



GOVERNMENT OF KIRIBATI

**MINISTRY OF ENVIRONMENT, LANDS AND
AGRICULTURE DEVELOPMENT**

P.O. Box 234, Bikenibeu, Tarawa, Republic of Kiribati
Telephone Number: (686)28211, Fax Number: (686)28334

File Ref: PIPA 31/1

31 January, 2015

Mr. Kishore Rao
Director
World Heritage Centre
7, place de Fontenoy
75352 Paris 07 SP, France

Dear Sir,

Subject: State of conservation of Phoenix Islands Protected Area (Kiribati) (N 1325)

As required by the World Heritage Committee for Kiribati to submit a report regarding the state of conservation by the Phoenix Islands Protected Area inscribed in 2010 as a natural site (N 1325), please find attached the electronic copy of the report. I will also send the hard copy of the same report by DHL.

I would like to take this opportunity to thank the World Heritage Centre and all those who have been involved in arranging Kiribati participation in the world heritage conferences, related meetings, workshops, and field trips conducted in the past years. The most recent one conducted in Sydney on the IUCN World Congress held in November, 2014.

Please be assured Kiribati will continue to ensure PIPA's values and resources are conserved and protected.

Also, we do look forward for the support and cooperation by the World Heritage Centre regarding the needed resources Kiribati may lack to maintain PIPA's pristine environment.

Thank you.

Yours sincerely,

Tiimi Kaiekieki
Secretary for Environment, Lands and Agricultural Development.

THE STATE OF CONSERVATION OF THE PHOENIX ISLANDS PROTECTED AREA (Kiribati) (N 1325)

Executive Summary

This report on the State of Conservation of the Phoenix Islands Protected Area (PIPA) is prepared in response to the decisions adopted by the World Heritage Committee at its 36th session (Saint-Petersburg, 2012), on PIPA: Decision 36 COM 78.13 .

To comply with the reporting format, the first part of this report concerns with **KIRIBATI** response to the Committee's decision as above thus covers progress on the following:

- The PIPA trust fund being capitalized, its operation and disbursement.
- Financial Plan utilizing the trust to meet the core management costs.
- Extension of PIPA's no-take-zone.
- Establishment of no-take-zones protecting PIPA's outstanding universal values.
- Measures addressing illegal and overfishing of inshore and offshore fisheries, prevention of the degradation of seamounts, extension, surveillance and enforcement of no-take zones and establishment of long-term sustainable financing of the property's management system including the full capitalisation of the initial endowment of the Trust Fund for the property.

The second part of the report touches on other current conservation issues identified by Kiribati.

The third part of the report is basically in response to paragraph 172 on the Operational Guidelines concerning the major restorations, alterations and /or new constructions within PIPA.

1. KIRIBATI RESPONSE TO THE WORLD HERITAGE COMMITTEE'S DECISION, 36 COM, 7B.13 (paragraph by paragraph)

The Committee notes the essential importance of the establishment and full capitalisation of the Trust Fund to the long term conservation of the property, and requests the State Party, with the support of its partners, to: ensure the Trust Fund is fully capitalised, operational, and disbursing fund; provide a clear financial plan outlining funds to be allocated for core management needs, including the proportion to compensate the State Party for the loss in tuna fishing licences fees; enable the extension of no-take zones for the property no later than 2014;

a) *ensure the Trust Fund is fully capitalised, operational, and disbursing fund;*

PIPA is currently financed by GoK, CI and NEAq with additional partnership and resources obtained from a variety of government, multilateral and private agencies including the GEF.

A key component of PIPA's sustainable financing was the enactment by the Kiribati Parliament of the PIPA Conservation Trust Act 2009, also known as the Rawaki Act 2009. By the provision of this Act, the PIPA Trust Board was constituted in 2010 comprising representatives from the government of Kiribati, Conservation International and New England Aquarium. Pursuant to the provisions of this same Act, the PIPA Trust Board signed a Conservation Agreement (CA) with the government of Kiribati in April 2014. One of the key provisions of this CA is the need for the PIPA Trust to compensate the government of Kiribati for loss in fishing access fees as a result of the closure of PIPA to commercial fishing by DWFNs. However, the payment of such compensation is contingent upon the outcome of a study to be undertaken by a Tuna Working Group (TWG) – a body agreed by both parties to be established to assess the potential loss (if any) in fishing revenues accruing to Kiribati as a result of the closure of PIPA to commercial fishing. The group will monitor patterns and revenues from tuna fishing in Kiribati EEZ subsequent to the full and effective closure of PIPA and prepare an analytical report no later than five years after PIPA has been effectively closed to tuna fishing, documenting the impact of closure on revenues to Kiribati. The outcome of this TWG study will determine a mutually agreeable approach to calculating any estimated conservation fee (compensation) associated with PIPA's full closure.

Due to significant resourcing requirements associated with fully capitalizing the trust at a level that will immediately cover all associated costs of PIPA, the PIPA partners (Government of Kiribati, Conservation International and New England Aquarium) have teamed up to structure global financial support for the capitalisation of the endowment. To this end, the PIPA Trust Fundraising Framework was developed in 2011 which set out the various opportunities and strategies that the PIPA partners can explore and employ to increase PIPA's funding base and attract external funds for the capitalisation of the PIPA Trust Fund. The Framework will inform and guide fundraising activities. The overall goal of this fundraising campaign is to raise US\$25 million, with an interim target of US\$13.5 million by 2014, to capitalise the Trust.

To date, Conservation International and the Government of Kiribati have each contributed \$2.5 million to the endowment, so the trust has \$5 million as a starting base. These contributions, together with contributions from other donors, is being invested in an endowment fund managed by a qualified investment manager appointed by the PIPA Trust Board.

More recently, the Waitt Foundation and Oceans 5 Alliance have jointly agreed to provide a grant to the PIPA Conservation Trust of \$1 million per annum for 5 years (starting from January 2015) to support the implementation of the PIPA Management Plan by the Ministry of Environment, Lands and Agricultural Development (MELAD) through the PIPA Implementation Office (PIO). To this end, the Grant Agreement between the PIPA Conservation Trust and the grantee, the Ministry of Environment, Lands and Agricultural Development will be signed this month (January 2015) that governs the use of the grant and set out the general conditions as regards to the disbursements and reporting requirements, among others. The implementation of the first PIPA Management Plan 2011-2014 was financed by the GEF along with the GoK, CI and NEAq.

Partnerships and resources are being pursued with other governments including Taiwan, New Zealand, Australia, and from the Prince of Monaco Foundation.

Discussions are also underway with a range of potential donors and partners including the Governments of Japan, Korea, Commonwealth Secretariat, Nordic countries and European Union.

b) Provide a clear financial plan outlining funds to be allocated for core management needs, including the proportion to compensate the State Party for the loss in tuna fishing licences fees,

US \$1 million has been received by the PIPA Trust from the Waitt Foundation and Oceans 5. This is only the first payment of the already agreed pledge of these two organisations to provide a grant of \$1 million per year for 5 years to implement the PIPA Management Plan 2015-2020.

From this grant, the PIPA Conservation Trust (“Trust”) has approved a grant of \$854,596 USD to the grantee, the Ministry of Environment, Lands and Agricultural Development (MELAD). The purpose of the grant is restricted solely to finance PIPA’s core activities as per the approved Work Plan and Budget (**Table 1**) for the first year, 2015 only. Under no circumstances may grant funds be expended, borrowed, pledged or transferred for reasons outside the scope of the approved Work Plan and Budget.

The PIPA core management activities to be implemented in Year 1 with budget allocations are as shown in Table 1 below:

Table 1: PIPA Implementation Budget 2015

PIPA Implementation Budget Breakdown for 2015 under Ted Waitt and Oceans 5 Funding				
PIO Bdgt Line No.	Components	Details of Key Activities	Bdgt Breakdown (USD)	Budget (USD)
1		Protected Area Management		
	<i>Personnel</i>	Salaries for PIO staff inclusive of legal obligations of KPF (15% of staff salary, Tax and Annual Leave Grant of \$750.		167,293.00
2		Surveillance & Enforcement		
	<i>Surveillance & Enforcement</i>	(1) Cost of TA who will do a Scoping Assessment of Surveillance & Enforcement Needs and Cost Structure for PIPA. Fees = \$10,000	10,000.00	

		(2) KPMU and QUARDs to do joint surveillance in the PIPA waters in March to April in 2015. PIO to contribute \$35,000 worth (based on fuel cost during the Kanton Mission in May-June 2013) of fuel. The QUARD programme will meet rest of costs. Sea Shepherds has expressed its surveillance interest in the PIPA at its own cost. Timing is to be strategically worked out by KMPU and Sea Shepherd.	35,000.00	
		(1) Purchase 1 new fuel tank (50-ton) to augment storage capacity of 7 old fuel tanks (6-ton) already on the island so total of 92 tons of fuel is sufficient to secure round trips of surveillance within the PIPA in 2015: S\$65,000; (2) Cost of fuel to fill the 7 6-ton tanks and the new 50-ton tank for patrol runs in 2015: \$51,525.	116,525.00	161,525.00
3	Capital Assets			
	Capital Assets	(1) VSAT communication system: \$26,000; (2) Solar systems to power office, residences and VSAT: \$20,000; (3) Desalinator for Kanton: \$5,000; (4) 2 sets of SCUBA diving with accessories: \$5,000; (5) Air compressor: \$500; (6) Installation Cost for 2 Surveillance specialists (office furniture and 2 laptops) = \$25,000; (7) Permanant mooring buoys purchased and installed plus signage in the PIPA and on Kanton = \$42,000.	123,500.00	138,450.00
		(1) Develop designs and costing for new patrol craft (with option of local builder): \$14,950;	14,950.00	
4	Asset Maintenance			
	Asset Maintenance	(1) Maintenance of KPMU fuel tanks on Kanton; Repair cost of Kanton Coordinator's motor-bike already purchased under PIPA PAS GEF Funding.	5,538.00	5,538.00
5	Supplies and Materials			
	Supplies and Materials	(1) Cost of communication and fuel bills for PIO and Kanton operations = \$10,000; (2) Freight cost to move materials/equipment/Kanton staff to Kanton=\$26,920	36,920.00	36,920.00
6	Travel			
	Travel	(1) Airtickets and perdiuims for Director to attend regional and local international meetings	12,000.00	13,845.00
		(2) Outreach within Kiribati including Kanton (1 time): Airfares and DSA.	1,845.00	
7	Education and Outreach			
	Education and Outreach	(1) 12 weekly visits to 12 secondary and primary schools in Tarawa to share the lessons of PIPA (cost 5 artist is \$20 each x 12 visits = \$1,2000)	1,200.00	9,229.00
		(2) 4 quarterly meetings with Curriculum writers to check on their progress with the PIPA materials included in senior form Geography Text Book. (cost of refreshments and fares).	320.00	
		(3) Awareness outreach to 5 tertiary institutes as follows: Kiribati Teachers College, Kiribati Institute of Technology, Tangintebu Theological College, Kiribati Pastoral Institute, and the Kiribati Marine Training Centre, (cost of refreshments and artists)	300.00	
		(4) Awareness to church leaders and members during church festivities like Easter, Christmas and New Year and Annual conferences and gatherings (costs of artists and refreshments for 4 main church-based groups). Refreshment of \$37 for 4 sessions = \$151	1,351.00	
		(5) Monthly release of PIPA Newsletter and posting on PIPA website and Facebook (newsletter as insert in 1 newspaper is = 1x\$50x12 = \$600, printing cost for (4pages x 48 glossy pages per year x 0.60 printing per page x 12 months) = \$1,382	1,982.00	
		(6) Producing 30 postcards on glossy paper = \$30, 1 calendar for 2016 with 100 copies on glossy paper = \$1 x 100 = \$100, 36 posters for 18 schools (primary, secondary and tertiary) = 36x\$2x18 = \$1,296; PIPA lessons simplified and dramatised on videos and audios and captured in songs (song 1 video and 2 songs on PIPA and conservation) = Video: 100 copies x \$2 + \$500 exclusive right to master copy for 1 year = \$700, Song: competition adverts: 4 times x \$120 = \$800 + prize to 2 winning songs = \$200 x 2 = \$1,200.	3,326.00	
		(7) Touch base with Members of Parliament: 3 sessions x 6 artists and refreshments (\$20). Refreshment of \$50 for 3 sessions = \$150	510.00	

		(8) Raising awareness of participants attending annual national workshops run by Ministries: 4 artists to assist in the PIPA presentation in 4 x 3 average ministry to hold workshops in 2015 x \$20.	240.00	
8	Monitoring and Evaluation			
	Monitoring and Evaluation Plan	(1) Hiring cost of TA to work with PIO Director and PSAC to develop a Monitoring and Evaluation Plan that will guide all scientific assessments and evaluations on effectiveness of the PIPA - being the very large MPA= \$30,000 (2) Airfares and fees and freight cost of equipment=\$5,000; PIPA Management Committee and Subcommittees' monitoring roles on PIO delivery (refreshments and fares)= \$10,000; (3) Public consultations on PIPA Regulations (Environment Act) to amend and increase fines and penalties = \$10,000; (4) Reporting activities on all aspects of PIO operations (to WH, PMC, Cabinet, etc) and costs of printing and despatch=\$7,500	62,500.00	62,500.00
9	Kanton Sustainable Resource Use Plan			
	Kanton Sustainable Resource Use Plan	(1) Hiring cost of TA to develop the Plan that will facilitate and guide all economic development activities in Kanton - to ensure that these activities are done in a sustainable way and in a manner conducive to requirements and standards of WH-MPAs: \$50,000; (2) Cost of workshop and consultations with all stakeholders with aims to ensure that all legal, customary, ecological and cultural as well as MPA requirements and values are upheld, respected and preserved: \$12,520.	62,500.00	62,500.00
10	Capacity Building			
	Capacity Building	(1) MPA stakeholders workshop(s) to be jointly conducted by NOAA, PIPA founding partners and PIO: a) \$23,000 for the curriculum development and trainers NOAA; Providing training in NOAA's "Training of Trainers" programme (to be housed at Kiribati Institute of Technology) in the context of MPAs b) \$84,000 for three workshop(s) expenses inclusive of meals, workshop venue, printing, land transport and internet; (2): Providing training for PIO (Kanton) Biosecurity officer in areas of MPA Biosecurity: \$12,500 inclusive of airfares, DSA and fees; (4) Training or exchanges in any areas relevant to MPAs, Marine, Science, Finances, Education and Outreach, etc: \$30,500.	150,000.00	150,000.00
11	Contingency			
	Contingency	(1) Developing a flexible contingency plan towards strengthening and improving protections of the PIPA when fully closed by end of 2014: \$5,000; (2) Resource and Monitoring including collection and analysis of social, ecological and biophysical data aimed at identifying ecosystem and community dynamics so as to be able to prioritize conservation activities; \$10,000 cost of hired TA; (3) \$31,796 unallocated.	46,796.00	46,796.00
			Grand Total	854,596.00

PIPA is part of the Kiribati outer islands and is also eligible to source funding from the Government through the Ministry of Finance and Economic Planning to implement activities identified in the PIPA Management Plan 2015-2020, mainly from bilateral donors including others.

As regards to the compensation to the Kiribati Government from the PIPA Trust for the loss of fishing revenue, Article 7 of the Conservation Contract provides that to the extent that available annual Trust Funds are in excess of the Reserve and after payment of the Management Fees, the PIPA Trust shall pay fees to Kiribati in accordance with the conservation fee protocols set out in the Conservation Contract on an annual basis. To this end, a Tuna Working Committee has been established with members comprising of tuna scientists from the Secretariat of the Pacific Commission, and representatives from the Government of Kiribati including Secretaries for MFMRD and MELAD, PIO Director and the PIPA Trust Executive Director. The Committee's key role is to work out on the level of compensation the Trust will pay to the Government of Kiribati.

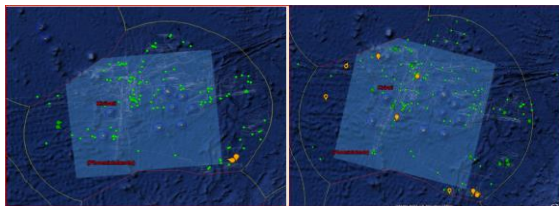
c) Enable the extension of no-take zones for the property no later than 2014;

In February 2014, the Kiribati Cabinet decided to fully close off the whole of PIPA from commercial fishing starting from January 1, 2015. Based on that decision, the Ministry of Fisheries was tasked to inform all distant water fishing companies mainly from the U.S Korea, Japan, EU and others regarding the closure and to take steps to ensure compliance by all of their fishing vessels.

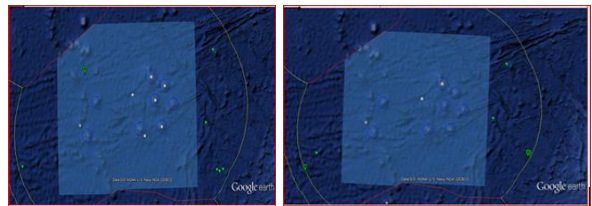
Besides sending out notices on the full closure, the dwfns and fishing companies were also informed regarding the changes on the PIPA's outer boundaries bordering with the U.S (Howland & Baker) and Tokelau. The Agreement on the new PIPA boundaries between Kiribati, Tokelau and the U.S was signed in 2012 and 2013 respectively. The PIPA (Amendment) Regulations 2014 (Annex 1) have been signed taking into account the new PIPA coordinates.

On January 1, 2015, a report and snapshots on vessels movements in real time in PIPA waters received by the PIPA Implementation Office (PIO) from the Kiribati Fisheries and Licensing Enforcement Unit and the Kiribati Police Maritime Unit indicated only 5 vessels were sighted, but were all moving at a cruising speed and were not fishing. Under the International Law of the Sea, innocent passage is allowed. Unlike the previous observations prior the full closure, PIPA waters was dotted with many fishing vessels (refer images below from KFLEU. green dots = f/vessels; orange dots = f/vessels of interest (VOI); white dots = PIPA islands).

IMAGES ON VESSEL MOVEMENTS IN PIPA BEFORE AND AFTER PIPA'S FULL CLOSURE



Snapshots on vessel movements BEFORE the FULL CLOSURE



Snapshots on vessel movements AFTER the FULL CLOSURE(January 1, 2015)

The PIO is currently maintaining daily reports including images on all vessel movements inside PIPA waters and that these reports are useful when it comes to prosecuting vessels fishing illegally in PIPA. These daily reports will also be covered in the PIPA's monthly reports including prosecutions reports with the objective to deter illegal fishing activities. The hot items will be uploaded on the PIPA's facebook as well.

Considers that the envisaged future extension of the zonation, as requested by the Committee at the time of inscription as an essential requirement, should consider the Outstanding Universal Value of the property by establishing no-take zones in the areas of greatest ecological significance, and consider the level of threat posed to each zone from both legal and illegal resource extraction;

The use of zonation continues to be a core tool of PIPA Management in the new PIPA Management Plan 2015-2020. As of January 1, 2015 as per Kiribati Cabinet decision (January 2014) there is a total ban on commercial fishing within the PIPA boundaries. This has fast tracked the originally planned phased full closure of the PIPA to fishing. In this Plan, zonation of Kiribati's Phoenix Islands EEZ, inclusive of PIPA, is summarized below

1. Atoll Reserve Zone

The Territorial Sea (to 12 nm) and all Internal Waters of the 8 PIPA islands including; Birnie, Enderbury, Kanton, Manra, McKean, Nikumaroro, Orona and Rawaki. A total ban of all extractive activities, and strict control of all activities to ensure there is no impact to marine and terrestrial species including habitats. This is the strictest level of protection and all activities must be explicitly assessed and permitted by PIPA MC and should be commensurate with the objectives of PIPA.

The territorial sea is known to harbour a wealth of PIPA's natural values. The essentially pristine environment, outstanding underwater clarity, the spectacle of large groups of charismatic aquatic animals (e.g. bumphead parrotfish, Napoleon wrasse, surgeonfishes, parrotfishes, groupers, maori wrasse, sharks, turtles, dolphins, manta rays, giant clams) in quantities rarely found elsewhere in the world, aesthetically outstanding coral reef features (e.g. giant clams, large coral heads, pristine coral life, and apex predators notably the sharks, many of which have been depleted elsewhere).

It is important to note this area is known as a No-Take-Zone in the previous Plan but now renamed the Atoll Reserve Zone to take into account of PIPA's terrestrial values- wildlife including the great number of seabirds. PIPA's location in the center of the Pacific Ocean, isolated and remote is an important feeding and breeding area of a number of birds including the endangered and vulnerable bird species. Three PIPA islands are already protected under the Wildlife Conservation Ordinance (1977) and under the PIPA Regulations including the rest of PIPA islands.



Some of the Endangered and globally important bird populations of the PIPA. From left to right, te ruru or Phoenix petrel, Te bwe bwe ni marawa or white-throated storm-petrel, te etei or frigatebirds (two species) and te raurau or blue noddie. Ray Pierce pics 2006-13.

As a world heritage site, any violation inside the atoll reserve zone could be charged with S\$100,000 fine.

2. Atoll Restricted Use Zone

Kiribati's Territorial Sea (to 12 nm), Internal Waters, and terrestrial areas of Kanton Island.

Kanton is currently the only island in PIPA inhabited with a population of about 30 people comprising mainly of government care-takers (policeman, nurse, primary school teachers, meteorological officer). By February 2015, two PIPA staff will be stationed on Kanton as well. The PIPA Office and living quarters will be completed by then.

Sustainable, subsistence use of resources are allowed in this zone, allowing some "take" of specified allowable species, and construction/habitat alteration that has the purpose of enhancing the management and use of PIPA. All activities must be permitted and assessed to have non-significant impacts on species

and habitats. This designation applies solely to Kanton Island, and all activities are to be managed under a Kanton Atoll Sustainable Resource Plan (SAP 1.12 of the PIPA Management Plan 2015-2020). Permit and/or license requirements to be assessed and decided upon by the PIPA MC.

The new PIPA Management Plan (2015-2020) also contains specific recommendations for limiting climate impacts.

Protection of Kanton Atoll

Any development proposed for Kanton should proceed with extreme caution, with the appropriate environmental safeguards in place to prevent changes to water quality, the degradation of coral reef and other ecosystems, or the disruption of recovery processes that continue post 2002-2003 bleaching. The tabular *Acropora* community of Kanton lagoon was the most vulnerable coral community to climate change. A recommendation from this finding would be for the Kanton Sustainable Resource Plan to consider designating as much of this lagoonal reef habitat as a strict protection zone with no fishing allowed, even for subsistence. This would remove perhaps 5 km² of lagoon area from fishing access, a reduction of only 10%.

Prevention and Removal of Shipwrecks

Shipwrecks release enough iron into surrounding waters that the recovery of corals from mass mortality is reduced. Two key actions should be considered:

- Punitive fines to finance removal of any new shipwrecks should be developed, following practice from other coral reefs areas (e.g. Florida Keys, Egypt, Australia), and removal plans be designed to come into action when needed; and
- If possible, the large old shipwrecks and remnant iron be removed. The sites most strongly affected include the western corner of Orona (no visible shipwreck at the surface), the Norwich City on Nikumaroro, and the President Taylor on Kanton has an impact on the entrance to the lagoon, but is likely too large to move. Options to remove shipwrecks on windward facing reefs should also be considered, if logistically possible.

Prevention of Anthropogenic Stressors

To date the most successful basic management strategy is to remove all other anthropogenic stressors to the PIPA environment (e.g. reduce fishing effort, avoid pollution, eradicate invasive species, remove shipwrecks and prevent habitat degradation), on the basis that PIPA would then have the best chance to cope with impacts of climate change. Specific guidelines should be developed to control and manage tourism to PIPA to minimise impacts to reefs, seabird colonies and prevent the introduction of invasive species to any of the islands.

Promote and Support PIPA Climate Change Research

Continue to support climate change research in PIPA, in accordance with the Phoenix Islands Protected area Research Vision: 2011-2020. PIPA will continue to strengthen existing research

partnerships (e.g. New England Aquarium, Woods Hole Research Institution). PIPA will also continue to further engage in the partnerships such as with the U.S. Papahānaumokuākea Marine National Monument, Pacific Remote Island Marine National Monument, as well as the Big Oceans Initiative, to ensure synergies and explore opportunities to do collaborative monitoring and research relating to climate change.

3. Ocean Conservation Zone

Kiribati's Phoenix Islands Exclusive Economic Zone lying within PIPA's Outer Boundary.

Two submerged reefs, Winslow and Carondelet, and at least 14 known seamounts together with open ocean and deep sea habitat are an integral part of this Ocean Conservation Zone. Several of PIPA's seamount volcanoes have been studied bathymetrically and formally named and entered into the Seamount Catalogue, including the Carondelet and Winslow seamounts (near their namesake submerged reefs), the Fautasi, Siapo, Polo, Tai, Tanoa, Tau Tau, Gardner. There remain at least four unnamed seamounts. The seamounts habitats are known to be very rich in biodiversity supporting a variety of oceanic pelagic species including tuna. In July 2014, a scientific research expedition conducted by NEAQ and Woods Hole Research Institute collected a tuna larvae in PIPA waters. PIPA is an important feeding and spawning site for the tuna species.

The effects of global climate change and global warming are expected to continue, even in the remote areas such as PIPA. Because PIPA is located at the origin of Central Pacific warm surface waters that drive the El Niño phenomenon, there have been various meteorological studies indicating that the Phoenix Islands region is ideally located for monitoring changes in weather patterns, especially ENSO activities. The impacts of these changes could be potentially amplified in the frail and unique ecosystems of the Phoenix Islands, making them a potential early-warning indicator location as well as a critical place to test predictions of climate models. Based on knowledge and studies completed to date, the vulnerability of PIPA to climate change in the Ocean Conservation Zone can be summarized as follows:

- *Pelagic Ecosystems and Tuna:* Deep and shallow open water systems contain the largest volume of habitable space in PIPA, including the photic zone and deep abyssal waters. Climate change impacts on pelagic systems may be caused by temperature (in the upper levels), ocean acidification (at all levels), and shifts in currents that change the locations of large bodies of water and the fronts between current systems. Temperature and ocean acidification impacts to species will be physiological, potentially changing recruitment, growth, reproduction and survival patterns. Changes in the location of pelagic fish stocks of economic significance will likely increase with climate change as the dynamics of sea surface temperature heating intensify. The implications for biodiversity and management of PIPA may be severely impacted.
- *Deep sea, seamounts:* The deep sea comprises the largest areal cover of any habitat in PIPA (approx. 70%), but is also the least known. Sensitivity of deep communities to acidification is not very well understood. Fourteen seamounts rise to within 500-1500 m of the surface, and emerging evidence shows that these systems will be highly vulnerable to climate changes, including potentially acidification and changes in current patterns at depth.
- *Marine turtles and mammals* - Green turtles are abundant in the Phoenix Islands, with large numbers of nests observed on the beaches, particularly on Enderbury. Sea turtles are highly

sensitive to nest temperatures, as increasing temperature alters the sex ratio in favour of males. Low numbers of marine mammals (mostly dolphins and a small numbers of beaked whales) have been sighted in PIPA. Marine mammals are not known to be highly sensitive to temperature changes in the tropics, but may be vulnerable as a result of changing tropic dynamics, and shifting water masses will affect planktonic and fish populations that they depend on.

Given these vulnerabilities, PIPA will be managed in accordance with best practice advice and information for adaptation to climate change in marine and island protected areas, provided by the PIPA Scientific Advisory Committee (SAC). PIPA, as a very remote, intact, protected oceanic environment, is of scientific importance as a global benchmark for identifying and monitoring the processes of sea level change, growth rates and age of reefs and reef builders, both geologically and historically, and in evaluating effects from climate change and coral bleaching events without the confounding factors of pollution or resource extraction. The reef system is so remote from industrial activities that it can serve as a critical benchmark for coral ecosystem understanding and potential guide the restoration of other degraded hard coral ecosystems. As such, the PIPA has exceptional value as a natural laboratory for the study and understanding of the significant ongoing ecological and biological processes in the evolution and development of marine ecosystems of the Pacific, the world's largest ocean, indeed all oceans.

In the new PIPA Management Plan, extractive activities are not allowed within the Ocean Conservation Zone. A strict control of all activities to ensure there is no impact to marine species and habitats. This is the strictest level of protection and all activities must be explicitly assessed and permitted by PIPA MC and should be commensurate with the objectives of PIPA.

4. Phoenix EEZ Ocean Buffer Zone

Kiribati's Phoenix Islands Exclusive Economic Zone lying outside PIPA's Outer Boundary

The area of Kiribati's Phoenix Islands EEZ outside of the outer boundary of PIPA is considered a buffer zone. Currently allowable uses include DWFN licenses for tuna fishing (purse seine, longline, pole and line fisheries) under MFMRD management. All uses should be commensurate with the objectives of PIPA.

Progress made with the management of the property, in particular measures addressing illegal and overfishing of inshore and offshore fisheries, prevention of the degradation of seamounts, extension, surveillance and enforcement of no-take zones and establishment of long-term sustainable financing of the property's management system, including the full capitalisation of the initial endowment of the Trust Fund for the property

With the full closure of PIPA from commercial fishing, the PIPA values in particular the seamounts located in the open deep sea will be further protected. This also applies to PIPA's aquatic animals such as the bumphead parrotfish, Napoleon wrasse, surgeonfishes, parrotfishes, groupers, maori wrasse, sharks, turtles, dolphins, manta rays, giant clams, including the aesthetically outstanding coral reef features. Not only that, but on land as well where a huge concentration of seabirds could be found due that PIPA islands are very remote and isolated.

Efforts to maintain PIPA's pristine environment has been the focus of the PIPA Management Plan 2011-2014. The monitoring and surveillance of PIPA waters was among the core management activities carried out during the life of the Plan mainly to avoid poaching and other illegal activities in the protected area.

This was carried out by the Kiribati Police Maritime Unit using the patrol boat with the assistance of the South Pacific Forum Fisheries Agency, Secretariat of the Pacific Commission, Australia and New Zealand and the U.S under the Shipriders Agreement. There were only two cases on illegal fishing reported, but these cases were cleared when the observers onboard reported the two fishing boats entering Kanton territorial water were dropping the sick crew for evacuation to Hawaii on U.S Coastguard plane.

In the new PIPA Management Plan 2015-2020, PIPA Surveillance and enforcement is specifically covered under Strategic Action Plan 1.6. It is recognized that effective surveillance and enforcement of PIPA is a significant challenge in terms of technology, capacity and resources.

Minimization of illegal activities is the key to the success of any MPA. This can be achieved through the application of several tools. In the case of PIPA, there are major constraints to surveillance. PIPA is extremely remote, inaccessible, and covers a very large area. Surveillance tools that had been and will continue to apply in the Plan include:

- Aerial surveillance (by aircraft and satellite);
- At sea surveillance (by boat); and
- Land-based surveillance.

The Plan recognizes the key roles of key Ministries would play in the effective surveillance and monitoring of the PIPA including:

MELAD/PIO Director

Under the auspices of the MELAD Minister, Principal Environment Officer and guidance of the PIPA-MC, the PIO Director is responsible for the definition, coordination, costing and management of surveillance and enforcement services for PIPA, which are sourced to relevant agencies within and outside of Kiribati. This will focus on building capacity within existing surveillance and enforcement programmes such as fisheries, and invasive species management. MELAD/PIO and Director will also focus on issues faced in surveillance and enforcement of a large, remote MPA namely;

- Fishing (legal, illegal and related activities)
- Other Boat and Visitor Management
- Kanton Atoll Subsistence Resource Use
- Protected islands and bird populations

Fisheries Surveillance and Enforcement (Ministry of Fisheries and Maritime Police)

Kiribati's Ministry of Fisheries and Kiribati's Maritime Police Unit (KMPU) have developed a Kiribati-EEZ wide surveillance and enforcement programme largely targeted at preventing illegal fishing and monitoring of licensed vessels. This programme is in cooperation with other Forum members states under the South Pacific Forum Fisheries Agency (FFA) and under a range of bilateral and individual agreements including those provisions made with DWFN vessels. Provisions include:

- Vessel Monitoring System (VMS) all licensed boats must carry VMS system to identify vessel and location in real time, this can be matched to the operation by FFA of a geo-fence with alerts when vessels are known to enter or depart a particular EEZ area. In case these fishing vessels

encounter VMS technical problems, they will then have to send their reports on manual basis to the Kiribati Ministry of Fisheries HQ, Bairiki. If they are in Betio port, they will be advised not to leave port as FFA has got their authorized technician in Tarawa. FFA has upgraded the National Coordinating Centre VMS by using the Goggle Earth where more applications are available compared to the previous VMS smartrack. KPMU is using both versions to compare real time with positions of targets.

- The patrol boat, Teanoai has been fitted with FFA VMS in which it can be detected by FFA during the joint operations such as Big Eye, Island Chief and Kurukuru. This information can be shared to PIO in which PIPA office (Kanton and Tarawa) can see (real time) the whereabouts of the patrol boat.
- A more advance HF radio was installed on RKS Teanoai where it has the capability of sending/receiving text messages from or to the Shore base. This HF radio will need further upgrading during the plan period.
- Fisheries Observer Scheme – currently DWFN carry trained Kiribati Fisheries Observers (ca. 20% coverage). Under the third arrangement to the Nauru Agreement, purse seiner observer coverage is 100%.
- Aerial surveillance provided by New Zealand (NZ), U.S. Coast Guard (USCG), France Air Force and Australia Air Forces (Orions) coordinated with regular and special surveillance operations managed by the FFA.
- Operation of Kiribati Patrol Boat- regular patrol runs (currently 1-2 per year to Phoenix Islands) and called out when assistance required e.g. vessel grounding or a vessel of Interest (VOI) to intercept.
- USA Kiribati Shipriders Agreement (2008) whereby Kiribati Maritime and Fisheries Officers are able to travel on USA Coastguard Ships and have the full power of arrest of vessel and other related powers under Kiribati Law. This initiative has already proven highly successful with the impoundment and prosecution of a vessel caught illegally bunkering off Nikumaroro Atoll in PIPA (\$4.7 AUD million fine).
- The USCG provided at least two to three ship riders every year. In most cases they will cover the Line Islands and the PIPA.
- RAAF could also assist if there is an urgent request from the GOK.
- Police Maritime continues to obtain ongoing support from the Australian Government under the Defense Corporation Project (DCP) by supporting a bi-annual RKS Teanoai slipping in Australia to comply with Maritime Safety Requirements for sea worthiness for policing of Kiribati EEZ including the PIPA.
- Australia is now commencing their new patrol boat program to the PPB regions and Kiribati is expected to have her new patrol boat in 2023 based in Tarawa.
- FFA to assist to develop an automatic geo fence entry and exit alert signal of PIPA close boundaries in order to monitor vessel movements in PIPA. (Currently, the PIO Tarawa receives satellite images of vessels on a daily basis on vessel movements in PIPA waters)
- In the case of the normal reporting, the Police Maritime Unit received from fishing vessels when entering or exiting KEEZ it is reported as; Area.Entry.Republic of Kiribati (EEZ) by JIN HUI 9. The PMU would then request FFA to do the similar reporting techniques but only for PIPA. Example; Area Entry. PIPA (Zone) by JIN HUI 9. When you open up this report it will give you more details such as Alert: Area.Entry.Republic of Kiribati (EEZ) in this case Area Entry Republic of Kiribati(PIPA Zone) Date: 17/08/2014 9:00:00 AM Unit: JIN HUI 9 Pos: 04 05.8996' S 175 33.2003' E knots deg for the case of PIPA the Longitude:W
- Cost efficiencies, program design, and additional resources for PIPA surveillance can be developed further in partnership with the United States through the 2009 cooperative exchange with Papahānaumokuākea and the PIPA-PRIMNM Cooperation Arrangement between the

Government of the United States through the Department of the Interior, United States Fish and Wildlife Service, and the National Oceanic and Atmospheric Administration, and the Government of Kiribati. This was signed in November, 2014 in Sydney.

- Additional support for the operation of the Kiribati Patrol Boat would enable more surveillance runs of PIPA. Primary support would include assisting in fuel and crew costs. Australian Defense Corporation Project (DCP) has provided ongoing support on fuel to Kiribati on 1:1 ratio that PMU normally share the cost of fuel 50% with Australia. During joint surveillance such as Island Chief Ops, Kurukuru and Big Eye Operations, Australia provides victuals for the crew (100%).

Terrestrial Surveillance and Enforcement

The islands, seabirds and turtle nesting beaches of the Phoenix Islands are vulnerable to illegal and/or unsustainable use and invasive species. Movement of people to Kanton or to any of the PIPA islands is now strictly monitored. Visitors going to Kanton from Tarawa and Kiritimati will complete the Kanton arrival form which checks that no invasives are brought into PIPA.

Operational plans for removing invasive mammals are in place and fund raising is underway to enable eradication to happen.

Surveillance of Kanton Atoll

With planned increased human resources and infrastructure (including an atoll based boat) for Kanton atoll, there is a commensurate role for increased effort in surveillance and enforcement for Kanton. This will include monitoring the compliance of visitors and local resident caretaker population on Kanton for adherence to the proposed Kanton Atoll Sustainable Resource Use Plan.

Due to the remoteness of PIPA, a small Patrol boat is essential in order to provide visibility in the region from time to time. It will be based in Kanton and it can also intercept any illegal vessels that are engaging in any illegal activities in the PIPA. There is a need to establish infrastructure such as a workshop and spare parts for maintenance work, fuel depot including water and supply of ration, for the crew to support the PB operation from the Kanton base.

Additional

In order to assist in the detection of illegal activities, visitors and residents are required to comply with the following.

- All individuals, and/or the vessel they are on, must report during their stay in the PIPA: sightings of all other individuals or vessels, any suspicious activities, any out of the ordinary conditions. This includes all of the Phoenix Islands, (except on the island of Kanton) and all of the waters within the PIPA area.
- Clearance for entering or operating in PIPA waters should be done from Kanton island.
- Sightings must be reported on the day observed. Reports will be sent to the MFMRD Fisheries Licensing and Enforcement Unit, the Kiribati Police Maritime Unit (KPMU), PIO in Kanton and and PIO Tarawa MELAD). The reporting format is as follows: individual name(a crew list / vessel name / vessel number/call sign / time in GMT / suspicious activity (short description, GPS Co-ordinates).

- PIO to register the Office HF frequency with the Ministry of Communications, Transport & Tourism. This will allow PIPA to own a frequency and no one will be allowed to use that frequency, in this way no one can interfere during the “talks” and working schedules using this designated frequency.
- Other alternatives are the Kanton Police (not operating 24/7) and the Kilo Papa (Operating 24/7). Their frequencies are the same 7692.5Khz.
- The National Coordination Centre (NCC) or the Patrol Boat Office, at the Police HQ can also be reached on frequency of 8005 Khz. RKS Teanoai is also listening on this frequency. NCC is not on 24/7 unless RKS Teanoai is at sea (Surveillance/patrol), NCC will then be man 24/7. These frequencies above are restricted for non police organization. .
- Illegal Activities such as fishing, bunkering or Transshipment in the PIPA are to be reported immediately to Police Kanton and PIPA Kanton. If these ships are caught by the Patrol boat, they must be arrested to Kanton and a full criminal investigation is to be conducted by the Police Officer on Kanton.
- The arrested vessel must remain in Kanton until a RELEASE NOTIFICATION is received from the AGs office. Without this release notification, Police, Fisheries and PIPA are not allowed to release the vessel. Once the release notification is received, the Police Maritime will inform the Police Officer on Kanton for the release of the arrested vessel.
- For any suspicious activity or out of the ordinary condition, if possible photographic documentation should be made and submitted to the PIPA Authority. Images can be sent as attached files to emails.
- It is not the responsibility of any visitor (individual or vessel) to the PIPA area to apprehend any person or vessel acting contrary to these rules. However, reporting is a requirement.
- Every vessel transiting in the PIPA must maintain course and speed. The international law of the sea will only allow ships to stops under certain circumstances as it is specified under the law of the sea. All foreign fishing license vessels shall report 24 hours prior their entry to the Fisheries as the Marine Protected Area is also specified in the Kiribati Fisheries Act 2010.
- Biosecurity measures at Kanton must follow the PIPA Biosecurity Guidelines.
 - Enforcement must be closely linked with surveillance. Surveillance is integral in identifying possible illegal activities. Information from surveillance activities shall be conveyed to the Police Maritime Unit at Betio and the Fisheries Licensing and Enforcement Unit at Bairiki. The Police Patrol boat has got HF radio to coordinate the surveillance operation in the PIPA with the Kanton Police.
 - GoK will continue to rely on existing measures for enforcement based on fisheries regulations and allowable permits and conditions therein.

As regards to the establishment of the long-term sustainable financing of PIPA’s management system including the full capitalization of the initial endowment of the Trust Fund for PIPA, please refer to section 1 (b) and Table 1 above.

2. Other current conservation issues identified by the State Party

[Note: conservation issues which are not mentioned in the Decision of the World Heritage Committee or any information request from the World Heritage Centre]

One major conservation issue currently faced by our PIPA property is the presence of shipwrecks impacting on the reefs on 4 of the PIPA islands, namely Orona, Nikumaroro, Kanton and McKean.

As reported earlier, shipwrecks release enough iron into surrounding waters that the recovery of corals from mass mortality is reduced. The affected area would expand further if there are no actions taken during the life of this Plan.

The Kiribati Government would kindly request the World Heritage Centre for assistance on the removal of the large shipwrecks on these three islands if possible.

It has been suggested punitive fines to finance removal of new shipwrecks should be developed following the practice from other coral reef areas and removal plans be designed to come into action when needed. .

3. In conformity with paragraph 172 of the *Operational Guidelines*, please describe any potential major restorations, alterations and/or new construction(s) within the protected area and its buffer zone and/or corridors that might be envisaged

PIPA (Amendment) Regulations 2014 – new PIPA boundary coordinates.

Recently, there has been a change made to the PIPA outer boundaries bordering with the U.S (Howland and Baker) and Tokelau thus PIPA has now got its new boundaries. These changes were made as the outcome of the boundary delimitation negotiations between the Government of Kiribati, the U.S and Tokelau.

Kiribati Cabinet towards the end of 2014 had adopted the PIPA (Amendment) Regulations 2014 (refer **Annex 1**) incorporating the new PIPA coordinates. PIPA's total area currently stands as 407,112sq.km.

Apart from that, a few improvements made to certain core management activities, in particular the full closure of the whole of PIPA area from commercial fishing, increased surveillance and monitoring. This also includes the introduction of the Kanton Arrival Form to be completed by all visitors travelling to Kanton from the other two main ports in Kiribati, Tarawa and Kiritimati. All visitors to Kanton should complete this arrival form (**Annex 2**) with the objective to ensure no pests are introduced and also to use the data for the control and management of visitors to Kanton.

The Kanton Arrival Form which differs from the PIPA Permit Application Form is in local language being meant for local visitors. The title of the form: Booma ibukin kariaian te roko iaon aban PIPA (Arrival Form to Kanton); A: Personnel Information; B: Purpose for travel; C: Things you bring; Importance Notice.



REPUBLIC OF KIRIBATI

ENVIRONMENT ACT 1999
as amended in 2007 (No 1 of 2007)

PHOENIX ISLANDS PROTECTED AREA (AMENDMENT) REGULATIONS 2014
(Sections 43(1) and 86(1))

In exercise of the powers conferred by sections 43(1) and 86 (1) of the Environment Act 1999, as amended in 2007 (No 1 of 2007), and acting in accordance with the advice of the Cabinet, I hereby make the following Regulations:-

1. **Title**

These Regulations are called the Phoenix Islands Protected Area (Amendment) Regulations 2014.

2. **Amendment of Regulations 5**

The Phoenix Islands Protected Area Regulations 2008 is amended at Regulation 5 by repealing sub regulation (1) and substituting the following new sub regulation (1):-

"5. Protected Area Prescription and World Heritage Nomination

- (1) The Minister hereby prescribes the following area as an area protected for conservation and sustainable use purposes pursuant to section 43 of the Act-

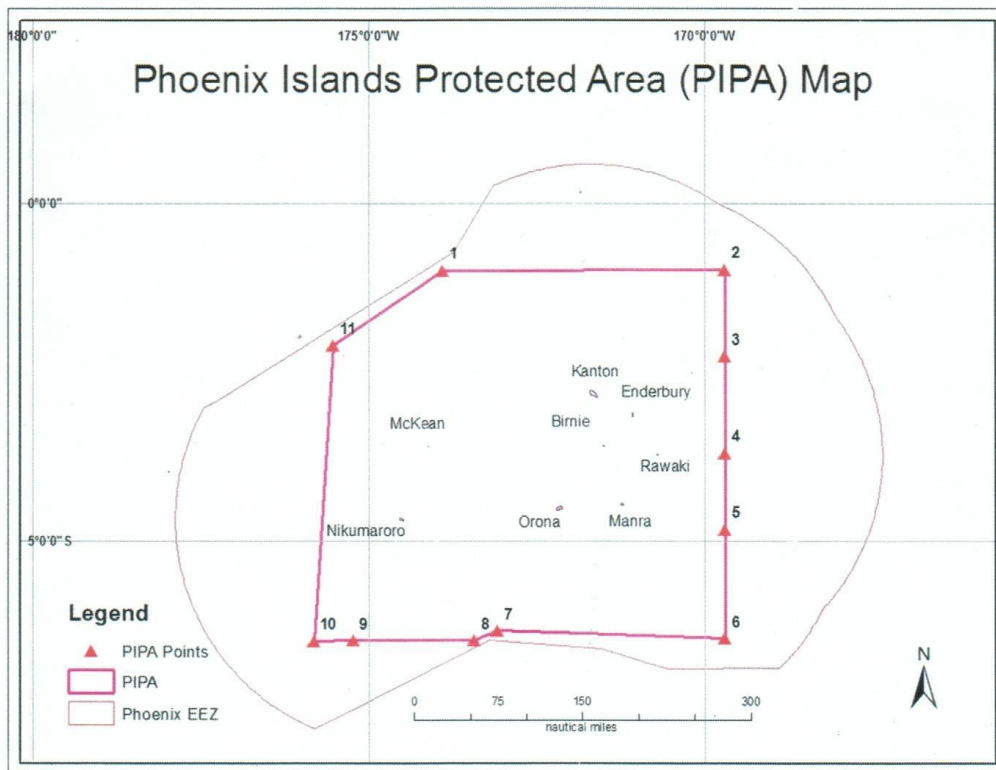
Burnie Island
Enderbury Island
Kanton (otherwise known as Aberiringa or Canton) Island
Manra (otherwise known as Sydney) Island
Mckean Island
Nikumaroro (otherwise known as Gardner) Island
Orona (otherwise known as Hull) Island and
Rawaki (otherwise known as Phoenix) Island

the lagoons and internal waters (if any) of each island, and those parts of the adjacent Kiribati territorial sea and exclusive economic zone within the area bounded by straight lines connecting the following points in the order stated.

A handwritten signature in dark ink, located in the bottom right corner of the page.

PIPA Boundaries

Point LD	LATITUDE	LONGITUDE
1	-0.9966017241	186.090242241
2	-0.9830000000	190.294000000
3	-2.2623495572	190.294000000
4	-3.6905216726	190.292043964
5	-4.8194574594	190.293952771
6	-6.4380788675	190.294000000
7	-6.3281818966	186.905809483
8	-6.4731818966	186.564809483
9	-6.4731818966	184.759809483
10	-6.4788840399	184.177654179
11	-2.1046017241	184.467242241



Dated this 31st day of December, 2014.



.....
Hon Tiarite Kwong
Minister of Enviroment, Lands
Agricultural Development.

Published by exhibition at the Office of Te Beretitenti this 31st day of December, 2014.



.....
Teea Tiira
Secretary to the Cabinet.

Annex 2: Kanton Arrival Form



Government of the Republic of Kiribati

BOOMA IBUKIN KARIAIAN TE ROKO IAON ABAN TE PIPA

IAAN TUAN TE ENWAEROMENTA – PIPA REGULATIONS 2008 AO TUAN ABAN TE PIPA AE TE PROHIBITED ACT – AO TUAN TE KUARANTIN AO A KABAEAKI BWATINTIA MA AOMATA NAKO AKE A NA NAKO ABAN TE PIPA AIKA WANIUA (8) BWA A RIAI NI KANO A RAOI TE BOOMA AEI. AKE A KUNEAKI BWA AKI KARAOA AIO AO A NA AKI KONA NI WAERAKE IAON ABAN TE PIPA MA A NA TIKU N TATANINGA IAON BAOIA TE KAIBUKE KE TE WANIKIBA NI KAROKOA OKINA. AKE A KUNEAKI N URUI TUAN AABA AIKAI A NA BON KATUAEAKI N ARON TEIN TUUA IAAN TUUA AKE A OTI I ETA.

BUKIN KARAOAN TE BOOMA AIO BON KAKOROAN TAIAN TUA IBUKIN KAMANOAN AONON TE PIPA AE ANA OKAI-NI-MARAWA KIRIBATI AE A TIA N RIN IAAN TE WORLOAD HERITAGE BWA NGAIA NGKAI TE KABANEA NI BUBURA AO N NANO N OKAI-NI-MARAWA N TE AONNABA.

TE OI NI KANTANINGA BON TOTOKOAN MAAN AO AROKA AIKA IAI AIA URUBWAI NAKON TE REITANIMAIU IAON ABAN TE PIPA, AO TOTOKOAN NABA MWAKURI N URUBWAI AO N ANAI BWAI NGKAI ABAN TE PIPA NI KABANE A BANE N TABUAKI URUAN BWAIN AO MARIN AONA NI MOA MAN BAIKA A MAIU AO AIKA AKEA TE MAIU INANOIA MA I KABIN MARAWANA AO AON ABANA NI KABANE.

A. RONGORONGOM

1. ARAM AO AM KAUOUA N ARA AE KO KINA AKI IAI: _____
2. ABAM: _____
3. BONG NI BUNG: _____

B. TAEKAN MWANANGAM

1. KO TOKARA BAOM TERA (name of vessel/flight number): _____
2. KO TOKARA BAOM MAI IAA? _____
3. TERA ABAN TE PIPA AE KO NA NAKO IAI? _____
4. TE BONG AE KO MWANANGA IAI (departure date): _____
5. TE BONG AE KO NA KITANA ABAN TE PIPA IAI? _____

C. KABWARABWARAN UOTAM AO BUKIN MWANANGAM NAKON ABAN TE PIPA.

1. IAI UOTAM N ARON AIKAI?

- I. AMWARAKE AIKA MAIU N ARON UANIKAI? _____
- II. AMWARAKE N ARON BAA-NI-KAI? _____
- III. AMWARAKE N ARON BUKINIKAI? _____
- IV. AMWARAKE AIKA IRIKO NI MAN AIKA A MAIU? _____
- V. MAAN AIKA MAIU (n aron te beeki, te moa, te katamwa, etc)? _____
- VI. AROKA AO ATI AIKA A MAIU (n aron uaan te nii, te mai, te kaina, te bero, uee, etc)? _____

VII. BWAAI NI MWAKURI IAON TANO (n aron te tiabora ma te beke, etc)? _____

VIII. BAO NI MWAMWANAGA (n aron te bwatika, rebwerebwe, etc)? _____

IX. BAIKARA RIKI AM BWAI AIKA UOTAM NAKON ABAN TE PIPA? _____

2. KABWARABWARA RAOI BUKIN ROKOM IAON ABAN TE PIPA (kaotia bwa te tia mwakuri ngkoe, ke ko roko ni kawariia kain am utu ao ni iangoa te tiku, ke ko roko n noria am utu/raoraom ao ko na manga oki, ke ko roko bwa iangoan wakinan am bitineti ao tera te bitineti anne, ke ko ti rinanon te PIPA ni ira kawain baom [transit], etc): _____

KAURING AIKA A KAKAWAKI

1. KANOA RAOI TE BOOMA AEI MA TE KOAUA AO ANGAM IBUOBUEKI NAKON ANA TIA MWAKURI TE PIPA IAON KANTON KE IAON ABAN RIKI TE PIPA AKE TABEUA;
2. IAI MWAAKAN TE BUREITIMAN NI KATIKA AO N TOTOKOA RUON TE AOMATA MAI IAON TE BAO NGKANA E KUNEAKI BWA E AKI KAKOROI NANON BAIKA A KAINNANOAKI INANON TE BOOMA AIO KE E KARAOA TE TOTOKO NAKON TUOAN ANA BWAI;
3. URINGA ARE A TABUAKI UOTAKINAKOAN AO KUMEAKIN BWAIN ABAN NAKO TE PIPA AIKA A MAIU (fresh fish or pet fish) AO AKE A TIA NI MATE (preserved or salted fish) AO AKE BON AKEA TE MAIU INANOIA, A BANE N TABUAKI UOTAKIIA NAKO MAI ABAN NAKO TE PIPA AIKA WANIUA (8) N ARON AE MWAKORO IAAN TUAN NAKO TE PIPA;
4. A KAWAKINAKI MAN KAMANOAKI ABAN NAKO TE PIPA BWA A NA AKEA MAAN AIKA URUBWAI N ARON TE KIMOA, TE BITERE, TE KINNONGO AE BAABOBO (yellow crazy ant), AO MAAN RIKI TABEUA MA AROKA AIKA KONA NI UOTA TE URUBWAI NAKON ANA OTABWANIN AO TE REITANIMAIU NAKON ABAN NAKO TE PIPA;
5. A TABUROROKO WAAKI NI BITINETI AKE A NA ROTAKI IAI KAUBWAIN MA MARIN TE PIPA N ARON ANAKIN TE BAI NI BAKOA, TE KEREBOKI, IKA AIKA MAIU (pet-fish), AO TABEUA RIKI;
6. A TABUAKI WAKI N NEWEABA AKE A NA URUBWAI NAKON MARIN NAKO ABAN TE PIPA (n aron kumeaia mannikiba ma anaakin bunnimoaia, kanakiia mannikiba, karenakoan maange n aki akaka, te beka n aki akaka, uruakan ao anaakin bwain auti ake akea aomata ma kaaia, ao tabeua riki.);
7. NGKANA IAI TE AKI OOTA NI KANOAAKIN TE BOOMA AIO AO TUUA RIKI TABEUA IBUKIN KAMANOAN ABAN MA MARAWAN NAKO TE PIPA AO REITAKI MA ANA TIA MWAKURI TE PIPA (PIPA Biosecurity Officer) KE TE BUREITIMAN IAON KANTON AO ABAN NAKO TE PIPA ARE KO NA NAKO IAI.

TE PIPA BON ABAN TE TAUTAEKA AE KAMANOAKI IAAN TUAN KIRIBATI AO TUAN TE WORLD HERITAGE.

TE PIPA BON ANA OKAI-NI-MARAWA KIRIBATI AE TI RIAI NI BANE NI BUOKA KAWAKINANA MA KAMANOANA.

KATEIMATOAN KAWAKINAN TE PIPA BON KAWAEKOAN REKEN TAIAN KABWAIA ARE A NA BANE NI KABWAIA IAI KAIN KIRIBATI NGKAI AO NAKON TAAI AIKA NA ROKO.

TEKERAOI TE MWANANGA