

**State of Conservation Report**  
**Nan Madol: Ceremonial Centre of Eastern Micronesia**  
**FSM Office of National Archives, Culture, and Historic Preservation**

**1. Executive Summary of the report**

Despite disruption caused by the global pandemic, work to address the issues that caused Nan Madol to be placed on the List of World Heritage in Danger has continued. Travel to Pohnpei has not been possible since January 26, 2020 when FSM's borders were closed due to Covid-19. More than one meeting per week was held via Zoom with the Pohnpei Governor's Task force of Nan Madol. Activities and achievements were made possible by the United States State Department Ambassadors Fund for Cultural Preservation Large Grant program, FSM National Government, State of Pohnpei Division of Resources and Development, the U.S. National Park Service Historic Preservation Fund, Office of Insular Affairs Technical Assistance Program grant. Activities were carried out the Pohnpei State Government, the FSM Office of Archives (NACH), Culture and Historic Preservation, and Cultural Site Research and Management (CSRM) Foundation.

As part of the United States State Department Ambassadors Fund for Cultural Preservation Large Grant program funded project, the CSRM Foundation prepared a 2020 Master Plan for the Sustainable Conservation of the Nan Madol World Heritage Site submitted to the State of Pohnpei Division of Resources and Development, the FSM NACH, the United States Ambassadors Fund for Cultural Preservation Large Grant Program, and the UNESCO World Heritage Center. Steps presented in the Master Plan were planned for implementation during 2021 and 2022. Some have been, but the inability for travel to Pohnpei hindered full achievement of some, most especially, the development of a Trust for the management of Nan Madol that will be essential for the sustainable conservation of the site.

Nonetheless, work continued to prepare the Nan Madol World Heritage Sites for visitation in collaboration with the design and construction of a Visitor Center, funded by the government of Japan. Design specifications were prepared and contracts for fabrication of exhibits that will fill the Visitor Center were accomplished. These include a solid three-dimensional model of the Nan Madol World Heritage Site surrounded by a stand with explanatory panels. Also, large interpretive panels that will cover the walls of the Visitor Center were designed and specifications prepared. The interpretive panels will display engaging, original artwork and will provide information in English and Pohnpeian. Drawings and specifications were sent to vendors for bid, selections have been made, and fabrication has begun.

Numerous Zoom meetings have been held on at least a weekly basis to sort out lines of responsibility and authority for the management of the Nan Madol World Heritage Site. Despite not yet having established an integrated management system for Nan Madol, all the above administrative tasks: preparation of drawings and specifications, going out for bid, selection of a bidder, monitoring of production, and payment to vendors, were accomplished. The process has underlined the need for the integrated management of the site. An organization chart and qualifications and duties for each position has been prepared. Also, preliminary talks were held with organizations that would be able to provide ongoing support for a Nan Madol management system. Our aim is to establish a Trust for that purpose. Among the organizations that have been and are planning to remain involved in the effort are the United States National Park Service, Division of International Affairs, the United States Office of Insular Affairs, The United States Department of Agriculture, the International National Trust Organization (INTO), and the Bahamas National Trust. It was hoped to hold an onsite workshop that would finalize the structure of the Trust and in doing so finalize legislation LB392. This would provide legal protection to the property, establish the Nan Madol Trust, and allow for continued involvement in the management of Nan Madol by these organization. While the pandemic has not so far permitted this, efforts are underway to arrange for this workshop in 2022. This will be essential to establishing a sustainable management system at Nan Madol.

**2. Response to the Decision of the World Heritage Committee**

Decision: 44 COM 7A.30

1. Having examined Document WHC/21/44.COM/7A.30

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- 1.1. No comment required
2. Recalling Decision 43 COM 7A.43 adopted at its 43rd session (Baku, 2019),
  - 2.1. No comment required
3. Welcomes the updated information provided by the State Party concerning the efforts to establish an effective management and protection system for the property, and to address the urgent pressures and threats affecting its state of conservation;
  - 3.1. No comment required
4. Notes with satisfaction that funds for a two-year implementation programme are being sought from the US Department of State through its "Ambassadors Fund for Cultural Preservation Large Grants Program";
  - 4.1. These funds have been obtained.
5. Notes that the State Party provides very few details on the stonework, which is the key attribute of Outstanding Universal Value (OUV), and that reinstating fallen masonry is likely to be impossible given the size of the columns and boulders and might be proscribed by their cultural context;
  - 5.1. The current condition of stonework has been recorded via the LiDAR survey conducted by CSRM Foundation. Previous maps of islets and structures drew from measurements taken on the ground in dense vegetation in an environment in which canal separating islets were heavily silted and the fabric of smaller islets had been previously disturbed. These maps also drew from generations of maps previously drawn, beginning in the nineteenth century. Essentially, previous maps, such as that used in the Nan Madol nomination dossier, were an idealized vision of what islet boundaries and the shape of structures were thought to have been during the Saudeleur Dynasty. By means of modeling using LiDAR data, the true condition of the Nan Madol islets and structures were ascertained. Precise visual models could be developed (see, for example, Figure 1) and accurate elevations were established every 50cm for islets and structures. Based upon this, they can be sorted into three groups: 1) primary islets and structures, those that were most important culturally, were generally much larger than others, and were well constructed. These have largely retained structural integrity but are at risk because of destructive vegetation 2) Islets and structures less culturally important, generally much smaller, and poorly constructed. Some of these have been reduced to scattered rubble, all would have to be rebuilt to some approximation of their original form. 3) Islets and structures near the coast of Temwen island have been partially covered by silt originating from that island.

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*Figure 1: LiDAR model showing integrity of Nan Madol islets and structures as opposed to an idealized map of them. The largest and most culturally significant islets and structures have retained a great deal of integrity, smaller, less important islets have suffered various degrees of disintegration. Islets nearest Temwen Island have been at least partially covered by silt.*

6. Considers that a non-intervention policy cannot be supported if, over time, this will lead to the attrition of attributes, and requests the State Party as a matter of urgency to determine which parts of the stonework can be safely monitored and which parts need interventions to ensure their safety and stability;
  - 6.1. Intervention is not recommended by anastylosis, but by managing vegetation that is an existential threat to the site. This can only be done sustainably by putting in place a management organization that will continually do this as well as monitoring the condition of stonework and degree of sea level rise that may introduce additional threats in the future.
7. Also welcomes the development of a Sustainable Conservation Plan that aims to allow the property to achieve sustainability in relation to vegetation management, site management and interpretation through short-, medium- and longer-term actions over five years, but urges the State Party to ensure that this addresses the complex interaction between deterioration of stonework, vegetation and canal management, and requests the State Party to provide feedback on this issue in its future state of conservation report, as masonry stability and resilience is closely related to access issues;

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- 7.1. The Conservation Management plan includes a vegetation management component. A supplementary grant provides training of personnel to manage vegetation at Nan Madol. A successful Office of Insular Affairs grant proposal was prepared to acquire tools necessary for vegetation management, provide funds to continue training, and create directional signs to Nan Madol. The tools have been acquired, the directional signs designed, and a vendor selected.
- 7.2. In lieu of the on-site training for vegetation management that was repeatedly delayed because of the COVID pandemic, videos for virtual training have been made to overcome this challenge. Interactive remote, digital classes for eight people identified to execute vegetation management will begin soon.
8. Notes with concern that the recent report from the Cultural Site Research and Management (CSRM) Foundation confirms that the property is deteriorating at an alarming rate, despite the progress made to address some of the most urgent pressures, and highlights the fact that vegetation encroachment is the main cause of masonry deterioration, all of which underscores the need for the Sustainable Conservation Plan;
  - 8.1. A 2020 Master Plan for the Sustainable Conservation of the Nan Madol World Heritage Site was requested and on October 31, 2020 was submitted to the State of Pohnpei Division of Resources and Development as well as to the FSM Office of National Archives Culture and Historic Preservation (NACH), and the United States Ambassadors Fund for Cultural Preservation Large Grant Program, with copies to the World Heritage Center.
9. Reiterates its request to the State Party to develop a Sustainable Tourism Strategy as soon as possible and submit it to the World Heritage Centre for review by the Advisory Bodies;
  - 9.1. Appendix 4 of the 2020 Master Plan for the Sustainable Conservation of the Nan Madol World Heritage Sites is the Sustainable Interpretation Plan Discussion Draft for Nan Madol.
10. *Regrets that work on the development of a tourist resort on Nahnningo Island (in the buffer zone) has commended in advance of this strategy and without a Heritage Impact Assessment (HIA) being developed, also requests the State Party to halt the development of this proposed tourism resort until the HIA has been developed and the issues raised in the ICOMOS technical review have been addressed, and further requests the State Party to submit the HIA to the World Heritage. Centre for review by the Advisory Bodies before work resumes;*
  - 10.1. *The builder has been informed to put the construction on hold and that no future expansions or construction will take place. The process for carrying out a Heritage Impact Assessment has begun. Due to Covid-19, this has been delayed. We look forward to the review of the Advisory Bodies before work can be completed.*
11. Strongly encourages the State Party to regularly provide updated information to the World Heritage Centre, and to continue these efforts as a matter of high priority, including:
  - a. Establishing a long-term commitment to the post of 'Property Manager',
    - 11.a.1 The position or one equivalent has been put in the Pohnpei State Department of Resources and Development Budget for 2022.
  - b. Finalizing and approving legislation LB392 to provide legal protection to the property and establish the Nan Madol Trust.
    - 11.b.1 Finalizing the legislation will require changes to the draft legislation that includes agreements among several organizations. Several iterations of a Memorandum of Understanding,

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Capacity Building for the Management of the Nan Madol World Heritage Site have been prepared and the precise terms of the MOU are under negotiation. The proposed MOU may be between the Pohnpei State Government, Federated States of Micronesia and the Nahnmwarki of Madolenihmw (the district in which Nan Madol is located). Also, efforts are underway to arrange a workshop that would develop a quasi-governmental Trust for the management of the Nan Madol World Heritage Site. Attendees would include Federated States of Micronesia Office of National Archives Culture and Historic Preservation, the Pohnpei State Government, Federated States of Micronesia, the United States National Park Service, Division of International Affairs, the United States Office of Insular Affairs, The United States Department of Agriculture, the International National Trust Organization (INTO), and the Bahamas National Trust.

c. Completing and finalizing the Sustainable Conservation Plan, Site Management Plan and Interpretation Plan for the property, and submitting them to the World Heritage Centre for review by the Advisory Bodies.

11.c.1 A 2020 Master Plan for the Sustainable Conservation of the Nan Madol World Heritage Site has been prepared and submitted (see above) and includes the Sustainable Interpretation Plan Discussion Draft for Nan Madol (Appendix 4). Regarding the Site Management Plan, the Draft Management Plan (Appendix A in the Nan Madol Nomination Dossier) was never completed. To be sustainable, a conservation plan must lay out an effective management organization that can be put into place, adapt to changing needs, and grow over time. The SHPO for FSM identified a finalized Management Plan as a necessary component of the final sustainable conservation plan. An outline of the plan was presented several times to concerned groups and distributed to them in 2019 and 2020 with requests for comment. Such meetings of concerned groups were held both collectively and individually.

At the request of the Director of the Pohnpei State Division of Resources and Development, the final sustainable conservation plan may be called the Master Plan for the Sustainable Conservation of Nan Madol. A key development in the production of the Master Plan for the Sustainable Conservation of Nan Madol was the formation of a Task Force for Nan Madol Management headed by the Governor of Pohnpei. The 2020 Master Plan for the Sustainable Conservation of the Nan Madol World Heritage Site lays out what must be done for the sustainable conservation of the site. An overview is provided in the Executive Summary of that document. The plan's three essential elements are:

- 1) To remove the most severe, existential threats to the integrity and authenticity of Nan Madol;
- 2) To put in place the basic management structure necessary to sustainably conserve Nan Madol;
- 3) To activate networks of management support.

The Pohnpei Governor's Task Force for the management of Nan Madol is the first and essential step in accomplishing element number 2. The Task Force will finalize the Management Plan in consultation with CSRM Foundation and NACH. It will then make changes to the bill for an act that would establish a Nan Madol Historic Preservation Trust (see 11.b.1). It would ultimately form the Nan Madol World Heritage Management Committee that is recommended in the Draft Management Plan (see pages 169–170).

A basic management structure for the Nan Madol World Heritage Site is presented from page 51 to page 65 in the 2020 Master Plan for the Sustainable Conservation of the Nan Madol World Heritage Site.

11.d.1 This is being undertaken by the Tourism Office in the Pohnpei State Department of Resources and Development

- e) Establishing processes for HIAs as part of the management system,

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11.e.1 This is a developing dialogue between the Federated States of Micronesia Office of National Archives Culture and Historic Preservation and the Pohnpei State Government to develop firm lines of responsibility and authority.

f) Implementing the short-term actions identified for vegetation management in the highest priority areas of the property,

11.f.1 Nan Madol's three greatest conservation threats are vegetation overgrowth, siltation of the canals, and water action. The three are related in that siltation of the canals provides more soil in which dense vegetation can grow. Where canals have been partially filled by silt, muddy waters encourage the growth of mangroves that insinuate roots into the stonework of islet walls. This will ultimately cause the walls to fail. While mangroves provide a buffer in addition to that created by the unusual bathymetry offshore Nan Madol and offshore walls built by the Saudeleur Dynasty, mangrove removal is not planned for areas along the outer mangroves removed from the man canals constitute only a tiny fraction of mangroves in and around Nan Madol. Other species of vegetation also have roots systems that undermine stonework and so must be removed. Another grave threat to the integrity of the structures at Nan Madol are large trees that topple over or drop limbs in storms. The United States Department of Agriculture has generously financed the involvement of Master Arborist Kevin Eckert, who developed a vegetation management plan and was to teach a course at Nan Madol to personnel hired to manage vegetation. However, the training session was postponed time and again over the past year and more because of the COVID pandemic. Given this, virtual vegetation management training videos have been produced and taring of eight people to begin management of vegetation in canals and also removal of small but destructive species of vegetation from Nan Madol islets in to being on early February 2022.



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*Figure 3: Area of mangrove removal from canals: Length of canal from **Nan Dowas (A)** to **Pohn Keimw (B)** – **1.01 miles***

*Area of the canal (from **A** to **B**) = **0.008 square miles** (2.16 hectares)*

*The width of the canal varies:*

*Average width = **0.01 miles***

*Widest part of the canal = **0.05 miles***

*Narrowest part of the canal = **0.0024 miles***

g) Developing measures to clear the canals and improve their hydrology

11.f.1 As mentioned in 11.f.1, just above, mangrove clearance along the main canals, termed the Channels of the Good Lizards, will commence soon. This should revive the flow of water through canals, restoring the productivity of mangrove habitat for fish and crustaceans, and possibly deepen canals so that access to important islets can be gained by water as well as by footpaths (see Figure 3).

h) Developing and implementing, as part of the management plan, a system to monitor the health of the mangroves;

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11.h.1 Monitoring will be an essential function of Nan Madol management. Mangrove monitoring can be done by examining freely available Sentinel-2 satellite imagery. The satellite should pass over Nan Madol approximately every six days.

12. Notes furthermore the need for continuing international cooperation and partnerships to develop the long-term capacity of the State Party, Pohnpei State and local communities to conserve and manage the property, and encourages the State Party to continue to develop collaborations that will enable the creation of a dedicated capacity-building programme, as recommended by the 2018 Reactive Monitoring mission and the draft Conservation Plan;

12.1 As mentioned in 11.b.1 and 11.c.1., efforts are underway to form a support network that would include the United States National Park Service, Division of International Affairs, the United States Office of Insular Affairs, The United States Department of Agriculture, the International National Trust Organization (INTO), and the Bahamas National Trust.

13. Requests furthermore the State Party to provide to the World Heritage Centre detailed information on any project that may have an impact on the OUV of the property and on any HIAs carried out according to the 2011 ICOMOS Guidance on HIAs for World Heritage cultural properties, and in accordance with Paragraph 172 of the Operational Guidelines, for review by the Advisory Bodies, before any decision is made that would be difficult to reverse and/or any project is implemented;

13.1 This again will require discussion between the Federated States of Micronesia Office of National Archives Culture and Historic Preservation and the Pohnpei State Government to develop firm lines of responsibility and authority.

14. Calls upon the international community to provide technical and financial support for the safeguarding of the property, in cooperation with the World Heritage Centre and the Advisory Bodies;

14.1 See 12.1, 11.b.1, and 11.c.1

15. Requests moreover the State Party to submit to the World Heritage Centre, by 1 February 2022, an updated report on the state of conservation of the property and the implementation of the above, for examination by the World Heritage Committee at its 45th session;

15.1 This document is the State of Conservation Report.

16. Decides to retain Nan Madol: Ceremonial Centre of Eastern Micronesia (Micronesia (Federated States of)) on the List of World Heritage in Danger.

16.1 We are hopeful that steps to be taken in 2022 and 2023 will result in the removal of the Nan Madol World Heritage Site from the List of World heritage in Danger.

**3. Other current conservation issues identified by the State(s) Party(ies) which may have an impact on the property's Outstanding Universal Value**

None to report.



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**4. In conformity with Paragraph 172 of the *Operational Guidelines*, describe any potential major restorations, alterations and/or new construction(s) intended within the property, the buffer zone(s) and/or corridors or other areas, where such developments may affect the Outstanding Universal Value of the property, including authenticity and integrity.**

None at this time.

**5. Public access to the state of conservation report**

It is ok to publish this report.

**6. Signature of the Authority**



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Augustine Kohler, Secretary-General, FSM NATCom for UNESCO  
Assistant Director  
FSM Office of National Archives, Culture, and Historic Preservation