

# Bikini Atoll Conservation Management Plan

*January 21, 2010*

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## Purpose and Scope of this Plan

This plan is prepared for the management of Bikini Atoll as a proposed World Heritage site. As a former US nuclear test site, Bikini Atoll is home to a remarkable assemblage of wartime technology in the form of sunken vessels, and the atoll's depopulated and scarred landscape and seascape bear witness to the destructive capacity of nuclear weapons and the persistent nature of radiation. As a tropical coral atoll which is not subject to the usual human pressures, Bikini Atoll hosts significant populations of endangered species, and offers important insights to science on how coral reefs can recover from a major trauma.

This management plan covers the protection of the cultural and natural heritage values of Bikini and compatible use of the atoll for tourism, research, cultural use and education.

Recent work on the recovery of corals at Bikini, and the possibility of World Heritage listing of Bikini for its cultural attributes has increased the interest from experts in both fields on the effective study, conservation and interpretation of Bikini Atoll. At present, preliminary discussions are underway with experts mentioned in this document and in the Bikini World Heritage Nomination Dossier to develop a program of work. These discussions will continue to inform the development of this plan, which we view as an ongoing process. Future developments will include specific assessment, monitoring and reporting protocols and interpretation of the site both for visitors to Bikini, and for presentation through websites, publications and other means of conveying the globally significant values of Bikini.

# Part 1. Background

## 1.1 Bikini Atoll and World Heritage

In 2005 the Marshall Islands included Bikini Atoll in the Tentative List of possible sites for inclusion on the World Heritage List. In 2006 work began to develop the nomination dossier for Bikini Atoll to be considered for listing by the World Heritage Committee for its cultural values as a nuclear test site. The Republic of the Marshall Islands is submitting its nomination for Bikini in 2009 for consideration by the World Heritage Committee in 2010.

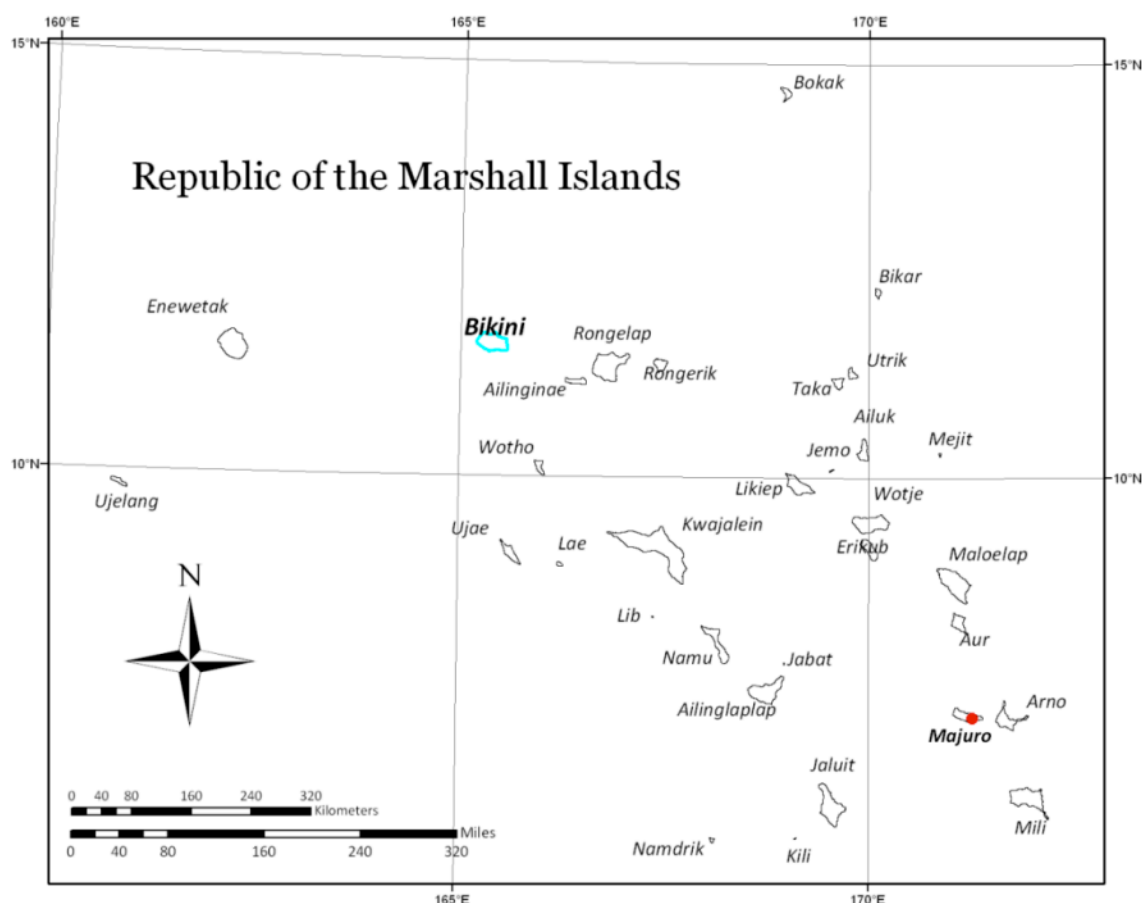
While Bikini Atoll is being nominated to World Heritage on the basis of cultural values only, it has globally significant natural values in terms of biodiversity conservation and the scientific study of coral reef systems.

## 1.2 A Brief History of Bikini Atoll

Bikini Atoll is thought to have been first settled by humans between 2000 and 3000 years ago. The people of Bikini lived a quiet, subsistence lifestyle well into the 20<sup>th</sup> century when, during the build-up to the Pacific War in World War II, the Japanese military established an outpost on Bikini. In 1945, at the end of the war, the Marshall Islands was captured by the Americans and the people of Bikini were released from a difficult time under Japanese martial rule. In 1946 Bikini Atoll was selected by the US to be the site of the first peace-time nuclear weapons tests. The people of Bikini reluctantly agreed to leave their treasured homeland “for the good of mankind and to end all world wars” and commenced their many years of unhappy displacement within the Marshall Islands. Within months the traditional villages were gone and a huge military installation hosting 42,000 personnel had changed the face of Bikini Atoll forever. In July 1946 the first of 23 nuclear tests to be held on Bikini was conducted. Operation Crossroads was the bombing of a fleet of over 90 retired naval vessels, 16 of which today lie on the bottom of Bikini lagoon. In 1954 another enormously significant testing event occurred: the Castle Bravo, the world’s first deliverable hydrogen device, which destroyed 3 islands and left a crater a mile wide. Fallout from the Castle Bravo was distributed across the Marshall Islands, having particular impact on the people of Rongelap and Utrik, and on the crew of a Japanese tuna boat. In the meantime, 43 nuclear tests were carried out on the neighboring atoll of Enewetak. Nuclear testing on Bikini finished in 1958, and after some attempts to clean-up the radioactive site, the Bikinians were allowed to return home in the 1970s. Within a couple of years, however, monitoring revealed the levels of radiation in their bodies was unacceptably high and Bikini was again abandoned. In 1985 the US Government handed over ownership of the sunken vessels to the people of Bikini, and these became the basis of a small-scale tourism operation. The population of Bikini today remains restricted to a few people monitoring the radiation, employees of the dive operation, and the visiting tourists. The people of Bikini, although now living elsewhere retain strong links of identity to their lost homeland.

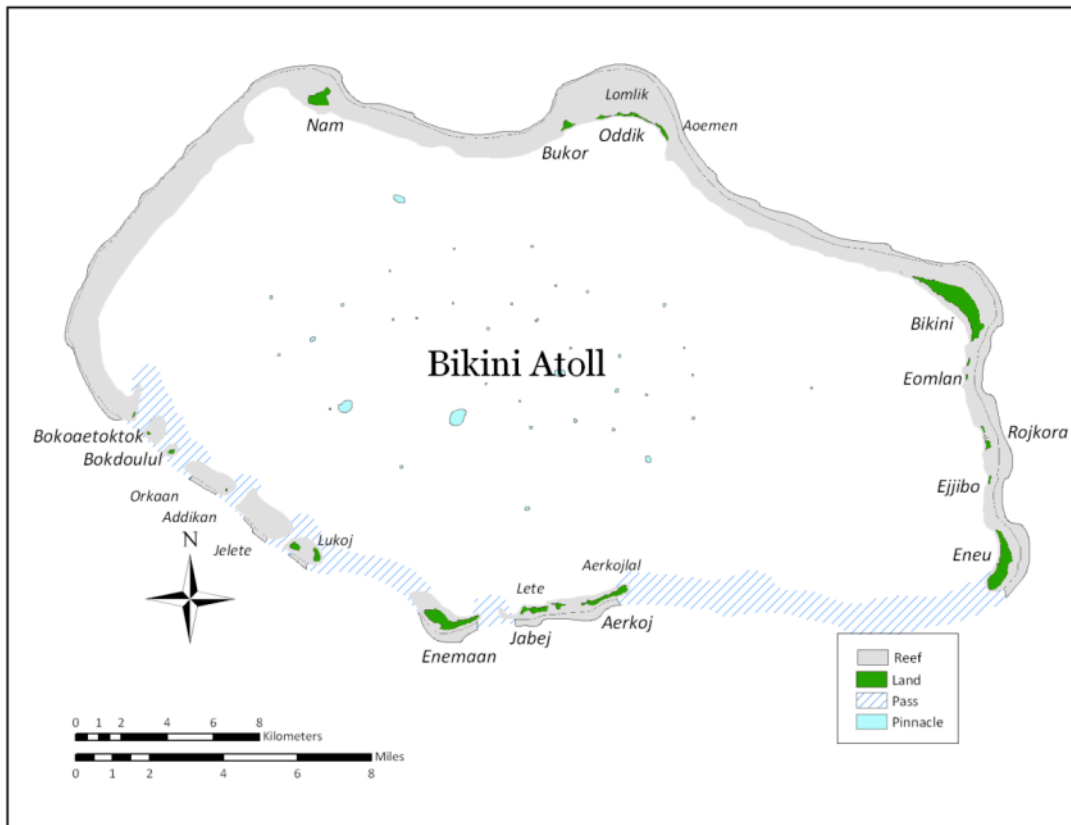
### 1.3 Location, Access and Geography

Bikini Atoll is the northern-most atoll in the western, *Ralik*, chain of atolls—one of 29 low-lying coral atolls that rise over 6,000 meters from the abyssal plain to no more than a couple of meters above sea level, and comprise the Marshall Islands, known to the Marshallese as *Aelōñ Kein*. The atolls consist of biotic limestone on a deep basalt core, built over millions of years by living coral organisms that grew as the basalt core slowly subsided, creating a marine environment extremely rich in productivity, diversity and complexity.



The entirety of the Marshall Islands lies in the central-western part of the Conservation International Polynesia/Micronesia Hotspot and the northern Marshall Islands form the Key Biodiversity Area, Kabin Meto. Bikini Atoll lies in this drier, northern part of the Marshall Islands. Air and water temperatures hover around 28 degrees Centigrade (82 Fahrenheit) year round, varying little from this. Annual rainfall is an average of 1500mm (60 inches).

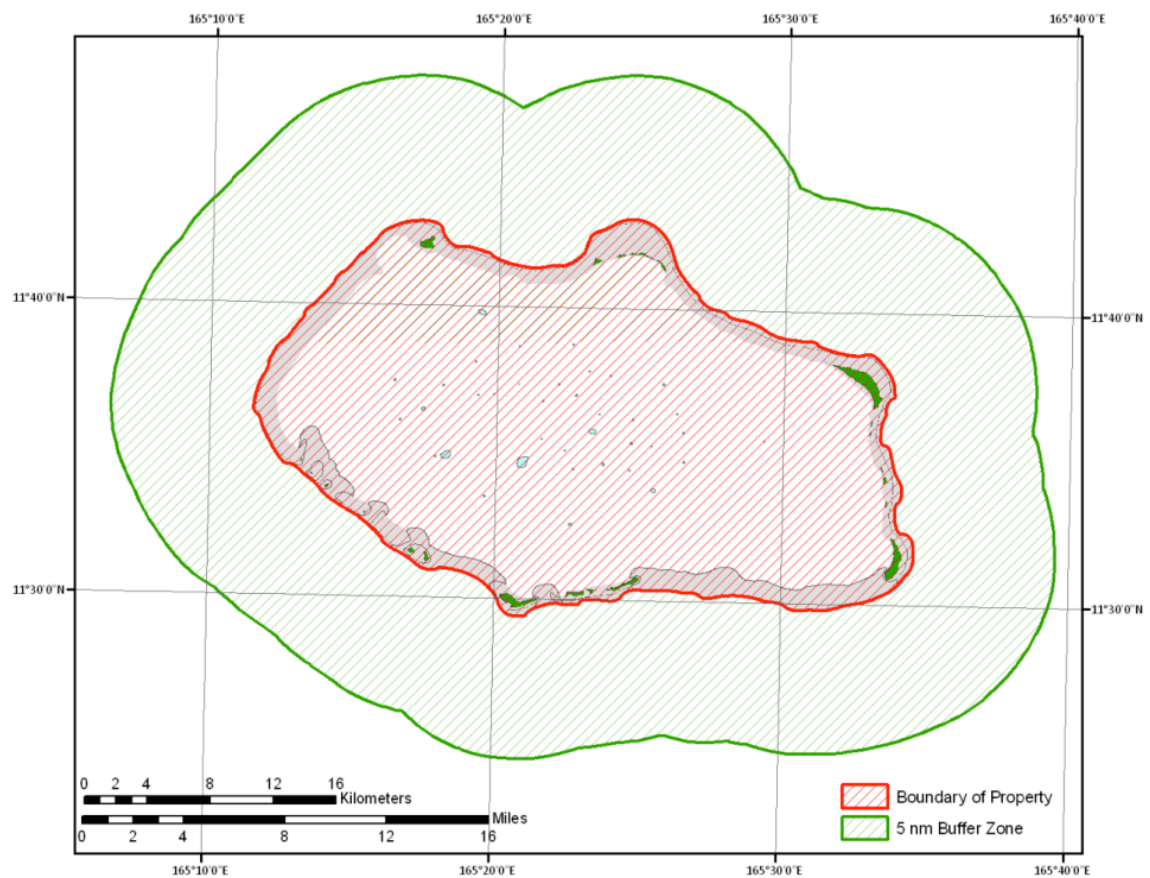
Bikini Atoll is 800 kilometers (500 Miles) from the main centre of Majuro, and an international airport. Access to Bikini is by the national domestic airline, Air Marshall Islands, or by boat. Weekly flights are scheduled to Bikini Atoll however during 2007 and 2008 Air Marshall Islands has been experiencing severe operational problems and so access to Bikini by aircraft is extremely limited and unpredictable at this time.



Bikini's 23 islands, a total land area of only 720 hectares (1780 acres), encircle an elongated and irregular lagoon which extends 40 kilometers (26 miles) long, east to west, 22 kilometers (15 miles) wide, north to south, and is around 60 meters (200 feet) at its deepest. Most of these islands are joined by a shallow reef, with several deep channels on the southern side of the lagoon. Eneu Channel, the largest, is 15 kilometers (9 miles) wide. Most of the islets on Bikini are small; Bikini Island is the largest with a total area of 212 hectares (524 acres) and Eneu the next largest at 115 hectares (284 acres).

## 1.4 Boundary of the Proposed World Heritage Site

The boundary of the core proposed World Heritage site of Bikini Atoll is clearly delineated by the outer visible reef of the atoll. A buffer zone extends 5 nautical miles from the baseline (basically the outer reef edge). No unauthorized vessels are to enter waters within 5 nautical miles of Bikini except as required for passage by international law. A further protective zone is established by fishing license conditions in the Marshalls Islands preventing any licensed boat from fishing within the territorial seas (12 nautical miles) surrounding each atoll.



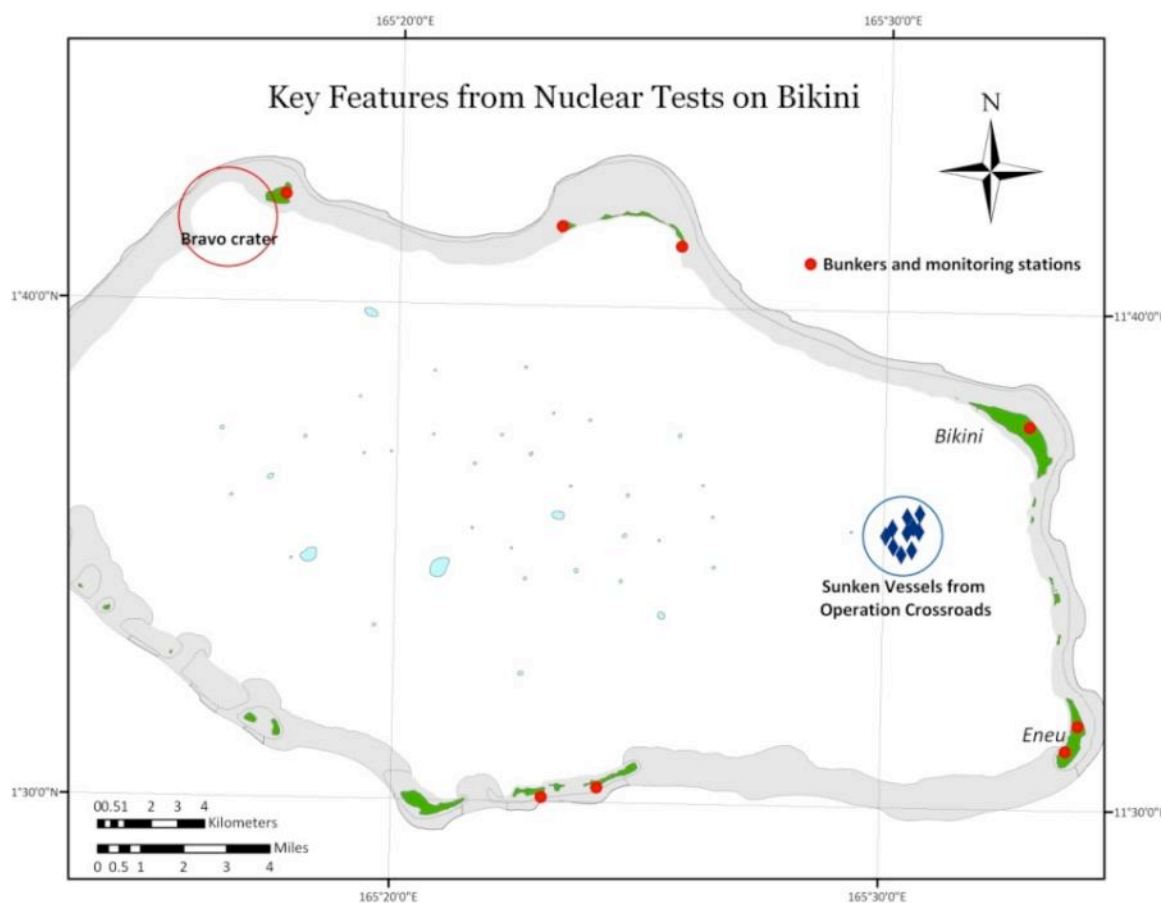
## 1.5 Cultural Resources

### *The Sunken Vessels*

Five kilometers from Bikini Island, in 60 meters of water, lays the *Saratoga*, victim of Bikini's second bomb, Crossroads Baker; upright on the lagoon floor, her mast-top just below the water line. Three Helldiver planes and an Avenger torpedo bomber sit on her deck, with 500 pound bombs stacked on nearby racks and her anti-aircraft guns facing skyward. Nearby lays the flagship of the Japanese fleet, the *Nagato*. These are but two of the sixteen ships that lie on the bottom of Bikini lagoon; the most prominent remnants of the nuclear testing on Bikini. Most of these vessels are clustered in and around the shallow crater formed by the Crossroads Baker test of July 25, 1946.

### *Bunkers*

On Eneu Island of Bikini Atoll there are two structures from the testing period: the remains of the cement Communications Station, and the cement Monitoring Bunker. On Bikini Island there is a small cement bunker at the back of the island. On several of the outer islands of Bikini Atoll there are cement monitoring stations that are still intact.





## 1.6 Natural Resources

### *Marine Environment*

Because it is essentially uninhabited, Bikini Atoll has been able to experience a remarkable recovery from the devastation caused by the bomb testing program. It is of immense interest to science for studying the effects on, and recovery of, marine ecosystems following major disruption. The Bravo crater is of particular interest as the Bravo explosion created new lagoonal space and new opportunities for reef development and colonization.

Approximately 50 of the 183 species of coral recorded at Bikini Atoll (Richards et al. 2008) fall within an IUCN threatened category. Given Bikini Atoll reef ecosystems are relatively pristine (Pinca et al. 2002) in comparison to reefs occurring in more populated regions, Bikini provides some of the most significant reef habitat in the northern Pacific and in effect a refuge that may support the recovery in other more heavily impacted parts of the world such as South East Asia and the “Coral Triangle”. Surveys of coral biodiversity carried out in 2002 (Richards et al. 2008) revealed eleven species of coral occur at Bikini Atoll despite never before being recorded in the Marshall Islands. Four of these species are considered, on current records, to be regionally restricted to Bikini Atoll—*Acanthastrea hillae*, *Acropora bushyensis*, *Montipora cocosensis*, *Polyphyllia talpina*. Two species (*Acanthastrea brevis* and *Montastrea salebrosa*) were found to be locally abundant and distributed widely at Bikini Atoll indicating Bikini Atoll provides significant habitat for the conservation of these species.

The rare and threatened species of giant clam *Tridacna gigas* appear to be particularly abundant in Bikini lagoon compared to other atolls of the Marshall Islands. This species is literally disappearing from the Pacific region and is found freely growing in Bikini as well as in the nearby atolls of Rongelap and Ailinginae. The locations where it is mostly found in Bikini are the lagoonal sites in the northwest (near Bravo crater) and central northern areas (in front of Aomoen island). At this latter site, many *Hyppopus hyppopus* are similarly found.

Fish fauna in Bikini is very diverse (species richness is 359) due to the high variability of habitats offered by lagoon, pass and ocean environments. The southern and eastern walls of Bikini sustain a high biomass of carnivores (*Lutjanidae*, *Lethrinidae*, *Sphyrnidae*, *Carangidae*), while the lagoon is rich in invertebrate feeders and herbivores (*Mullidae*, *Ephinephelidae*, *Caesionidae*).

One special characteristic of Bikini that differentiates it from other atolls in the Marshalls and from many reefs in the world is the particularly high concentration of several shark species that are considered threatened including gray reef shark (*Charcharhinus amblyrhynchos*), reef whitetip shark (*Trienodon obesus*), reef blacktip shark (*C. melanopterus*) and silvertip shark (*C. albimarginatus*). The highest concentration is found at the so-called Shark Pass in the south where hundreds of *C. amblyrhynchos* swim inoffensively and undisturbed along the inner wall and at the pass itself. Tiger sharks (*Galeocerdo cuvier*) are also known to inhabit the lagoon of Bikini and to approach the shore at night or to swim by the decompression bars in the middle of the lagoon. The spotted eagle ray (*Aetobatus narinari*) is a frequent sight in the lagoon waters.

The Bikini property is a holistic single atoll system surrounded by open ocean. The location provides natural isolation from neighboring systems and from human intervention. This provides sufficient size for the ongoing functioning of the natural marine systems. While the terrestrial environment has been significantly disturbed, the marine environment reef system has a very high biodiversity, showing the range of species that demonstrate the system is functioning well including endemic biota, apex predators (sharks) and migratory species such as turtles.

## *Terrestrial Vegetation*

So dramatic was the impact of testing on the islands that a vegetation survey by Fosberg in 1985 reported that on all the islands of Bikini “no unaltered vegetation has survived” (1988: 2) although the native species have survived. There are several stands of important species on some of the islands, including *Pisonia grandis*, a favorite nesting place for birds, and *Pemphis acidula*, which is a species of importance in the RMI (Reimaanlok: 2008). The islands of Eneu and Bikini are dominated by planted coconut palms “on a precisely laid-out 30 foot square grid system” (Fosberg 1988: 3). These trees remain untended and the physiognomy of the plantation varies from tall and luxuriant, with dense undergrowth, to stunted coconut palms with sparse undergrowth. Vegetation on other islands in 1985 was a mixture of the usual atoll strand vegetation (*Scaevola* and *Tournefortia*) and exotic species. There is a need to carry out a vegetation survey to understand how these atoll terrestrial systems have recovered from the testing and associated impacts.

## *Birds*

Bikini Atoll is seeing an increase in avifauna, probably due to the absence of human hunting pressure. Twenty-six species of birds are documented for Bikini Atoll, including 3 IUCN Red-listed species: Buller’s Shearwater (*Puffinus bulleri*), Sooty Shearwater (*Puffinus griseus*) and the Bristle-thighed curlew (*Numenius tahitiensis*). The Red-tailed Tropicbird (*Phaeton rubricauda*) now nests on Bikini, but was unknown to Bikinians prior to the testing. (Vander Velde and Vander Velde 2003).

## 1.7 Radiation

The residual radioactivity on Bikini is higher than on other atolls in the Marshall Islands, however there is no radiological risk from visiting the lagoon or the islands. It is safe to walk on the islands, swim in the lagoon and the drinking water is safe also – that is, the residual radioactivity is lower than the natural radioactivity occurring in many places in the world. It is also deemed safe to eat marine life. The main radiation risk is from eating food grown locally on Bikini, including coconuts and breadfruit, over a long period of time. This includes coconut crabs which are known to bio-accumulate the radioactive cesium remaining in the soil and plants.

## 1.8 The People of Bikini

The Bikinians left Bikini in 1946 and after many years as nuclear nomads, the main populations of Bikinians now reside on Ejit, a small islet of Majuro Atoll, and on Kili, an inhospitable island in the south-west reaches of the Marshall Islands. While the Bikinians that left Bikini Atoll in 1946 numbered only 167, the number of people that identify as Bikinian today is over 4,000. The people of Bikini are still active in the governance and management of Bikini Atoll through the Kili-Bikini-Ejit Local Government. This plan will establish a further mechanism for involvement through the establishment of the Bikini Atoll Conservation Management Board.

## 1.9 Ownership and Management of the Site

### *Ownership*

As in the rest of the Marshall Islands, land on Bikini Atoll is held under customary tenure through traditional clan relationships. Land is divided into parcels, called ‘weto’, under specific customary ownership. Bikini Atoll has a recognized ‘Iroij’ or chief, and each parcel of land also has ‘Alaps’ (caretakers of the land) and ‘Dri-jerbal’ (workers).

Under Marshall Islands law, all marine areas (lagoon and ocean) below the mean high water mark are legally owned by the people of the Marshall Islands, through the Government of the Marshall Islands, with the recognition of traditional and customary rights of landowner, clan and municipality to control the use of and materials in marine areas. (Public Lands and Resources Act, 1996)

Local governments have the power to make any ordinances over the area of local government jurisdiction, so long as they are not inconsistent with any other legislative instrument that has the force of law in the Marshall

Islands (including regulations from national agencies but not including other municipal ordinances). Local Government jurisdiction is to a distance of 5 miles from the mean low water line (Constitution of the Republic of the Marshall Islands). In effect, this means that the ownership and control of resources in Bikini Atoll comes under both customary landowners, and the Kili-Bikini-Ejit Local Government.

All rights, title and interest to the ships sunk by the nuclear tests in 1946 in Bikini Atoll's lagoon were transferred from the Government of the United States to the people of Bikini under Section 177 of the Compact of Free Association of 1985. This agreement is significant because it is the only place in the world where the United States has ceded its rights to its sunken naval vessels (Agreement Between the Government of the United States and the Government of the Marshall Islands for the Implementation of Section 177 of the Compact of Free Association, Article VI, 1985).

### *Management*

The management of Bikini Atoll, including all cultural heritage resources, is the responsibility of the Kili-Bikini-Ejit Local Government.

## 1.10 Existing Uses

### *Tourism*

The existing use of Bikini is limited to a small dive tourism operation, visiting yachts, ongoing radiation monitoring activities of the US Department of Energy and occasional visits by the people of Bikini.

More recent construction was carried out to develop facilities for tourism on Bikini. Also on Eneu Island there is a crushed coral runway that allows for the landing of aircraft ranging from large propeller planes to small Lear jets. Eneu Island has a small airport terminal, several warehouses, crew quarters, a pier and dock, repair shops, a power plant, and several unfinished buildings that were at one time going to be utilized for tourism until it was decided by the Local Government to use Bikini Island for this purpose.

On Bikini Island there are two buildings used to house tourists that are situated along the beach, a large structure utilized as a dining hall and warehouse for supplies, a dive shop and tank filling station, a garage that also houses a water making complex, a TV/briefing room and office used for the tourism program, several buildings used by the US Department of Energy for their ongoing monitoring program, a dock facility, a fuel farm, a power plant, and several buildings used as repair shops for routine maintenance work on the facilities.

## 1.11 Key Challenges and Threats

### *Deterioration of nuclear testing artifacts*

The processes of deterioration, especially in the ships, are irreversible and directly related to the atomic tests. In the case of the ships, blast damage introduced micro-fractures and may have produced isotopes of steel, accelerating the deterioration of the ships. Similarly deterioration of the concrete structures remaining on land is inevitable due to the harsh, salty environment. These processes at work, and the ultimate disintegration of the ships and bunkers is demonstrative of the legacy of the tests, and an integral and key aspect of this landscape—as such, these processes and the ongoing changes in the ships and structures should be monitored, assessed and documented.

### *Removal of artifacts*

There are reports of unauthorized visitation and removal of artifacts in the early 90s. It is important to ensure the ongoing integrity of the site by preventing unauthorized removal of artifacts. This is addressed through restricted access to the site, supervised diving and visitation and a provision to allow for inspection of visitors bags upon departure from Bikini Atoll, or from the Marshall Islands.

### *Risks to divers*

The ships at Bikini are at depths of up to 60 meters (200 feet) which is well below recommended recreational diving depths. Diving at these depths involves extended periods below water to allow for decompression before surfacing. In addition, penetration of the wrecks themselves requires a good level of skill, experience and comfort in diving. All these factors mean that divers must be well qualified and experienced, and must be aware of the risks prior to undertaking diving at Bikini Atoll. This requires good information and briefing to visitors prior to arriving at Bikini and prior to each dive, and also requires the signing of a waiver form acknowledging this information and releasing Bikini Atoll from liability.

### *Illegal, Unreported and Unregulated Fishing*

Several fishing vessels have been caught in recent years fishing illegally in the atolls of Bikini, Ujelang, Jaluit and Mili. In 2002 a vessel was found fishing for sharks at Bikini Atoll and was successfully prosecuted. The current extent of illegal fishing is not known due to difficulties in surveillance and monitoring, however effective surveillance and enforcement and the prevention of illegal fishing is an objective of this management plan.

### *Overfishing or overharvesting*

Atoll ecosystems were traditionally carefully managed to prevent overfishing and depletion of fish stocks, or other species. While the level of harvesting pressure is expected to remain low due to the isolation of Bikini, the ability for the people of Bikini and other visitors to carry out some harvest is important, as is occasional sport fishing for tourists on Bikini. This management plan and the correlating regulations will place restrictions on different species, or seasons and fishing methods to protect and maintain the current healthy populations of fish and other species at Bikini.

Local government ordinances placing restrictions on harvesting levels and sport-fishing have been passed (see attached KBE Ordinance 2010-02).

### *Climate change and sea-level rise*

Climate change is a major threat to the low-lying Marshall Islands. The islands are at risk from storm surge in the short to medium term, and complete inundation in the future. Rises in sea temperature will likely cause coral bleaching – the extent and impact of which is unpredictable. Ocean acidification is predicted to seriously impact the ability of corals to grow and form skeletons. Bikini Atoll will best retain some resilience to climate change through maintaining the health and protection of its coral ecosystems.

### *Invasive species*

Many land and marine invasive species, both plants and animals, are threatening the biodiversity of the Marshall Islands. Once an invasive species becomes established it can be extremely difficult and expensive to control or eradicate. Invasive species can cause the extinction of native and endemic species by taking over their positions in the ecosystem, or through predation. Bikini Atoll has many invasive exotic plant and animal species, particularly apparent in the terrestrial environment, due to the huge military and clean up operations here carried out over many years. At this point there are no plans to take particular measures to address either the introduction of new species or the eradication of established invasives due to the scale of the existing problem. With further assessment of the terrestrial environment and bird populations, however, it may be desirable in the future to establish a program to address invasive species.

## **1.12 Existing Legal Framework**

Legislation, regulations and ordinances have been established at national and local level to ensure the legal protection of the artifacts and natural environment at Bikini Atoll.

### *Protection of Historic and Cultural Resources*

The property currently has a high degree of protection through local ordinances and strictly controlled access.

The Historic and Cultural Preservation Act (1991) and its subsidiary regulations protect historic and cultural resources including governing access to submerged resources, the export of historic and cultural artifacts and control over land modification activities. The Act provides for fines of up to \$10,000 or six months imprisonment for violations. (The Historic and Cultural Preservation Act: Title 45, Ch 2, 1991; Regulations Governing The Taking And Export Of Artifacts, 1991; Regulations Governing Access To Prehistoric And Historic Submerged Resources, 1991; Regulations Governing Land Modification Activities, 1991)

In addition, Kili-Bikini-Ejit Local Government established ordinances in 1988 prohibiting entry to Bikini Atoll or diving on ships without a permit issued by KBE Local Government, and prohibiting removal of any object from Bikini lagoon (Ordinance No.14-1988). These were updated in 1996 to additionally require that all divers be accompanied by the official Bikini dive operation (Ordinance No.2-1996). All of these ordinances were combined and updated with the passing of KBE Ordinance 2010-02 (attached). All divers and yachts visiting Bikini Atoll are required to gain permission from KBE Local Government (through the Tourism Manager) and to sign a liability waiver confirming that they understand their responsibilities (Yacht Liability Waiver, 2008).

### *Protection of Biological Resources*

Bikini has a high level of biodiversity protection also, based on a decree (July 30, 1997) from the KBE Local Government that it is illegal to fish for sharks or turtles in the lagoon, or to use gill nets or throw nets within the lagoon area. All bird habitats are preserved by this same decree. All fishing around the area of the sunken ships is prohibited. Additionally, at national level, licensed pelagic fishing vessels are prohibited from fishing within the 12 mile territorial seas of any atoll.

### *List of Ordinances*

**Marine Resource Ordinance** (Dated July 28, 1997): Ordinance passed in 1997 with the object of conserving the marine and wildlife resources of Bikini Atoll.

**Ordinance No. 14-1988** (October 8, 1988): Ordinance to prevent unauthorized diving in Bikini Atoll lagoon and to prevent removal of artifacts from ships. This ordinance was created soon after the ships were made the property of the Bikinians under Section 177 of the Compact of Free Associated (year? And ref).

**Ordinance No. 2-1996** (May 30, 1996): Ordinance to prevent unauthorized diving in Bikini Atoll lagoon and to prevent removal of artifacts from ships. This ordinance was developed soon after the establishment of a commercial dive operation on Bikini Atoll and required that all divers be supervised by the authorized dive operation.

**Ordinance No. 2-2010** (January 21, 2010): Ordinance that combines and updates all of the above Ordinances (Marine Resource Ordinance, Ordinance No. 14-1988 and Ordinance 2-1996).

**Liability Release Form and Express Assumption of Risk for Diving at Bikini Atoll:** All tourist divers at Bikini are required to sign a liability release form that also informs them of the rules regarding removal of artifacts. During times when the dive operation is active, each diver is required to sign this form. Visiting yachts are required to sign this form also.

## 2. The Plan

### 2.1 Goals and Objectives

#### *Goal*

To identify, protect, conserve, present and transmit the cultural heritage values of Bikini in relation to the World Heritage Listing, and to protect the biodiversity of Bikini Atoll.

#### *Cultural Heritage Objectives*

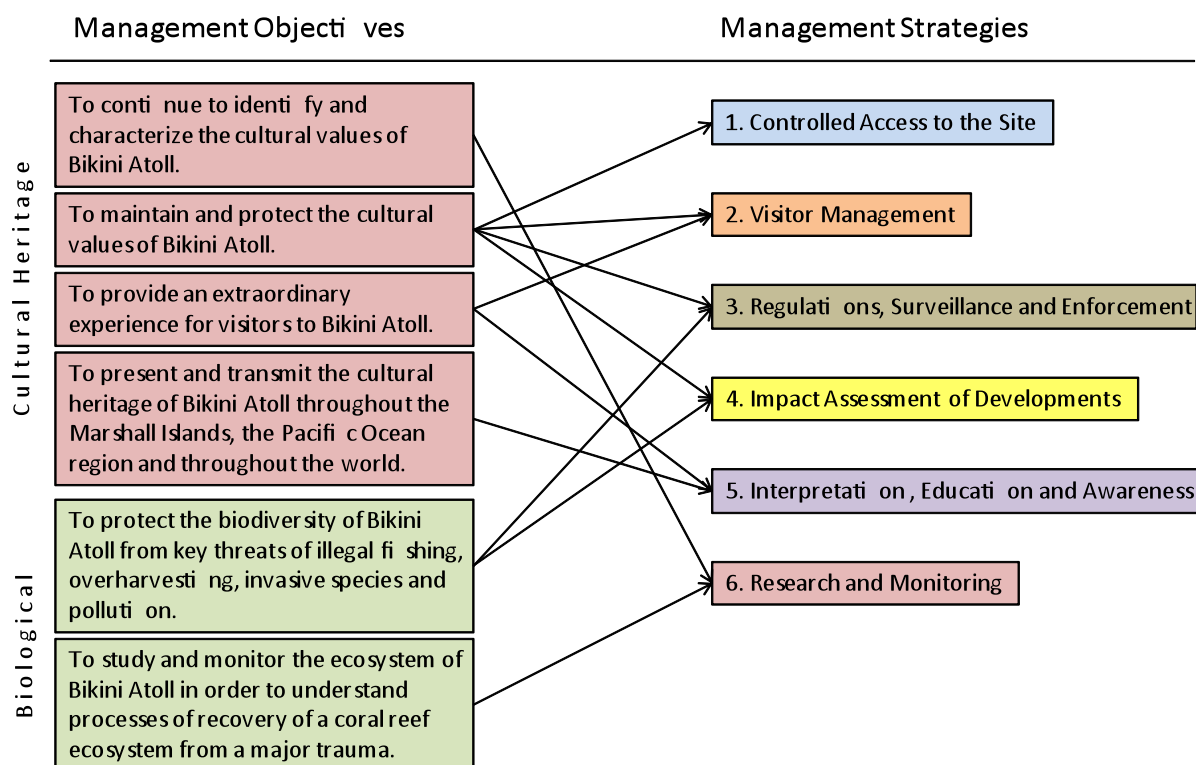
- To continue to identify and characterize the cultural values of Bikini Atoll.
- To maintain and protect the cultural values of Bikini Atoll.
- To provide an extraordinary experience for visitors to Bikini Atoll.
- To present and transmit the cultural heritage of Bikini Atoll throughout the Marshall Islands, the Pacific Ocean region and throughout the world.

#### *Biological Objectives*

- To protect the biodiversity of Bikini Atoll from key threats of illegal fishing, overharvesting, invasive species and pollution.
- To study and monitor the ecosystem of Bikini Atoll in order to understand processes of recovery of a coral reef ecosystem from a major trauma.

### 2.2 Management Strategies

The diagram below indicates how the key management strategies outlined in this plan link to the achievement of the objectives for the site.



### ***Strategy 1. Controlled Access to the Site***

Access to Bikini Atoll is restricted to recreation and tourism visitors, and to scientific survey teams. All people wishing to visit Bikini by aircraft must obtain prior permission. All vessels wishing to enter Bikini Atoll must obtain prior permission from the KBE Local Government through the permitting procedure. Yachts and boats may visit Bikini (with a permit) but, if diving, must be accompanied by a diver and an observer in the employ of the Kili-Bikini-Ejit Local Government.

<b><i>Key Actions</i></b>	<b><i>Timing</i></b>	<b><i>Responsibility</i></b>	<b><i>Partners and Additional Resources Required</i></b>
Document and formalize permitting procedure for access to Bikini Atoll.	Jun 2009	Jack Niedenthal	-

### ***Strategy 2. Visitor Management***

The visitor experience of Bikini is very closely managed due to the remoteness of the atoll, controlled access to the site, the depth of the dives and the need to protect the ships and artifacts. Visitors to Bikini can expect an amazing experience due not only to the spectacular location and activities, but the professionalism and hospitality of the Bikini Atoll staff, and the comfortable facilities on offer.

Bikini Atoll has been open to tourists since 1996 and is considered one of the World's premier dive destinations. Visitors to Bikini Atoll generally come as part of the dive tourism program run by Bikini Atoll Divers, a business owned by the Kili-Bikini-Ejit Local Government. To date, tourism on Bikini has mainly been focused on the sunken vessels which are considered one of the premier SCUBA diving experiences in the world (see <http://www.bikiniatoll.com/divetour2.html> for articles, reviews and testimonials of the tourism-diving experience of Bikini Atoll). While the vessels sunk during Operation Crossroads in 1946, are the premier attraction, there is also the opportunity to go sport fishing and to dive or snorkel some of the beautiful coral reef, or to walk on and explore some of the islands.

The current and expected future levels of tourism to Bikini Atoll remain very low, mainly due to the relative inaccessibility of the atoll and the associated high costs. A restricted number of divers visit the site each year for diving the wrecks of the sunken ships. To date this has been a maximum of 12 per week during the dive season from March to November, a total of between 200 and 250 per year. In the future, depending on transport options to Bikini, the number may expand to around 20 visitors per week, or 400 per year.

Unfortunately 2008 has seen the temporary closure of the Bikini Atoll Divers operation due to the unreliable nature of Air Marshall Islands, the national airline servicing Bikini. The failure of the airline to fly scheduled routes throughout 2007 and 2008 left visitors to Bikini Atoll stranded for weeks at a time. During the 2008 season Bikini Atoll Divers and the KBE Local Government made the difficult decision to cancel the remainder of the season and to close the dive operation for 2009 and 2010.

The facilities described below are maintained on Bikini until the dive operation can resume.

#### **DIVING FACILITIES**

A typical visit to Bikini over a week includes 12 deep decompression dives—these are dives that are below normal recreational diving limits and require the use of staged decompression stops prior to surfacing. Facilities for divers include tanks, two dive boats, a tank filling station for both air and nitrox (decompression gas), oxygen generation equipment, dive equipment repair shop. Decompression stops are facilitated by a decompression station that is hung from the dive boat.

## **ACCOMMODATION AND DINING**

Visitors to Bikini sleep in private, air-conditioned comfort with 24 hour power and hot running water, right on one of the most beautiful beaches in the Pacific. A dining hall provides an "all you can eat" buffet style selection for breakfast, lunch and dinner.

## **INTERPRETATION AND EXPLANATION DURING THE VISIT**

Over the course of the week's dive tour historical documentary films are shown, complete briefings about each of the ships and their respective histories are given, and there is a tour of the island and the atoll. The Bikinians feel this to be important because this allows their story to be taken away by tourists and retold to their families and friends. In short, the tourism program helps perpetuate a story the islanders want the world to remember. Before each dive the divemasters give a full briefing about the vessel's history and unique characteristics, and a comprehensive dive plan.

## **VISITING YACHTS AND PRIVATE VESSELS**

Yachts and Private Vessels may visit Bikini, as long as they meet requirements for safety and being able to manage decompression diving. The conditions of this visit are that they are accompanied by a diver and by an observer affiliated with the KBE Local Government to ensure there is no damage to or removal of artifacts.

### ***Strategy 3. Regulations, Surveillance and Enforcement***

Access to Bikini is restricted to recreation and tourism visitors, and to scientific survey teams. All people wishing to visit Bikini by aircraft must obtain prior permission from the Kili-Bikini-Ejit Local Government through an established permitting procedure.

Divers on the sunken vessels must be accompanied by a diver employed by Bikini. Divers that visit Bikini are usually very experienced and well-certified to dive on, and to penetrate, the sunken vessels without causing damage. Divers are required to sign waivers and are prohibited from removing artifacts from the ships. This may be enforced by bag checks upon departure. Yachts are able to visit Bikini but must gain permissions from Bikini Atoll Local Government, and are not permitted to dive the wrecks unless accompanied by a diver employed by Bikini.

Nationally, licensed fishing boats are required to be part of the Vessel Monitoring System (VMS), which allows the Marshall Islands Marine Resources Authority (MIMRA) to track the position of vessels and if they are found within 12 nautical miles of any atoll, to pass this information on to the Sea Patrol operation (an arm of the Marshall Islands Police) and support apprehension and prosecution for any illegal fishing.

When the dive operation is running on Bikini, staff there can observe unauthorized vessels in or near the lagoon. They can then approach the vessel using one of the boats on Bikini Atoll and collect evidence, such as photos, to support prosecution. They can radio the Marshall Islands Sea Patrol to pursue the unauthorized vessel. Bikini Atoll has successfully pursued one prosecution of unauthorized shark finning in 2002.

All of these protective measures are more difficult to implement when the regular dive operation is not running. An option is being developed to install a radar system at the western end of the atoll to notify staff on Bikini Island of any unauthorized vessel in the vicinity, which can then be reported to Sea Patrol who can then pursue and prosecute.

### ***Strategy 4. Impact Assessment of Proposed Developments on Bikini***

Features of Bikini Atoll that contribute to the overall character of an abandoned nuclear test site include the rows of coconut trees and the generally low level of buildings and construction. There is a need to assess any proposed demolition, construction, land-clearing, earthmoving or similar activity in light of its impact on the attributes of Bikini Atoll as a former nuclear test site. There are established permitting requirements for this that assess the impact of a development against impacts on environmental and heritage resources. Any



earthmoving or construction activity must gain a permit from the Republic of the Marshall Islands Environmental Protection Authority (RMIEPA) and from the Historic Preservation Office (HPO). In addition to this, the Bikini Atoll Conservation Management Board must consider any proposal to carry out works on Bikini in light of the effects the work may have on the outstanding universal value of the site. In this respect they shall also seek advice from ICOMOS and the World Heritage Centre, and from other international experts.

<b>Key Actions</b>	<b>Timing</b>	<b>Responsibility</b>	<b>Partners and Additional Resources Required</b>
Ensure proper assessment of any proposed works on Bikini including consultation with international experts and ICOMOS.	Ongoing	Chair, Bikini Atoll Conservation Management Board	Access to international experts will be required.

### ***Strategy 5. Interpretation, Education and Awareness***

Education and awareness about Bikini is to be designed for three key target audiences. The first is the people of the Marshall Islands and the people of Bikini Atoll living on Kili, Majuro and elsewhere. The second is foreign visitors and tourists to Bikini and the Marshall Islands. The third is more generally people around world. Several programs are under development that will contribute greatly to the transmission of the World Heritage values of Bikini Atoll including the following:

#### **BIKINI ATOLL WEBSITE**

The official website of Bikini Atoll <http://www.bikiniatoll.com/> has been developed and maintained by Jack Niedenthal since 1997 (the longest running website involving the Marshall Islands) and contains a wealth of information about Bikini Atoll. This website will continue to be developed to incorporate more information about the World Heritage values of Bikini, and to present them to a global audience.

#### **ON-SITE INTERPRETATION**

Bikini Atoll will continue to deliver and develop its on-site interpretation program for visitors, as described in *Strategy 2. Visitor Management*, above. This will be done with the assistance of international experts in submerged heritage.

#### **ENVIRONMENT AND HERITAGE YOUTH THEATRE PROJECT**

Youth to Youth in Health (Y2Y) is a community-based NGO that supports at-risk youth to develop and deliver peer-to-peer education programs. Y2Y specialize in using the medium of theatre and music to positively impact young people's lives by exploring issues such as sexual health, alcohol and drugs, and family life. Inspired by the World Heritage project and other conservation activities in the Marshalls, Y2Y propose to develop a theatre program that focuses specifically on the issues of natural and cultural heritage of the Marshall Islands, starting with the nuclear heritage of Bikini Atoll as a proposed World Heritage site, and the natural and cultural values of Ailinginae Atoll. While a proposal has been developed, the project needs substantial technical assistance and funding to become established.

#### **MARSHALL ISLANDS PEACE MUSEUM**

A project is currently under development as a partnership between the Marshall Islands government and interested parties in Japan to establish a Peace Museum in Majuro, commemorating the nuclear history of the Marshall Islands, with the intention of promoting peace throughout the world. The Peace Museum will include exhibits on nuclear tests in the Marshalls and the impacts on the Marshallese people, including the events and people of Bikini Atoll.

<b>Key Actions</b>	<b>Timing</b>	<b>Responsibility</b>	<b>Partners and Additional Resources Required</b>
Maintain and upgrade Bikini Atoll website to present material on Bikini's proposed World Heritage values	Dec 2010	Jack Niedenthal	Consider support from a web-design and/or heritage management faculty as a graduate project.
Upgrade interpretive materials on the sunken vessels and other site to enhance visitor experience	Dec 2010	Jack Niedenthal	Partnership with Charles Beeker at Indiana University
Establishment of Environment and Heritage Youth Theatre Program	Dec 2010	Youth to Youth in Health	Dependent on recruitment of theatre professional and raising \$250k.
Development of exhibit for proposed Peace Museum in Majuro	Dec 2010	Peace Museum	In partnership with experts helping to establish the Peace Museum

## **Strategy 6. Research and Monitoring**

### **SCIENTIFIC STUDY, MONITORING AND INTERPRETATION OF CULTURAL HERITAGE RESOURCES**

The most recent archeological assessment carried out 1991 (Delgado et al., 1991) by the US National Parks Service revealed the historical and archaeological significance of the artifacts at Bikini Atoll, and led to the development of interpretation materials and the opening of Bikini Atoll to dive tourism. There is a need to develop partnerships with universities and research institutions to enable the ongoing identification and characterization of the cultural heritage resources at Bikini.

Bikini Atoll is in the early stages of developing a program in partnership with maritime archaeologists and conservation scientists at the Institute of Nautical Archaeology, James Cook University, and at the Western Australian Maritime Museum. This program will conduct a baseline assessment of the state of conservation of the vessels and buildings, and develop a protocol and indicators for a regular assessment of the state of conservation of these artifacts. Local staff divers of Bikini Atoll will be trained in how to conduct a regular state of conservation assessment. The monitoring protocol will likely involve taking photographs at fixed monitoring points and comparing these photographs over the years. A partnership with Charles Beeker's Underwater Science group at Indiana University is also being developed which will lead to the development of interpretation materials for the site. These partners will help to develop the funding and expert resources required to carry out these activities.

### **SCIENTIFIC STUDY AND MONITORING OF MARINE ENVIRONMENT**

Bikini Atoll provides as unique opportunity to study the recovery of a coral reef system, and a terrestrial system, after the major disturbance of nuclear testing and persistent radiation. Scientific study and monitoring of Bikini Atoll will allow increased understanding of the ecosystem and processes of Bikini, and therefore of other atolls and coral reef systems. It will enable the study of the impacts of climate change and other remote impacts on coral reef systems in the absence of pollution and over-harvesting of resources. A scientific program should be managed in a way that that benefits the people of the Marshall Islands.

Partnerships with scientific research organizations are to be sought and established to enable long-term monitoring of the condition and biodiversity of the site. Zoe Richards of James Cook University, Maria Beger from the University of Queensland and Silvia Pinca of the Secretariat of the Pacific Community form a core of marine biologists who have carried out biological resources assessments on several atolls in the Marshall Islands, and who have made recommendations for the conservation management of these sites.

A team of scientists (including the three mentioned above) carried out a baseline survey of the marine environment Bikini Atoll in 2002, establishing a set of indicators for monitoring the state of conservation of the marine environment. These indicators include:

- Coral and fish biodiversity: presence/absence and semi-qualitative abundance in timed swims
- Algae diversity and abundance
- Percent cover of substrate, coral and algae
- Reef health including counts of *Acanthaster planci* (crown-of-thorn starfish), dead and bleached coral
- Counts of target species of invertebrates
- Fish size and abundance of commercially and ecologically important species.

While the survey established a baseline in 2002, there is no ongoing program of monitoring due to lack of available resources, however, with recent interest in a scientific paper on Bikini in 2008, (Richards et al. 2008) it is expected that more resources will become available for research and monitoring on Bikini. There is a need to carry out baseline assessment of avifauna and vegetation on the island and to develop monitoring indicators.

<b>Key Actions</b>	<b>Timing</b>	<b>Responsibility</b>	<b>Partners and Additional Resources Required</b>
Carry out baseline assessment of state of conservation of artifacts	Dec 2010	Jack Niedenthal	James Cook University and Western Australian Maritime Museum
Develop interpretation materials for the sunken vessels	Dec 2010	Jack Niedenthal	Charles Beeker at Indiana University
Continuation of partnership with marine scientists to carry out monitoring of biodiversity on Bikini Atoll.	Ongoing	Jack Niedenthal	Experts from various international research institutions, MIMRA and the College of the Marshall Islands.

## 2.3 Management, Administration and Reporting

### *Roles and Responsibilities*

#### **KILI-BIKINI-EJIT LOCAL GOVERNMENT**

Kili-Bikini-Ejit (KBE) Local Government is the elected local government for the community of Bikini, now living on Ejit Islet in Majuro and on Kili Island. The Bikini Atoll Local Government is responsible for the management of the site.

#### **BIKINI ATOLL CONSERVATION MANAGEMENT BOARD**

Under this management plan, The Bikini Atoll Conservation Management Board (BACMB) will be established under the auspices of the KBE Local Government, and will meet at least every three months. The Bikini Atoll Conservation Management Board membership will consist of:

- The Mayor, the Senator and the Executive Committee of the Kili/Bikini/Ejit Local Government Council;
- Bikini Liaison Officer;
- Bikini Tourism Representative/Bikini Atoll Conservation Manager;
- Resort Manager of the Bikini Atoll Tourism Operation (when in operation);
- Bikini Project Manager or his/her representative;
- Traditional leader representative from Bikini Atoll;
- Youth representative;
- Women's representative; and

- Member to be appointed by the RMI Historical Preservation Office.

The role of the Management Board is to:

- Carry out management planning;
- Recommend rules, regulations and procedures;
- Ensure the effective implementation of the Bikini Atoll Conservation Management Plan.

### **EXPERT HERITAGE ADVISORS**

International experts in marine archaeology or cold war heritage and conservation will be recruited to provide advice on an as-needs basis, either on a volunteer basis or with the support of their institutions. It is expected that this pool of experts will include individuals with an established knowledge of Bikini, such as James P. Delgado (maritime archaeologist), Jeffrey Sasha Davis (cultural geographer), Anita Smith (archaeologist) as well as experts established in their fields such as Charles Beeker of Indiana University, Vickie Williams of the Western Australian Maritime Museum and William Jeffery of James Cook University, as discussed earlier.

The role of the Expert Heritage Advisor/s will be to:

- Advise on conservation actions for the artifacts;
- Assist in developing proposals and grant applications for the ongoing study and interpretation of the site;
- Carry out assessments and assist in the development of interpretation materials; and
- Advise on the impact of proposed developments on Bikini—whether they will affect the heritage values.

### **CONSERVATION PROJECT MANAGER**

The Conservation Project Manager will be based in Majuro with regular visits to Bikini to work with conservation officers there. The Conservation Project Manager role is not expected to be full-time, but could be combined with an existing role under the KBE Local Government. The role of the Conservation Project Manager will be to:

- Work with stakeholders at local, national and international level to implement the Bikini Atoll Conservation Management Plan;
- Develop partnerships, funding sources for implementation of the Bikini Atoll Conservation Management Plan;
- Oversee day-to-day management of the conservation area: develop work plans, ensure staff carry out the activities stated in their job descriptions and work plans;
- Conduct regular education and awareness, community consultations;
- Identify training and capacity-building needs for staff and ensure staff receive this training;
- Provide reports to meet the requirements of donors and grant contracts;
- Monitor the implementation of the plan and adapt the management of the site as appropriate.

### **BIKINI ATOLL DIVERS**

Bikini Atoll Divers is the dive operation owned by the KBE Local Government. The staff of Bikini Atoll Divers will play an active role in the day-to-day management, monitoring and surveillance of the site. They will also be trained to conduct monitoring of the state of conservation of the sunken vessels and buildings.

### *Location*

The Majuro-based staff will be located in the KBE Local Government Offices. The Bikini-based staff will be located at the dive tourism facilities on Bikini Island.

### *Key Equipment and Materials*

The dive operation on Bikini Atoll is equipped with two boats for dive tourism. These boats will be used also for the surveillance of the atoll in the case that an unauthorized vessel is in the vicinity. Due to the distance from Bikini Island on the eastern side of the atoll where the operations are based, and the uninhabited western side of the atoll, it is not possible to visually see unauthorized vessels. It is intended to install a radar-based remote surveillance system which would transmit a signal to a station at Bikini Island. It is expected that a basic installation will cost of the order of \$100,000.

### *Marshall Islands and the implementation of the World Heritage Convention*

In general the Marshall Islands, as a small island developing state, has very limited technical capacity. To compound this, the Marshall Islands is party to various international conventions, due in large part to the efforts of these conventions to include small island developing states and so limited resources are further stretched in order to meet the considerable obligations of such conventions. The management, interpretation, presentation and conservation of Bikini Atoll will require ongoing support and assistance from the World Heritage Centre, the Advisory Bodies and other state parties to the convention.

### *Periodic Reporting to the World Heritage Centre*

In the case that Bikini is included on the World Heritage List, periodic reporting to the World Heritage Centre will be required. Monitoring and reporting on the state of conservation of the property will be the responsibility of the Kili-Bikini-Ejit Local Government and reporting on general issues of implementation of the convention will be the responsibility of the focal point of the convention, which at this time is the Alele Museum. Both responsible agencies are likely to require assistance and support from the World Heritage Centre and the Advisory Bodies in the preparation of periodic reports.

# Appendices:

## A.1 Selected References

- Delgado, J.P., Lenihan, D.J., & Murphy, L.F. (1991). *The Archaeology of the Atomic Bomb: A Submerged Cultural Resources Assessment of the Sunken Fleet of Operation Crossroads at Bikini and Kwajalein Atoll Lagoons, Republic of the Marshall Islands*. Santa Fe, N.M.: US Department of the Interior, National Park Service, Submerged Cultural Resources Unit. Note: an online version can be found at [http://www.nps.gov/history/history/online\\_books/swcrc/37/contents.htm](http://www.nps.gov/history/history/online_books/swcrc/37/contents.htm)
- Fosberg, F. Raymond. 1988. Vegetation of Bikini Atoll, 1985. *Atoll Research Bulletin* 315: 1-28. National Museum of Natural History, The Smithsonian Institution: Washington, D.C.
- Pinca, S., Beger, M., Richards, Z., and Peterson, E. 2002. Coral Reef Biodiversity Community-based Assessment and Conservation Planning in the Marshall Islands: Baseline surveys, capacity building and natural protection and management of coral reefs of the atolls of Bikini and Rongelap. Report to the Rongelap Government, Republic of the Marshall Islands.
- Reimaanlok National Planning Team. 2008. *Reimaanlok: National Conservation Area Plan for the Marshall Islands*. N. Baker: Melbourne.
- Richards, Z. T., M. Beger, S. Pinca, and C. C. Wallace. (2008). Bikini Atoll coral biodiversity resilience revealed; five decades after nuclear testing. *Marine Pollution Bulletin*. 56, 503-515.
- Vander Velde, Nancy and Brian Vander Velde. 2003. *A Review of the Birds of Bikini Atoll, Marshall Islands with Recent Observations*. Unpublished report for Bikini Atoll Local Government: Majuro.

## A.2 Existing Local Government Ordinances

**Marine Resource Ordinance** (Dated July 28, 1997): Ordinance passed in 1997 with the object of conserving the marine and wildlife resources of Bikini Atoll. **Attached.**

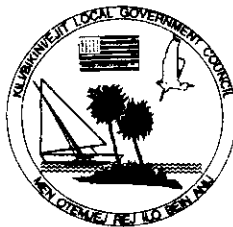
**Ordinance No. 14-1988** (October 8, 1988): Ordinance to prevent unauthorized diving in Bikini Atoll lagoon and to prevent removal of artifacts from ships. This ordinance was created soon after the ships were made the property of the Bikinians under Section 177 of the Compact of Free Association in 1986. **Attached.**

**Ordinance No. 2-1996** (May 30, 1996): Ordinance to prevent unauthorized diving in Bikini Atoll lagoon and to prevent removal of artifacts from ships. This ordinance was developed soon after the establishment of a commercial dive operation on Bikini Atoll and required that all divers be supervised by the authorized dive operation. **Attached.**

**Ordinance No. 2-2010** (January 21, 2010): Ordinance that combines and updates all of the above Ordinances (Marine Resource Ordinance, Ordinance No. 14-1988 and Ordinance 2-1996). **Attached.**

**Liability Release Form and Express Assumption of Risk for Diving at Bikini Atoll:** All tourist divers at Bikini are required to sign a liability release form that also informs them of the rules regarding removal of artifacts. During times when the dive operation is active, each diver is required to sign this form. Visiting yachts are required to sign this form also. **Attached.**

*Special thanks to Nicole Baker for preparing this plan.*



**KILI/BIKINI/EJIT  
LOCAL GOVERNMENT COUNCIL**

Tomaki Juda  
Mayor

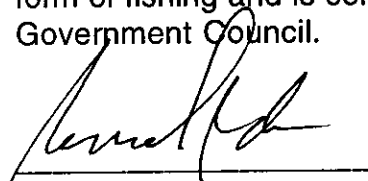
July 30, 1997

P.O. Box 3007  
Majuro, MH 96960  
Telephone 011 692 625 3177  
Fax 011 692 625 3330

To Whom It May Concern:

The following regulations were passed by the Kili/Bikini/Ejit Local Government Council on July 28, 1997 regarding our marine resources on Bikini Atoll:

- 1) No gill-nets shall be used in any part of the atoll, both lagoon and oceanside.
- 2) Throw-nets or fishing rods shall be the sole method of gathering fish.
- 3) No commercial fishing is permitted within the 12 nautical miles claimed by the Kili/Bikini/Ejit Local Government Council Constitution: This includes dynamite, cyanide, drift-net or any form of shark fishing.
- 4) Important sports-fish species such as trevally and bonefish are protected: These species shall be released alive and unharmed unless a potential world record or other circumstances dictates such to be unwise.
- 5) All wildlife on and around islands between Bikini, Aoemen and Eneu shall be protected: This includes all birds and nesting turtles and their eggs.
- 6) All turtles are protected and shall not be taken unless there is written authorization from the Mayor.
- 7) All natural resources not mentioned in these regulations on and around the atoll shall be preserved in such a way that they are not exploited.
- 8) The quadrants encompassed by the following longitudes and latitudes, 165° 30' E longitude, 11° 35' N latitude, the area of the buoyed ships, shall be protected from any form of fishing and is considered a marine sanctuary by the Kili/Bikini/Ejit Local Government Council.

  
\_\_\_\_\_  
Mayor Tomaki Juda



### **Protected Fishes at Bikini Atoll**

ALL Bonefish shall be released IMMEDIATELY.

ALL Trevally of any species shall be released if caught within 300 yards of any land structure, or of any reef flats surrounding land.

NO "snappers" can be taken off any reef flats (reef on ocean side of islands and at either end)

A MINIMUM SIZE of 12 INCHES applies to ALL species of fish roughly classed as

"GROUPERS" and "SNAPPERS". Fish smaller than this must be released, and if the hook has been swallowed then the line should be cut as close to the hook as possible to aid survival. DO NOT try to cut or pull out a swallowed hook as it may kill the fish. A fish hook is inexpensive to lose, and you CANNOT keep these fish even if they die!

The use of BARBLESS hooks (Barb squashed down with pliers) aids in releasing fish easily upon capture, and does not significantly reduce the catch rate!

No fish or lobsters can be taken with spears, Hawaiian slings etc.

This does not mean that you cannot catch these fish, it just means that they must be released so that somebody else can also catch that fish later on. The reason for these regulations is to maintain the great fishing we have here for future guests to these islands, and all regulations are very, very reasonable to anyone who has lived in USA or elsewhere in the developed world.

### **Rules for lobster.**

The only method allowed for taking lobster is by hand. NO lobsters can be taken with spears.

ALL female lobsters with eggs shall be immediately released unharmed.

The minimum size for lobsters should be 14 inches from eyes to tip of tail, or about 1 ½-2 lbs.

The lobster caught here should be for local consumption, and definitely not for sale in Majuro.

### **Rules for Birds**

No "Frigate Birds" or "Hawks" shall be taken for consumption, or sent to Majuro.

No birds will be sent to Majuro without written permission from the Bikini Council.

Bird "harvesting" shall be LIMITED to 1 bird per person, with an ABSOLUTE MAXIMUM of 10 birds per party

NO adult birds will be taken.

Only one harvest of birds every 6 months.

Birds can only be taken from the "Bird Islands", and are completely protected on all islands from and including Enue over to Aoemen, where NO birds shall be taken.

These rules are to reduce the over-exploitation of these animals, and will help to make it possible to take SOME of these animals EVERY year without severely disturbing the population numbers. It is called a SUSTAINABLE HARVEST, and is a widely adopted attitude around the world. This way neither side "suffers".

All regulations were passed by the Kili/Bikini/Ejit Council on July 28, 1997.

Thank you for your co-operation

KILI/BIKINI/EJIT LOCAL COUNCIL

KILI/BIKINI/EJIT LOCAL GOVERNMENT ORDINANCE NO. 14-1988

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Ordinance No. 14-1988 has been created by the Kili/Bikini/Ejit Local Council for Bikini Atoll:

Section 1.

Title:

**This is an ordinance to prevent recreational diving within the Bikini Atoll lagoon in general and specifically on the ships, cables and any other nuclear weapons testing artifacts on the bottom of the Bikini Atoll lagoon.**

Section 2.

Purpose for Ordinance:

- 1. Unauthorized vessels have been sighted within the confines of Bikini Atoll lagoon.**
- 2. Persons diving on the ships and cables in the lagoon had not retained the correct permits and legal waivers to do so.**
- 3. Diving on the ships of Bikini lagoon remains dangerous due to the unexploded war ordnance still on and around the ships. Artifacts, that are the property of the Bikini Atoll Local Government according to the Compact of Free Association, have been pilfered from the ships by these divers.**

Section 3.

Measures to be taken to correct situation:

1. **No vessel is permitted to enter the lagoon of Bikini Atoll without obtaining first the official permits and legal waiver forms from the KBE Local Government Office.**
2. **No person/persons are permitted to dive within the confines of Bikini Atoll lagoon without obtaining first the official permits and legal waiver forms from the KBE Local Government Office.**

Section 4.

Result if ordinance 14-1988 is defied:

1. **The cost of a diving permit is \$ 125.00 per day/per vessel and can be obtained at the KBE Local Government office along with necessary legal waiver forms and entry permits for the Bikini Atoll lagoon.**
2. **Any person/persons convicted of diving within the confines of Bikini Atoll Lagoon without permission shall be subject to a fine of \$ 2,000.00 or subject to a six month jail term.**
3. **Any person convicted of taking any object from the bottom of the Bikini Atoll lagoon, whether natural or related to the testing of nuclear weapons, shall be fined \$ 5,000.00 per object or subject to a six month jail term.**
4. **Unauthorized vessels entering Bikini Atoll lagoon will be confiscated by the KBE Local Government.**

Section 5.

Effective Date:

1. **After being passed and approved by the Kili/Bikini/Ejit Local Council this ordinance will become effective:**

Date introduced: 10/8/88

Dated Public Hearing: 10/8/88

Approved: \* /s/  
Tomaki Juda, Mayor                      Date  
Kili/Bikini/Ejit Local Council

Witness: \* /s/  
Andy Bill, Clerk                      Date  
Kili/Bikini/Ejit Local Council

\* (See attached for signatures on Marshallese version).

KILI/BIKINI/EJIT LOCAL COUNCIL

KILI/BIKINI/EJIT LOCAL GOVERNMENT ORDINANCE NO. <sup>14</sup>~~12~~

Ordinance No. <sup>14</sup>~~12~~ ej kio ejak jen Kili/Bikini/Ejit Council einwot in,

Section 1.

Title:

Juon kien nan kamo tulok im jibwe jabrewot men ko ilo wa im cables ko ilo maloan Bikini Atoll.

Section 2.

Kin Un Kein:

1. Elon ro rej lo ir ilo maloan Bikini.
2. Elon ro rej ilok ilo an ejelok permit.
3. Elon ro rej ilok im tuloki wa ko kab cable eo.

Section 3.

Bwe en jimwe im Emonlok:

1. Jabrewot armij ejab melim aer lolok Bikini ilo an ejelok melim ko jen Office eo an KBE Local Government.
2. Jabrewot armij ejab melim aer tuloki wa ko im cable ko ne ejelok aer melim jen Office eo an KBE Local Government.

Section 4.

Non jab Bokake:

1. Jabrewot eo enaj ilok im tuloki wa ko ej aikuuj wor an permit jen Office eo an KBE Local Government kin jonan in \$125.00
2. Jabrewot eo enaj ilok im tulok ilo an ejelok an permit en ilok kaje nan e kin jonan in \$2,000.00 dollars fine 6 alling kalbuij.
3. Jabrewot eo ejelok an permit ak ej ebok jabrewot jen Wa ko inem ej aikuuj fine \$ 5,000.00 ak 6 alling kalbuij.

4. UNAUTHORIZED VESSELS WILL BE CONFISCATED BY KBE LOCAL GOVERNMENT  
Date Introduced: 10/8/88

Date Public Hearing: 10/8/88

Kamol:

Tomaki Juda  
Tomaki Juda, Mayor  
Kili/Bikini/Ejit  
Local Council

10/8/88  
Ran

Iman Meja:

Andy Bill  
Andy Bill, Clerk  
Kili/Bikini/Ejit  
Local Council

10/8/88  
Ran

KILI/BIKINI/EJIT LOCAL COUNCIL

KILI/BIKINI/EJIT LOCAL GOVERNMENT ORDINANCE NO. 14-1988

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Purpose for Ordinance:

- 1. Unauthorized vessels have been sighted within the confines of Bikini Atoll lagoon.**
- 2. Persons diving on the ships and cables in the lagoon had not retained the correct permits and legal waivers to do so.**
- 3. Diving on the ships of Bikini lagoon remains dangerous due to the unexploded war ordnance still on and around the ships. Artifacts, that are the property of the Bikini Atoll Local Government according to the Compact of Free Association, have been pilfered from the ships by these divers.**

Section 3.

Measures to be taken to correct situation:

1. **No vessel is permitted to enter the lagoon of Bikini Atoll without obtaining first the official permits and legal waiver forms from the KBE Local Government Office.**
2. **No person/persons are permitted to dive within the confines of Bikini Atoll lagoon without obtaining first the official permits and legal waiver forms from the KBE Local Government Office.**

Section 4.

Result if ordinance 14-1988 is defied:

1. **The cost of a diving permit is \$ 125.00 per day/per vessel and can be obtained at the KBE Local Government office along with necessary legal waiver forms and entry permits for the Bikini Atoll lagoon.**
2. **Any person/persons convicted of diving within the confines of Bikini Atoll Lagoon without permission shall be subject to a fine of \$ 2,000.00 or subject to a six month jail term.**
3. **Any person convicted of taking any object from the bottom of the Bikini Atoll lagoon, whether natural or related to the testing of nuclear weapons, shall be fined \$ 5,000.00 per object or subject to a six month jail term.**
4. **Unauthorized vessels entering Bikini Atoll lagoon will be confiscated by the KBE Local Government.**

Section 5.

Effective Date:

1. **After being passed and approved by the Kili/Bikini/Ejit Local Council this ordinance will become effective:**

Date introduced: 10/8/88

Dated Public Hearing: 10/8/88

Approved: \* /s/  
Tomaki Juda, Mayor                      Date  
Kili/Bikini/Ejit Local Council

Witness: \* /s/  
Andy Bill, Clerk                      Date  
Kili/Bikini/Ejit Local Council

\* (See attached for signatures on Marshallese version).



KILI/BIKINI/EJIT LOCAL COUNCIL

KILI/BIKINI/EJIT LOCAL GOVERNMENT ORDINANCE NO. <sup>14</sup>~~12~~

Ordinance No. <sup>14</sup>~~12~~ ej kio ejak jen Kili/Bikini/Ejit Council einwot in,

Section 1.

Title:

Juon kien nan kamo tulok im jibwe jabrewot men ko ilo wa im cables ko ilo maloan Bikini Atoll.

Section 2.

Kin Un Kein:

1. Elon ro rej lo ir ilo maloan Bikini.
2. Elon ro rej ilok ilo an ejelok permit.
3. Elon ro rej ilok im tuloki wa ko kab cable eo.

Section 3.

Bwe en jimwe im Emonlok:

1. Jabrewot armij ejab melim aer lolok Bikini ilo an ejelok melim ko jen Office eo an KBE Local Government.
2. Jabrewot armij ejab melim aer tuloki wa ko im cable ko ne ejelok aer melim jen Office eo an KBE Local Government.

Section 4.

Non jab Bokake:

1. Jabrewot eo enaj ilok im tuloki wa ko ej aikuuj wor an permit jen Office eo an KBE Local Government kin jonan in \$125.00
2. Jabrewot eo enaj ilok im tulok ilo an ejelok an permit en ilok kaje nan e kin jonan in \$2,000.00 dollars fine 6 alling kalbuij.
3. Jabrewot eo ejelok an permit ak ej ebok jabrewot jen Wa ko inem ej aikuuj fine \$ 5,000.00 ak 6 alling kalbuij.

4. UNAUTHORIZED VESSELS WILL BE CONFISCATED BY KBE LOCAL GOVERNMENT  
Date Introduced: 10/8/88

Date Public Hearing: 10/8/88

Kamol:

Tomaki Juda  
Tomaki Juda, Mayor  
Kili/Bikini/Ejit  
Local Council

10/8/88  
Ran

Iman Meja:

Andy Bill  
Andy Bill, Clerk  
Kili/Bikini/Ejit  
Local Council

10/8/88  
Ran

**ORDINANCE NUMBER 2010 - 02**  
**OF THE KILI/BIKINI/EJIT LOCAL GOVERNMENT COUNCIL**

WHEREAS, the people of Bikini Atoll and their governing body, the Kili/Bikini/Ejit Local Government Council ("Council"), wish to establish our homeland as a World Heritage site to retain and conserve for future generations whose remnants of the nuclear testing era currently present on Bikini Atoll; and

WHEREAS, in order to further the conservation and management of Bikini Atoll as a World Heritage site, the Council has adopted a "Conservation and Management Plan for Bikini Atoll;" and

WHEREAS, as part of the "Conservation and Management Plan for Bikini Atoll," the Council wishes to consolidate and bring up to date its rules, regulations, surveillance and enforcement measurements concerning access to Bikini Atoll, diving, and marine resources;

NOW, THEREFORE, be it resolved that:

1. Access to Bikini is restricted to recreation and tourism visitors and to scientific survey teams.
2. All people wishing to visit Bikini Atoll by aircraft must obtain prior written permission from the Kili-Bikini-Ejit Local Government.
3. Divers on the sunken vessels at Bikini Atoll lagoon must be accompanied by a diver employed by the Council or under contract to the Council.
4. No vessel is permitted to enter Bikini Atoll lagoon without first obtaining official permits and legal waiver forms from the Council.
5. No person is permitted to dive within the confines of Bikini Atoll lagoon without first obtaining official permits, liability release, waiver, express assumption of risk, and other relevant legal forms from the Council.
6. It is unlawful for any person to take any object from the water of Bikini Atoll lagoon (except fish), whether natural or manmade. This section specifically makes it unlawful for any person to take any object whatsoever off of any sunken vessel in Bikini Atoll lagoon.
7. Any person intending to dive at Bikini Atoll lagoon is hereby put on notice that his/her luggage will be searched prior to departure from Bikini Atoll in order to ensure compliance with Section 6, above.
8. Any person who violates Section 6, above, shall be fined \$5,000.00 per object and/or be subject to a maximum imprisonment of six months in prison in the Marshall Islands.
9. Any vessel carrying diver(s) in Bikini Atoll lagoon who have failed to comply with the terms of Sections 3, 4, and/or 5, above, shall be subject to confiscation by the Council.
10. No vessel may engage in any fishing operation of any kind within 12 miles of Bikini Atoll without express written permission from the Council. This includes dynamite, cyanide, drift-net or any form of shark fishing.

11. Except as provided in paragraph 12, below, any individual, corporation or other entity found to be in violation of Section 10, above, shall be subject to fine of \$50,000 per day for each violation.
12. Any individual, corporation or other entity found to be in violation of Section 10, above, in the course of fishing for sharks of any kind shall be subject to fine of \$75,000 per day for each violation.
13. No grill-nets shall be used in any part of Bikini Atoll, both lagoon and oceanside.
14. Throw-nets or fishing rods shall be the sole method of gathering fish at Bikini Atoll.
15. Sports-fish species such as trevally and bonefish shall be released alive and unharmed.
16. All wildlife on and around islands between Bikini, Aoemen and Eneu shall be protected. This includes all birds and nesting turtles and their eggs.
17. All turtles are protected and shall not be taken without prior permission from the Mayor.
18. All natural resources not mentioned in these regulations on and around Bikini Atoll shall be preserved in such a way that they are not exploited.
19. The quadrants encompassed by the following longitudes and latitudes, 165° 30'200 longitude, 11° 35'040 N latitude and 165° 30'937 longitude, 11° 35'734 N latitude, the area of the buoyed ships, shall be protected from any form of fishing and is considered a marine sanctuary by the Council.
20. The Council instructs the trust liaison for the People of Bikini to publish this ordinance in the Marshall Islands Journal, post it prominently in public areas in and around the Kili/Bikini/Ejit Local Government Council office, post it in public areas at Bikini Atoll, and provide a copy to the Office of the Attorney General of the Marshall Islands Government.

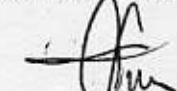
APPROVED by the Kili/Bikini/Ejit Local Government Council this 21 day of January, 2010 by:



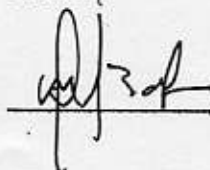
Alson Kelen, Mayor



Senator Tomaki Juda



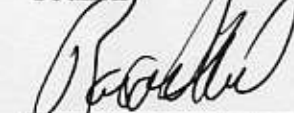
Council



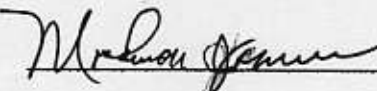

Clerk Frederick Aitap



Council



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