICOMOS recommends that the Management Plan should include the actions proposed for all the cultural sites and a risk preparedness strategy, and the Management Plan should be implemented.

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## 6 Monitoring

Monitoring is conducted through the Koror State Ranger programme. A list of 5 key indicators for cultural sites is included in the nomination dossier. The state of the rock art is not separately listed but comes under '%sites with documented visitor damage'. There is no indicator for the oral traditions. A list of publications covering research studies and monitoring activities within the property relates entirely to natural sites and wildlife and does not include a baseline study of the state of the rock art; the archaeological sites or the oral traditions. The sole basis for future monitoring of the archaeological sites is the

2010 Survey of Stone Features included as Appendix B to the nomination dossier.

ICOMOS considers that the basis for assessment against the key indicators is presently inadequate and requires supplementing with a baseline survey of the rock art and a record of the oral histories and cultural traditions.

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ICOMOS considers that the basis for monitoring the cultural values of the property is currently inadequate.

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## 7 Conclusions

ICOMOS considers that the nominated property meets criteria (iii) and (v) and conditions of authenticity and integrity and that Outstanding Universal Value has been demonstrated. The main threats to the property in the long term are tourism and climate change. The boundary of the nominated property to the south-east as adjusted in accordance with the State Party's advice of 28 February 2012 to include Ngerechong Island is adequate. The lack of a buffer zone is considered acceptable.

The legal protection in place is not fully adequate as not all the designated sites within the nominated property are yet included in the National Register.

The State Party advised in its response of 28 February 2012 that consideration of the name of the property to reflect the cultural values will be part of the new Management Plan which is expected to be completed and approved by June 2012. At this point the agreed goal for 2015 is to *"consider a revision of the name of the RISL, to reflect cultural values, and a name that is Palauan"*.

ICOMOS considers that a database of identified cultural sites within the property including archaeological sites, caves, rock art, stone money quarries and villages is needed as a high priority and attention is needed to conservation and maintenance of the identified cultural sites in particular attention is needed for the physical protection of the Ulong rock art.

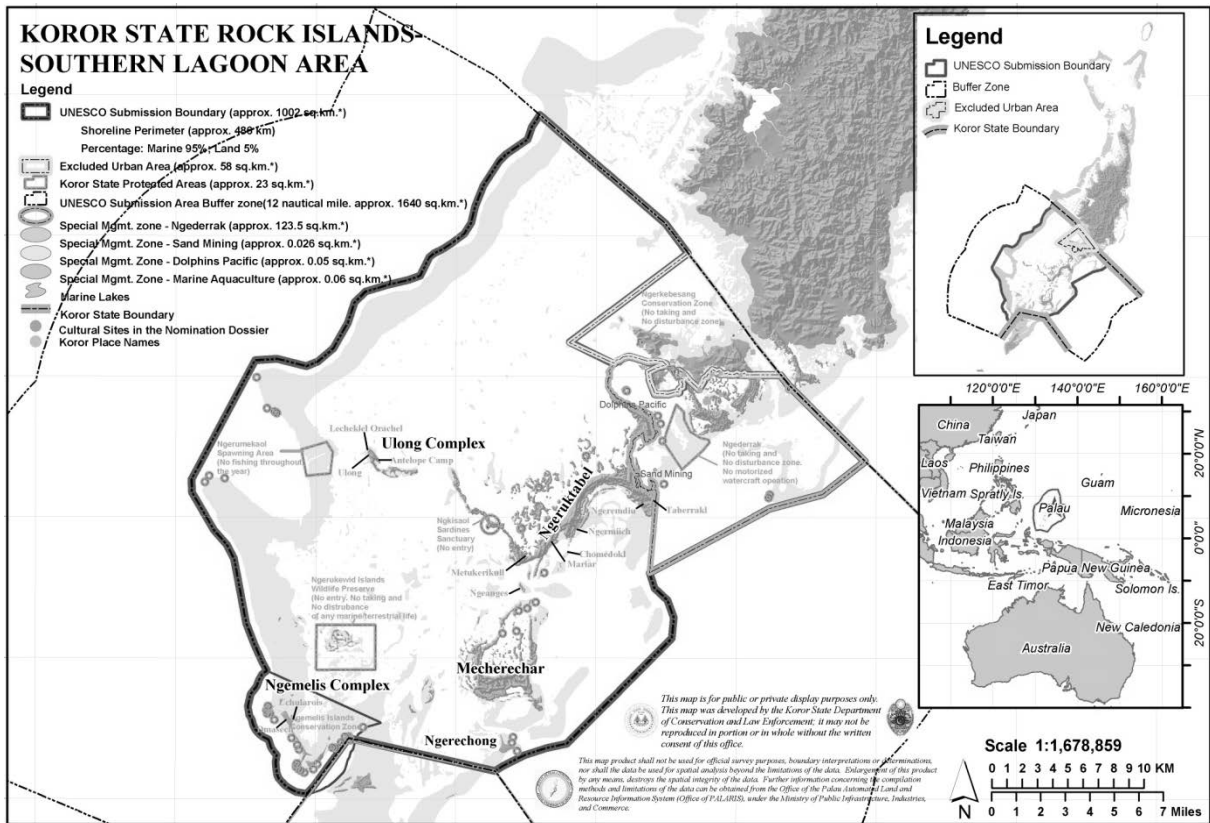
A conservation programme needs to be incorporated into the Management Plan. The management system should be extended to include involvement of relevant communities in the protection and management of the property. The Management Plan should include the actions proposed for the cultural sites, a tourism management strategy and a risk preparedness strategy, and the Management Plan should be implemented. ICOMOS considers that the basis for assessment against the key indicators is presently inadequate and requires supplementing with a baseline survey of the rock art and a record of the oral histories and traditions.

### Recommendations with respect to inscription

ICOMOS recommends that the nomination of Rock Islands Southern Lagoon, Republic of Palau, be **referred back** to the State Party in order to allow it to:

- Include all the designated sites within the property on Palau's National Register of historic places;
- Develop a database of identified cultural sites within the property, including archaeological sites, caves, burials, rock art, stone money quarries and villages;
- Complete and approve the new Management Plan, with the involvement of relevant communities, to include:
  - a conservation programme for the cultural sites covering access, monitoring, maintenance, research, consolidation, and any necessary physical protection, and provide a timetable for the implementation of this programme;
  - a tourism management strategy;
  - a risk preparedness strategy;
  - extension of the key monitoring indicators to include a baseline survey of the rock art, and oral histories.

ICOMOS also recommends that the State Party give further consideration to changing the name of the property to reflect its cultural value.



Map showing the revised boundaries of the nominated property



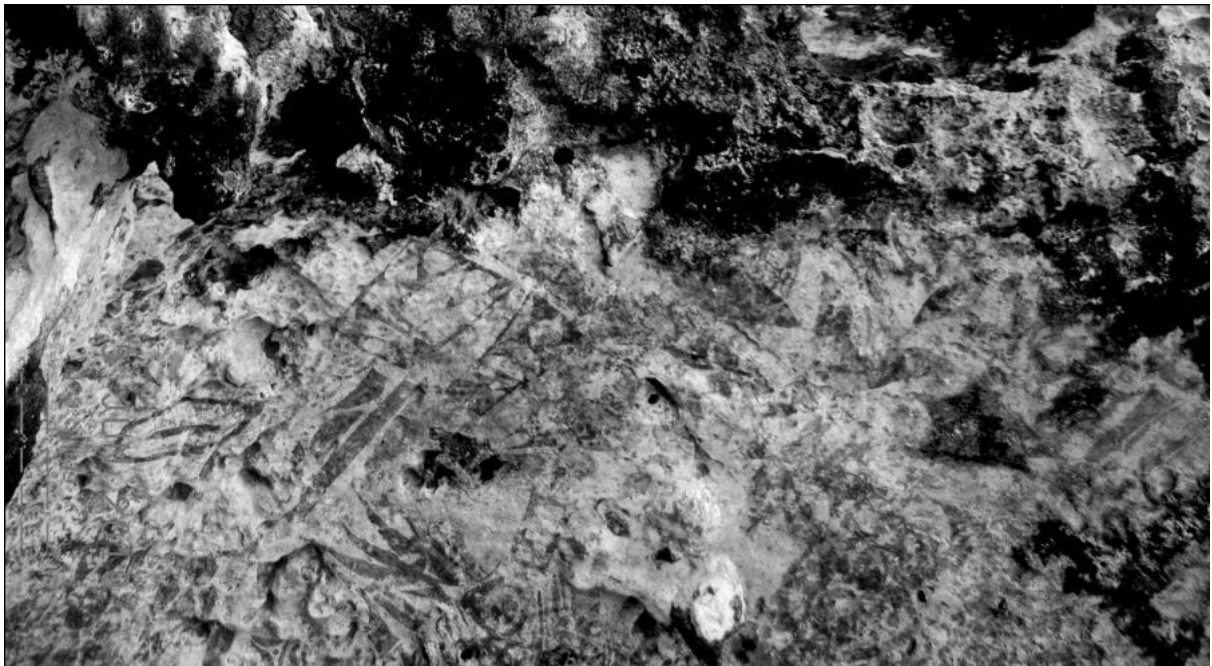
Aerial view of the Rock Islands



Chomedokl Island burial cave



Dmasech Island village at Ngemelis Complex, stone *bai* platform



Red ochre rock art, north side of Ulong