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## Nan Madol (Federated States of Micronesia) No 1503

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### Official name as proposed by the State Party

Nan Madol: Ceremonial Center of Eastern Micronesia

### Location

Madolenihmw Municipality, Pohnpei Island

Pohnpei State

Federated States of Micronesia

### Brief description

Created on a series of 99 artificial islets off the shore of Pohnpei Island, the remains of stone palaces, temples, mortuaries and residential domains known as Nan Madol represent the ceremonial centre of the Saudeleur Dynasty. Reflecting an era of vibrant and intact Pacific Island culture the complex saw dramatic changes of settlement and social organisation 1200-1500 CE. Today it preserves the traditional subsistence way of life, social linkages and the political and kingly authority of the paramount chief (Nahnmwarki) and his subject hierarchy.

### Category of property

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

## 1 Basic data

### Included in the Tentative List

3 January 2012

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

None

### Date received by the World Heritage Centre

29 January 2015

### Background

This is a new nomination and is the first nomination of a proposed serial property 'Ceremonial Centers of Eastern Micronesia' that would in future include two components, Nan Madol and Lelu on Kosrae Island.

### Consultations

ICOMOS consulted its International Scientific Committee on Archaeological Heritage Management (ICAHM) and several independent experts.

### Technical Evaluation Mission

An ICOMOS technical evaluation mission visited the property from 17 to 24 August 2015.

### Additional information received by ICOMOS

A copy of the proposed Bill adding to the Pohnpei Code to establish the Nan Madol Historic Preservation Trust together with a copy of the Pohnpei Code were provided to the mission expert, together with the brochure on the Nan Madol Archaeological Site and a research report on the Shoreline Change Phase 1 for Federated States of Micronesia (FSM).

A letter was sent by ICOMOS to the State Party on 23 September 2015 requesting an updated map showing all numbered sites; clarification on protection of the buffer zone; a time schedule for passing the new Bill, and for the completion of the management plan. A response from the State Party was received on 18 November 2015 and the information has been incorporated below. An interim report including a request for additional information was sent by ICOMOS to the State Party on 21 December 2015 following discussions with the State Party by Skype on 2 December 2015 regarding the state of conservation of the property and a possible approach to dealing with this. A second Skype meeting was held with the State Party on 10 March 2016 to clarify this process.

### Date of ICOMOS approval of this report

11 March 2016

## 2 The property

### Description

The Nan Madol settlement complex is built on artificial islets extending across a shallow reef platform within the fringing reef of the adjacent small island of Temwen on the south-east coast of Pohnpei. Navigable tidal canals were created between the islets which were constructed with walls of basalt and coral boulders and filled with coral rubble from the reef and soil from Temwen Island. Erected on top of the islets were monumental stone structures, some with walls 6-7 metres high. Formed by lengths of prismatic/columnar basalt laid in header and stretcher patterns, the walls surround tombs, residential domains, and sites for sacred and ceremonial activities.

The complex is surrounded by a massive sea wall on the north-east, south-east and south-west, and abuts the reef flat of Temwen Island along the north-west. The megalithic construction took place between 1200-1300 CE and 1500-1600 CE during the period of the Saudeleur Dynasty, creating the royal residence and ceremonial centre of the Saudeleur rulers. It is estimated that the small island populations quarried, transported and laid 2000 tons of volcanic rock every year for at least three to four centuries without the benefit of pulleys, levels, metal tools or wheels.

The north-east half of the complex (Madol Powe) includes the island known as Nandowas, containing the monumental remains of three massive royal burial tombs of the Saudeleur rulers and early Nahnmwarkis (Paramount Chiefs). Nearby islets contain the remains of construction workers' residences, chiefs' residences, priests' residences, guards' residences and sacred shrines. Other islets were used for functional activities including canoe and sail-making, coconut oil manufacturing, clam aquaculture, local medicine production, moray eel raising, food storage and preparation, sacrificial turtle husbandry, and funeral rituals.

The south-eastern half (Madol Pah) was the location of the larger islets containing the Saudeleur's residence complex and the large Temple of Nankieilmwahu. A separate islet accommodated the chiefs' guest house and other small islets accommodated executions, torture and burials of the tortured.

The total property area is 76.7 ha and it is surrounded by a buffer zone of 664 ha.

The buffer zone includes the adjacent Temwen Island along the north-west side of Nan Madol, where the paramount chief responsible for Nan Madol (Nahnmwarki of Madolenihmw) traditionally takes up official residence, and whose residents utilise the terrestrial and marine resources in and around Nan Madol. Two islets Nangih and Nahkapw in the southern and eastern corners respectively, were used in the transport of stone and are considered part of the ancient territory of the Saudeleurs. It also includes part of the Kasin Nahmw en Nangih Stingray Sanctuary Marine Protected Area on the reef flat at the south-western part of the nominated property.

### **History and development**

Pohnpei was initially settled around 2000 years ago, probably from the south, by people from eastern Melanesia. Oral histories suggest that founding settlements were on off-shore islands or strategically defended shoreline locales, possibly the reef areas off Temwen Island. Archaeological evidence at Nan Madol indicates that there were islets with some columnar basalt construction as early as 500-600 CE, with stone house foundations. Islet construction had increased by 1000 CE, beginning adjacent to Temwen Island and expanding seaward. Islets of ritual significance such as Nandowas and Nannmwuluhsei were constructed c1200 CE according to uranium series dating, and Pahnkedira Islet with the Saudeleur's residence dates from 900-1000 CE. Archaeological evidence and radiocarbon dating indicates that the sacrificial rituals for the Saudeleur rulers were performed from 1200-1300 CE to 1500-1600 CE, indicating that Nan Madol functioned as the administrative and religious centre of the Saudeleurs for a period of 300-400 years. Oral traditions relate that Nan Madol was selected due to the presence of a mythical undersea settlement of various spirits including those of the dead in its vicinity. The Saudeleurs' influence extended across Pohnpei and there is evidence of long distance exchange and interaction across the region in the form of exotic

artefacts and other examples of megalithic structures together with the spread of particular rituals.

It is thought that the cessation of islet and megalithic construction 1500-1600 CE was associated with the overthrow of the Saudeleur dynasty by a chief from neighbouring Madolenihmw. The new paramount chief known as the Nahnmwarki established a new political order but failed to maintain sovereignty over the whole island of Pohnpei and at the arrival of the Euro-Americans during the 19<sup>th</sup> century it was separated into five chiefdoms. Nan Madol fell into decline although some residential construction continued. By the 1820s people no longer lived at Nan Madol but it continues to retain religious and traditional significance.

As part of the Caroline Islands, Pohnpei was colonised by Spain in 1886; ceded to Germany after the Spanish-American War; seized by Japan during World War I and after World War II became part of the Trust Territory of the Pacific Islands under United States administration in 1947. In 1979 the former Trust Territories became the Federated States of Micronesia and as an independent sovereign nation entered into a free association with the United States of America in 1986.

The system of chiefly governance of the five political and administrative areas of Pohnpei continues today, with Nan Madol coming under the Nahnmwarki of Madolenihmw.

Descriptions of the site by missionaries in the 1850s were followed by scholarly reports dating from the 1870s, including the first map of Nan Madol by Kubary (1874); tomb excavations by Christian and a more accurate map by Paul Hambruch in 1910 during the German Administration. Hambruch also surveyed oral traditions related to Nan Madol. Japanese researchers carried out archaeological studies during the 1910s-1930s and a data base was compiled by Intoh in 1999 of all the artefacts from these that were deposited in universities and institutions. Radiocarbon dates were established through systematic excavations in 1963 by the Smithsonian Institution.

Several studies were carried out during the 1970s and following years by the U.S. National Park Service including mapping and excavations, investigation of stone sourcing and transportation, marine resources, mortuary facilities, inter-island interaction and socio-political development. Further studies and collection of oral traditions on Nan Madol were also carried out during this period. The site was included on the U.S. National Register of Historic Places in 1980 and protected under the Pohnpei Historic and Cultural Preservation Act 2002.

## **3 Justification for inscription, integrity and authenticity**

### **Comparative analysis**

The most immediate comparator for Nan Madol is the contemporary megalithic island complex Lelu off Kosrae

Island, which is about one-third the size of Nan Madol. It was the seat of another paramount chiefly dynasty, the Tokosra. It is considered that the similarities of the two sites indicate a common ancestral culture that appears to have split and subsequently followed their own parallel paths of development. The State Party intends to nominate Lelu as a serial component to Nan Madol when ownership, protection and management requirements are resolved.

The comparative analysis has compared the property with other sites in the region of Austronesian speaking peoples across the Pacific on the World Heritage List incorporating stone structures including Rapa Nui National Park (*Ahu* and *Moai* on Easter Island), Chile (1995, criteria (i), (iii) and (v)); Papahānaumokuākea (*Heiau* in Hawaii), USA (2010, criteria (iii), (vi), (viii), (ix) and (x)); and on the Tentative List: Les Iles Marquises (France); Le site sacré de *Tapu-tapu-ātea /Te Pō*, vallée de *Ō-po-ā* (*Marae* in East Polynesia, France); The Ancient Capitals of the Kingdom of Tonga (Tonga); Yapese Quarry Sites in Palau and Micronesia as well as with the Latte Stones in the Mariana Islands. The discussion points out that there were a variety of megalithic monuments in the Pacific Islands, each of which was closely associated with ceremonies and rituals involving the chiefly hierarchy. All bear witness to a deep cultural affinity due to the historical connections related to the Austronesian dispersal across the Pacific.

However Nan Madol is one of only two (the other being Lelu) networks of artificial islets built in an off-shore locale as a high ranking administrative/ residential/ ceremonial/mortuary centre. It is larger and more expansive than the Ancient Capitals of Tonga in terms of scale and monumentality and the extent of population base that would have been needed for construction. The nomination dossier posits that Nan Madol is an outstanding example of the effort involved in constructing and maintaining such a site. Nan Madol linked island cultures throughout the Pacific as seen by the spread of a distinctive matrilineal network, a shared adaptive pattern, the genetic links of breadfruit hybrids, and the spread of maritime navigation and sailing technology.

The comparative analysis also covered megalithic ceremonial centres on the World Heritage List such as Stonehenge, Avebury and Associated Sites, United Kingdom of Great Britain and Northern Ireland (1986, criteria (i), (ii) and (iii)); Megalithic Temples of Malta, Malta (1980, 1992, criterion (iv)); Pyramids of Djoser as part of Memphis and its Necropolis – the Pyramid Fields from Giza to Dahshur, Egypt (1979, criteria (i), (iii) and (vi)); Historic Centre of Oaxaca and Archaeological Site of Monte Albán, Mexico (1987, criteria (i), (ii), (iii) and (iv)); Sacred City of Caral-Supe, Peru (2009, criteria (ii), (iii) and (iv), Great Zimbabwe National Monument (1986, criteria (i), (iii) and (vi)) and others inscribed on the Tentative Lists, such as Mozu-Furuichi Kofungun, Ancient Tumulus Clusters, Japan.

It concluded that there is an inherent propensity within the human species to build societies with large socio-religious centres for honoured elite. While Nan Madol can be seen as no less an outstanding monument than these, it has taken a different form due to the environmental, technological and cultural differences of the time and the people by whom it was built.

ICOMOS concurs with these views.

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

### 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:

- Apart from Lelu, it is the only large-scale, monumental ceremonial centre of megalithic construction distributed over a series of off-shore artificial islets in the Pacific;
- The property brings together administrative, ceremonial and mortuary functions to form a high ranking centre of chiefly rule;
- The property represents the association of monumental architecture with the emergence of social complexity in the Pacific as the development of elaborate political hierarchies enabled the creation of monumental structures as emblems of power and authority;
- The property represents Austronesia culture in the Pacific through the inter-island network that spanned the Caroline Islands and extended into other parts of the Pacific

ICOMOS considers that this justification is appropriate because Nan Madol has long been known as a remarkable, monumental site of megalithic construction in the Pacific and the studies and research carried out since its recognition in the 19<sup>th</sup> century have served to amplify its significance to the history of the region.

### Integrity and authenticity

#### Integrity

According to the State Party, Nan Madol is a unique and well-preserved archaeological ruin and landscape that embodies the florescence of a Pacific Islands culture and that retains deep connections with the living culture through a vibrant oral history and a complex cross-cutting system of clan, kinship, and chiefly lineage. The property includes all elements necessary to express its outstanding value and is of adequate size to ensure the complete representation of the features and processes which convey the property's significance. There are no intrusive elements from development or modification, and there are no reconstructions of the original elements. In a few places there is damage from collapse but these are minimal and current practices are

emerging to mitigate vegetation and other natural elements.

However ICOMOS considers that the state of conservation of the stone structures is of extreme concern, and that their neglect over centuries of abandonment makes the integrity of the property vulnerable.

#### Authenticity

According to the State Party, all the characteristics of authenticity are met and especially qualities of location and setting, intangible culture, spirit and feeling as well as form and design, materials and substance, use and function, and traditions. The site conveys a very sophisticated and powerful Pacific Islands polity and its expression through the ceremonial architecture and landscape of the site.

However ICOMOS considers that the state of conservation of the stone structures with many of them completely overgrown and therefore unable to be seen and understood means that authenticity is vulnerable.

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ICOMOS considers that the conditions of integrity and authenticity are vulnerable.

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#### Criteria under which inscription is proposed

The property is nominated on the basis of cultural criteria (iii), (iv) and (vi).

While not proposed by the State Party, ICOMOS considers that the property also justifies Criterion (i): *represent a masterpiece of human creative genius*;

ICOMOS considers that this criterion is justified by the monumental megalithic architecture of Nan Madol. This is particularly demonstrated by the wall construction using massive columnar basalt stones, transported from quarries elsewhere on the island, and laid using a distinctive 'header-stretcher technique'.

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

This criterion is justified by the State Party on the grounds that Nan Madol bears exceptional testimony to the development of chiefly societies in the Pacific Islands. The huge scale, technical sophistication and concentration of elaborate megalithic structures of Nan Madol bear testimony to complex social and religious practices of the island societies that persisted for over 500 years.

ICOMOS considers that as the administrative and ceremonial centre for the Saudeleur during a time that saw dramatic changes of settlement and social organization 1200-1500, Nan Madol represents an era of vibrant and powerful Pacific Island culture.

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ICOMOS considers that this criterion has been justified.

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Criterion (iv): *be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history*;

This criterion is justified by the State Party on the grounds that Nan Madol is an outstanding small island example of monumental architecture associated with the appearance of stratified societies and centralisation of power that is evidenced in many parts of the world. The megalithic stone complex of Nan Madol includes the remains of chiefly dwellings, ritual/ceremonial sites, mortuary structures and domestic sites that bear unique testimony to the original development of chiefly societies evidenced across the Pacific Islands from around 1000 years ago and associated with increasing island populations and intensifications of agriculture.

ICOMOS considers that the monumental ceremonial centre dramatically located on the edge of the Pacific shore is an outstanding example of Pacific Island megalithic architecture illustrating the political and chiefly authority developed during the period of the Saudeleur dynasty 1200-1500 CE.

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ICOMOS considers that this criterion has been justified.

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Criterion (vi): *be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance*;

This criterion is justified by the State Party on the grounds that Nan Madol is an expression of the original development of traditional chiefly institutions and systems of governance in the Pacific Islands that continue into the present in the form of the Nahnmwarki system under which Nan Madol is traditionally owned and managed.

ICOMOS considers that Nan Madol through its archaeological remains is tangibly associated with Pohnpei's continuing social and ceremonial traditions and the authority of the Nahnmwarki.

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ICOMOS considers that the nominated property meets criteria (i), (iii), (iv) and (vi) however conditions of authenticity and integrity are vulnerable.

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#### Description of the attributes

The attributes are the islets with massive basalt and coral stone walls and structures that demonstrate the power and authority of the Saudeleur; the tombs and archaeological remains of temples, residences and shrines that demonstrate the use and functions of the complex; the linking canals and waterways between the islets; the associated oral traditions and rituals that convey the chiefly culture of Nan Madol and the artefacts unearthed from excavations and surface collection over the past 150 years.

## 4 Factors affecting the property

The nomination dossier includes an extensive survey of Nan Madol carried out in 2010 to assess the state of conservation of the site. The property is not threatened by development; it is uninhabited and accessed only for seasonal fruit collection and by tourists, who are not numerous but have had some impact on the site through trampling and moving archaeological remains. A tourist trail has been constructed on slightly elevated causeways running from the land entrance on Temwen Island to Nandowas, passing through six islets and this is thought to have possibly contributed to the silting up of waterways by trapping silt and thereby encouraging mangrove growth. Sand mining beneath the islet of Pahnwi in the past, combined with wave action, has caused the collapse of that islet's largest wall.

The survey showed that the artificial islets along the reef on the open ocean side are vulnerable to waves and wind as well as dense mangrove vegetation, with some stonework loosened or collapsed. The internal islets are mostly covered by dense vegetation including large trees. Where these have withered and fallen perimeter walls have been damaged or collapsed. The islets close to Temwen Island are subject to soil and sand runoff from Temwen due to tidal action and rainwater, choking waterways and forming mud lakes and swamps. The silting up of the waterways and canals is also attributed to climate changes since the construction of the islets and has changed the water level and flow, rendering the canals no longer navigable by canoe except at very high tide.

Typhoons have damaged Nan Madol in the past. They generally pass further south and west of Pohnpei at approximately three yearly intervals. Little can be done to prepare for typhoon damage except vegetation clearance to prevent damage to the stonework from falling trees.

ICOMOS notes that vegetation clearance is carried out daily by maintenance staff around Nandowas, but needs to be extended to other areas of the site.

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ICOMOS considers that the main threats to the property are growth of vegetation, silting up of waterways and storm surge leading to stonework collapse.

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## 5 Protection, conservation and management

### Boundaries of the nominated property and buffer zone

The property boundaries follow the area first described by Hambruch in his 1936 documentation. They follow the outside of the sea walls and extend to the north to include Peinot Island, then extend west across to Sapwenluhk Islet on the edge of Temwen Island's shore reef, following the reef south-west to the beginning of the sea wall. These boundaries were later used to designate

the public lands during the Trust Territory period. They enclose the royal residential ceremonial and burial centre that existed at the height of its use in the Saudeleur period.

The buffer zone boundary is a polygon cornered by island markers and is of adequate size. It includes Temwen Island, on which traditional subsistence farming is still practised, and a large marine area including part of the Stingray Sanctuary and two islands that were part of the early Saudeleur domain.

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ICOMOS considers that the boundaries of the nominated property and of its buffer zone are adequate.

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### Ownership

Nan Madol was granted to the government as public land following the development of the Trust Territory government in 1986 and also remains under the traditional customary ownership of the Nahnmwarki Madolenihmw. Free prior and informed consent to the nomination was signed by the traditional owners in 2011. A Memorandum of Understanding was signed by municipal, state and national governments and the traditional owners of Nan Madol.

### Protection

Nan Madol is legally protected by the federal government having been declared a National Historic Landmark in 1986, administered by the Office of National Archives, Culture and Historic Preservation (NACH) through the Historic Preservation Office of the FSM. It is protected by the state government of Pohnpei under the Pohnpei Historic and Cultural Preservation Act (2002), administered by the Pohnpei Historic Preservation Office. The FSM Constitution acknowledges the customary interests of the traditional chiefs and the property is customarily protected by the Nahnmwarki Madolenihmw. Prior to independence Nan Madol was included on the United States (US) National Register of Historic Places.

The local government of Madolenihmw is responsible for the day-to-day protection of Nan Madol, including keeping stonework clear of damaging vegetation. The provision of allowing planting of coconut palms in order to provide revenue for maintenance is no longer relevant as there is no longer a market for copra. Hence some maintenance is currently funded by the Pohnpei Office of Tourism. Private use of the property was revoked under the 2002 Act, but the actual deterrent is the authority of the Nahnmwarki.

ICOMOS notes that a Bill for new legislation (LB 392) is proposed to create a Nan Madol Historic Preservation Trust with ownership and management under traditional oversight by the Nahnmwarki Chief with a Board of traditional authority. This is expected to permanently consolidate the resolution of issues regarding ownership and management that was established by the Memorandum of Understanding (MoU). According to the additional information from the State Party the draft legislation will be presented to Parliament in October

2016. Meanwhile the property will continue to be protected by the current system.

ICOMOS notes that there is no legal protection of the buffer zone. However it is protected by the authority of the Nahnmwarki and through regular compliance survey of development activities on Pohnpei, including in the buffer zone by the Pohnpei State Historic Preservation Office. No development is permitted without this oversight. The State Party considers that the traditional protection is more effective than legal protection and legal protection is not included in the new legislation.

ICOMOS considers that protection measures are adequate.

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ICOMOS considers that the legal protection and protective measures for the property are adequate but will be enhanced by passage of the proposed Bill.

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### **Conservation**

A detailed inventory of the artificial islets which comprise the nominated property was provided as Appendix B to the nomination dossier. This differs from the Hambruch plan used in the information brochure in not including legendary places. Considerable research into the property has been carried out as noted above. The state of conservation was surveyed extensively in 2010, setting out issues to be addressed. A daily maintenance regime is implemented by staff funded by the Pohnpei Office of Tourism to keep the stonework free of vegetation in the area of the site visited by tourists. However the remainder of the site requires similar treatment. A key issue is the need to remove silt from the canals and waterways.

ICOMOS notes that the mangroves provide shade and also contribute to biodiversity and protection from storm surge and typhoon.

ICOMOS considers that the limits of the mangrove growth should be maintained, with the silt being removed by hand. This would be a very labor-intensive project but could be achieved by local labor much as the Office of Tourism supports the two personnel presently maintaining the property.

However ICOMOS is extremely concerned about the state of conservation of the property, given that over 80% of the monuments have conservation problems relating to these issues and all are suffering from lack of conservation. One major wall has fallen within the last twenty years and in another case a washed out corner was more pronounced than it was three years ago. While methods presently applied are contributing to limiting the spread of vegetation and clearing of some of the canals of sediment, the lack of overall maintenance could be reaching a stage where the stonework is too degraded and unstable to allow interventions. In the absence of a conservation policy there is no apparent way forward to address the deterioration of the property.

ICOMOS considers that the inventory provided as Appendix B to the nomination dossier is a good baseline document; however there is uncertainty about the primary and contributing causes of disturbance and collapse. These need to be established before strategies can be devised to stabilize areas. As part of a detailed assessment of the stability of the walls further more detailed consideration will be required of processes contributing to instability. As well as considering historical documentation that might indicate prior vegetation disturbance and clearing, prior storms, damage records and tidal data, this should include a geological and geomorphological analysis of site terrain.

A definitive plan for monitoring condition and processes then needs to be developed, and a treatment plan involving stabilisation to retard future collapse.

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ICOMOS considers that the maintenance regime in the tourist (Nandowas) area of the site should be extended to the whole property. A similar maintenance program to remove the silt from the waterways needs to be put in place. As a matter of urgency a detailed assessment should be made of the stability of the walls and contributing processes of disturbance and collapse as a basis for setting out a conservation strategy that can then be phased and costed, and efforts made to find partners and donors to support this conservation project.

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### **Management**

Management structures and processes, including traditional management processes

Following a Nan Madol capacity building workshop in 2012, a draft management system was developed for Nan Madol. It is intended that management of the site will be co-ordinated by a Nan Madol World Heritage Management Committee under the Nan Madol World Heritage Board. Members of the Nan Madol World Heritage Board include the Nahnmwarki, the Municipal Chief Magistrate, State Governor, land owners adjacent to the site, three section chiefs from Temwen Island, national government representatives and technical advisors as required. A diagram of the proposed management structure is provided on p. 112 of the nomination dossier. The Board and Management Committee also link to the Temwen Island World Heritage and Tourism Committee. The first meeting of the Management Committee was held in April, 2014.

The FSM Office of National Archives, Culture and Historic Preservation (NACH) was funded by the FSM government as well as grant monies and support from the US National Park Service including funding of an anthropologist and an archaeologist. Direct financial support to Nan Madol is provided by the Pohnpei Office of Tourism. Other institutions involved in the preservation of Nan Madol as a tourism resource include the FSM Department of Resources and Development and the Pohnpei Department of Land and Natural Resources. These financial resources are supplemented by occasional

funds from the Japan Council and ADB (Asian Development Bank).

ICOMOS notes that the Pohnpei Historic Preservation Office follows the Secretary of the Interior's Standards and Guidelines for Archaeological Preservation of the US National Park Service (NPS). There is a routine monitoring program in place as well as requirements for inventory survey of any new development undertakings in Pohnpei including Nan Madol and Madolenihmw. There is no risk management program as such. Both the national and state Historic Preservation Offices (HPOs) have a limited staff and development of human resources in cultural heritage management is required. While there is currently no designated site manager trained in cultural heritage management, the State Party advised in its further information that a property manager will be appointed from existing experienced staff, and that the property manager and others involved in the management and conservation of Nan Madol will be provided with further training in cultural resource management through regional training opportunities in Japan and at the University of the South Pacific.

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

An outline and process for the development of a comprehensive management plan for Nan Madol was discussed at the first management committee meeting.

Issues to be resolved include information sharing with all stakeholders and collection of access fees to the site. At present, visitors number as few as three per day and not more than 3000-4000 annually. They enter the site from Temwen through a facility operated by the traditional caretaker of the site and then follow the visitor trail to Nandowas where the royal tombs are considered the main attraction. There are currently neither information panels nor guides at the site and there is no museum on Pohnpei to house artefacts from Nan Madol. Visitors obtain information from the tourism office in Kolonia (the capital of Pohnpei) or from tour services. A local visitor/interpretation centre is proposed near Nan Madol but not within the property, and a national museum is proposed for Pohnpei. Details of these proposals are not yet available. ICOMOS notes that the new UNESCO recommendation on the protection and promotion of museums and collections (17 November 2015) is relevant in this context. The proposed museum should be used to disseminate the Outstanding Universal Value of the property.

There is another entrance route by sea along the sea wall at the south-eastern side of the site, at the shoreline of the reef lagoon, but it is accessible only at very high tide.

ICOMOS notes that visitor numbers will increase dramatically when the expected direct flights to Japan are initiated and considers that a comprehensive tourism

strategy should be developed. This should cover infrastructure, guided tours and access to the site with a coordinated system for collecting and distributing visitor fees, which could be increased to provide some modest income for preservation purposes.

ICOMOS considers that a Management Plan for Nan Madol should be prepared that includes risk preparedness and tourism strategies and an internationally supported conservation strategy. Further to the additional information provided, the State Party has advised that funds are being sought to enable completion of the Management Plan with international technical assistance by mid- 2017.

Involvement of the local communities

The traditional owners and local community have been involved in workshops held prior to the preparation of the World Heritage nomination. ICOMOS is pleased to note that the traditional owners offered free, prior and informed consent to the nomination through signing the MoU in 2011. Further consultation has led to the draft Bill for the setting up of a Nan Madol Historic Preservation Trust with ownership and management under traditional oversight by the Nahnmwarki Chief with a board of traditional authority.

The Bill (LB 392) represents collaboration of traditional and civil leadership in resolving conflicts between traditional and civil governance and will provide a reasonable framework for oversight and management. In the meantime ICOMOS considers that the current management as coordinated by NACH, the Pohnpei HPO and the Department of Tourism needs to be extended to encompass an internationally supported conservation strategy. In its response to ICOMOS interim report on this the State Party has advised that an Advisory Board headed by the Nahnmwarki will be established to oversee expenditure of funds managed for a Nan Madol Safeguarding Programme by the Micronesia Conservation Trust. This matter will be presented and discussed at the next FSM World Heritage Committee meeting in March/April 2016.

ICOMOS considers that the Nan Madol Safeguarding Programme will need to secure international funding to cover the activities set out under Conservation above.

ICOMOS considers that special attention is needed for maintenance and conservation of the archaeological remains, tourism management, risk preparedness, and cultural resource management training. ICOMOS considers that the management system for the property should be extended to include a designated site manager trained in cultural resource management; that the current maintenance program should be extended to the full area of the property and to include removal of silt from the waterways, and a risk preparedness strategy needs to be developed. Furthermore, ICOMOS recommends a tourism strategy be developed to improve visitor management and infrastructure. The

management plan should be developed to encompass an internationally supported conservation strategy and implemented.

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## 6 Monitoring

The proposed monitoring regime specifying indicators, periodicity and location of records is set out in the nomination dossier. All records will be kept at the FSM Office of the National Archives, Culture and Historic Preservation (NACH).

ICOMOS recommends that site monitoring be linked with the regular marine monitoring conducted for the marine sanctuary by the coastal agency. In addition, the recently funded Pohnpei-wide climate change vulnerability assessment should focus on Nan Madol, with regular exchange of data and monitoring between agencies and Non-Governmental Organisations (NGOs), and this should be incorporated into the Nan Madol Management Plan.

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ICOMOS considers that the monitoring system should be extended to include co-ordination with other agencies and programs in the area.

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## 7 Conclusions

The comparative analysis justifies consideration of this property for the World Heritage List; the nominated property meets criteria (i), (iii), (iv) and (vi) but conditions of authenticity and integrity are vulnerable. The property is threatened by vegetation growth (which is countered to some extent by a maintenance program), silting up of waterways and is vulnerable to storm surge. The state of conservation of the stone structures and the likelihood of their increasing collapse is a matter of extreme concern. The boundaries of the nominated property and of its buffer zone are adequate and the property and buffer zone are customarily protected by the Chief of Madolenihmw (the Nahnmwarki). The property has been legally protected since 1980. A management committee has been set up involving all stakeholders including traditional owners and this collaboration will be consolidated by passage of the proposed Bill to create a Nan Madol Historic Preservation Trust with ownership and management under traditional oversight by the Nahnmwarki Chief. Financial and technical resources are limited; there is no trained property manager as yet and while current maintenance is apparently adequate for the area frequented by visitors, it needs to be extended to the whole property. A similar program to remove the silt from the waterways needs to be put in place. As a matter of urgency a detailed assessment should be made of the stability of the walls and contributing processes of disturbance and collapse as a basis for setting out a conservation strategy that can then be phased and costed, and efforts made to find partners and donors to support conservation. Visitor management needs

improvement with a comprehensive tourism strategy for infrastructure, information, tour guides and ticketing. A risk preparedness strategy needs to be developed, and monitoring to be co-ordinated with other relevant agencies and NGOs. The management plan needs to be developed to cover all these issues, and implemented.

In view of the vulnerabilities of and threats to the cultural attributes, and the lack of a conservation policy ICOMOS considers that the property should be inscribed under criteria (i), (iii), (iv) and (vi) and at the same time be inscribed on the List of World Heritage in Danger. This should be seen as a way forward to mobilise international resources to address the conservation problems, within the context of the traditional management of the property.

In its response to ICOMOS' interim report requesting support for recommending inscription on the World Heritage List in Danger at the same time as inscription on the World Heritage List in order to raise the profile of the conservation issues and help to enlist donor support to undertake necessary surveys and studies as a prelude to funds being raised for work to stabilise the monuments in the medium and short term, the State Party noted that while acknowledging the urgency in undertaking conservation works donor support is not guaranteed to follow In Danger Listing. The State Party advised that it would support a recommendation for inscription on the World Heritage List in Danger provided that a desired state of conservation for the removal of the property from the list is clearly articulated at the time of inscription and demonstrably achievable through a programme of corrective measures (as set out in the *Operational Guidelines* Paragraph 183).

ICOMOS notes that since establishing the desired state of conservation and programme of corrective measures will require a reactive monitoring mission to the property, the timeline makes it impractical for this to happen before inscription. This was explained to and discussed with the State Party in the second Skype meeting on 10 March 2016.

## 8 Recommendations

### Recommendations with respect to inscription

ICOMOS recommends that Nan Madol: Ceremonial Center of Eastern Micronesia, Federated States of Micronesia, be inscribed on the World Heritage List on the basis of **criteria (i), (iii), (iv) and (vi)** and at the same time be inscribed on the List of World Heritage in Danger.

ICOMOS also recommends that the State Party invite a mission to the property as soon as possible to agree a Desired State of Conservation for the removal of the property from the List of World Heritage in Danger, based on the cultural attributes of Outstanding Universal Value and to be reached through a detailed assessment of the stability of the walls as a base for setting out a



conservation strategy and corrective measures that can then be phased and costed. Efforts would then be made with the assistance of ICOMOS and UNESCO to find partners and donors to support this conservation project.

### **Recommended Statement of Outstanding Universal Value**

#### **Brief synthesis**

The megalithic basalt stone structures of the more than 90 islets that form Nan Madol off the shore of Pohnpei Island comprise the remains of stone palaces, temples, mortuaries and residential domains. They represent the ceremonial centre of the Saudeleur dynasty, an era of vibrant Pacific island culture which underwent dramatic changes of settlement and social organisation 1200-1500 CE. Through its archaeological remains, Nan Madol is tangibly associated with Pohnpei's continuing social and ceremonial traditions and the authority of the Nahnmwarki.

**Criterion (i):** The outstanding monumental megalithic architecture of Nan Madol is demonstrated by the wall construction using massive columnar basalt stones, transported from quarries elsewhere on the island, and laid using a distinctive 'header-stretcher technique'.

**Criterion (iii):** Nan Madol bears exceptional testimony to the development of chiefly societies in the Pacific Islands. The huge scale, technical sophistication and concentration of elaborate megalithic structures of Nan Madol bear testimony to complex social and religious practices of the island societies.

**Criterion (iv):** The remains of chiefly dwellings, ritual/ceremonial sites, mortuary structures and domestic sites combine as an outstanding example of a monumental ceremonial centre illustrating the period of development of chiefly societies from around 1000 years ago, associated with increasing island populations and intensifications of agriculture.

**Criterion (vi):** Nan Madol is an expression of the original development of traditional chiefly institutions and systems of governance in the Pacific Islands that continue into the present in the form of the Nahnmwarki system under which Nan Madol is traditionally owned and managed.

#### **Integrity**

Nan Madol includes all elements necessary to express its outstanding universal value and is of adequate size to ensure the complete representation of features and processes which convey the property's significance. There are no intrusive elements from development or modification, and no reconstructions of the original elements. Due to cessation of use for residential purposes by the 1820s, while retaining religious and traditional significance, the property suffers from overgrowth of vegetation, the effects of storm surge and some stonework collapse. The state of conservation of

stone structures is now of extreme concern, rendering the integrity of the property vulnerable.

#### **Authenticity**

The property is authentic in terms of location and setting, intangible culture, spirit and feeling, materials, form and design. The overgrowth of the stone structures and their state of conservation means that many of them are unable to be seen, rendering authenticity vulnerable.

#### **Management and protection requirements**

Nan Madol is legally protected by the federal government and administered by the Office of National Archives, Culture and Historic Preservation (NACH) through the Historic Preservation Office of the Federated States of Micronesia (FSM). It is protected by the state government of Pohnpei under the Pohnpei Historic and Cultural Preservation Act (2002), administered by the Pohnpei Historic Preservation Office. The FSM Constitution acknowledges the customary interests of the traditional chiefs and the property is customarily protected by the Nahnmwarki Madolenihmw.

A management committee has been set up involving all stakeholders including traditional owners and this collaboration will be consolidated by passage of the proposed Bill LB 392 (expected to pass in October 2016) to create a Nan Madol Historic Preservation Trust with ownership and management under traditional oversight by the Nahnmwarki Chief. The Management Plan is expected to be completed with international financial and technical assistance by mid-2017. This will include appointment of a designated property manager trained in cultural resource management and strategies for risk preparedness, conservation and tourism as well as an ongoing maintenance and monitoring program.

#### **Additional recommendations**

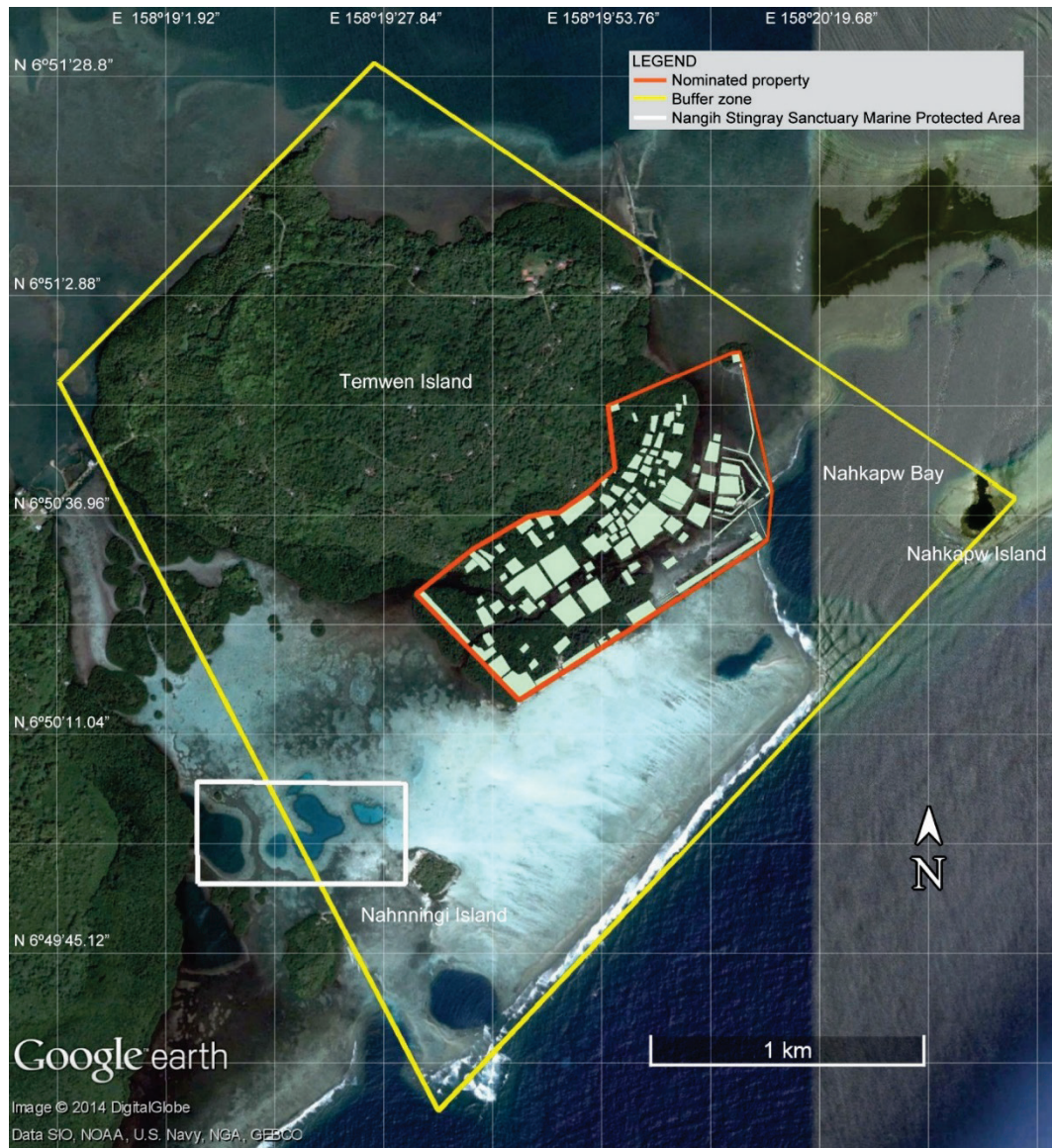
ICOMOS additionally recommends that the State Party give urgent consideration to the following:

- Passing and implementing the new legislation LB 392 (expected by October 2016) which will create a Nan Madol Historic Preservation Trust with ownership and management under traditional oversight by the Nahnmwarki Chief with a Board of traditional authority and will permanently consolidate the resolution of issues regarding ownership and management that was established by the MoU;
- Extending the management system to include a designated property manager trained in cultural resource management;
- Developing the management plan to:
  - Include a risk preparedness strategy;
  - Extend the current maintenance program to the full area of the property including removal of silt from the waterways;

- Include the conservation strategy project and corrective measures required to achieve the desired state of conservation;
- Include a comprehensive tourism strategy to deal with the future impact of tourism on the property.
- Submitting to the World Heritage Centre by 1 December 2016, a report on the implementation of the above-mentioned recommendations for examination by the World Heritage Committee at its 41<sup>st</sup> session in 2017;
- Considering the new UNESCO recommendation on the protection and promotion of museums and collections (17 November 2015) and use the proposed museum to disseminate the Outstanding Universal Value of the property.

ICOMOS encourages international cooperation to support the conservation project.

ICOMOS also encourages the submission of Lelu as a serial component when ownership, protection, conservation, funding and management requirements are resolved.



Map showing the boundaries of the nominated property





Nandowas Islet



Columnar basalt built by in a header-stretcher technique, Nandowas Islet



Dense crop trees planted, Nandowas Islet



Withered trees on a structure made stacked basalt columns, Pahnkedira