

**DRAFT**

**Likiep Atoll Local Government Fisheries Management Plan**

**Version. 2**

**Prepared by:**

**Likiep Atoll Local Government/Community**

**With technical assistance from MIMRA and C-MAC**

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## **Part 1 Preliminary**

### **1 Title of the Management Plan**

This Management Plan shall be referred to as "*the Likiep Atoll Fishery Management Plan 2006*".

### **2 Designated areas, species and fishing gear and methods for the FMP**

#### 2-1 Area

Designated area in this plan is all Likiep Atoll water area.

#### 2-2 Species

Designated species in this plan is all fishery resources in Likiep Atoll water area.

#### 2-3 Fishing gear and methods

Designated fishing gear and methods in this plan are all kinds of fishing gear and methods, whether those are actually used or not used at the present time.

### **3 Definitions**

- "Fishery" means operation of fishing or aquaculture of fisheries resources both on the subsistence and commercial bases, as well as activities in which products from fishing and aquaculture are dealt with.

- "Fishery resources" means species of animals and plants living in or obtained from the water area which are utilized by a human. Minerals and refined matter from the sea such as salt are not included in this term.

- "Fishing" means performance of taking or removing fishery resources from natural environments for human's possession. Fishery resources do not belong to anyone's property in the natural environments. Ownership of the fishery resources occurs when one obtained those by fishing.

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- "Aquaculture" means production or cultivation of fishery resources under the artificially conditions with a purpose of harvest.

- "Community residents" means one engaged in fishery, also including part-time employees and people collecting fishery resources for handicrafts.

- "Fishery Management" means management necessary for engagement of a sustainable fishery. This term includes management of activities related to fishery with consideration of social-economic conditions, not only limited to resource management in biological aspects.
- "Likiep atoll community" means one who lives in the Likiep Atoll and engaged in fishing and/or aquaculture.
- "Likiep atoll water area" means, in accordance with the Act, the internal lagoon waters and water areas up to five miles seaward of the baseline of the Likiep Atoll.
- "Community" means a society of residents in a village.
- "Local Government" means Likiep Atoll Local Government, Council and the Mayor of the Likiep Atoll.
- "MIMRA" means Marshall Islands Marine Resources Authority.
- "Act" means Marshall Islands Marine Resources Act 1997.
- "FMP" means this Fishery Management Plan.
- "FMO" means, in accordance with the Act, Fisheries Management Ordinance.
- "Community based fisheries management organization (CBFMO)" means a minimal organization for fishery management in each group as concurred from the Likiep Atoll community group meetings such as Likiep Atoll Local Government Councils group, traditional or manit group, fishermen group, women's group, and youth's group.
- "Likiep Atoll Fisheries Management Advisory Committee (FMAC)" means advisory committee for Local Government Council as to fishery management, in accordance with the Act. This organization has function of consensus building among all Likiep Atoll's fishermen.

#### 4. LIKIEP ATOLL

Likiep Atoll is situated in the northeastern part of the Marshall Islands in the Ratak Chain (Sunrise). It is located at 9 degrees latitude and 170 degrees longitude (Fig. 1). The RMI National Census (1999: 395) gives a land area for Likiep Atoll of 3.96 square miles and a lagoon area of 163.71 square miles (Fig. 2).

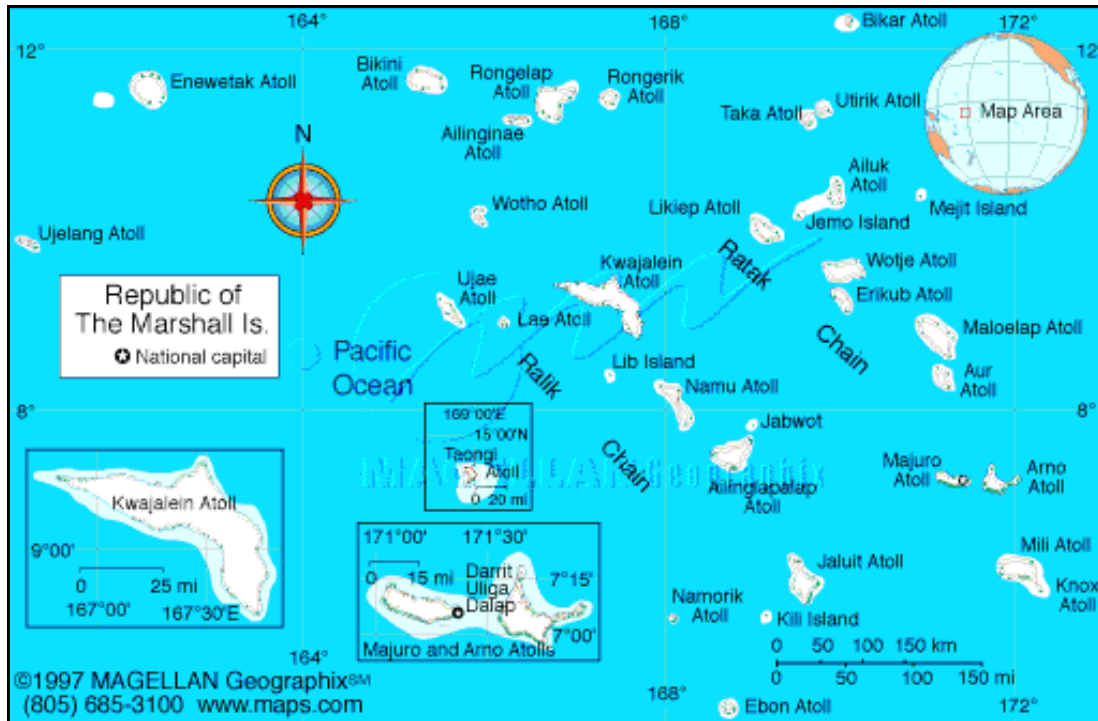


Figure 1: Map of the Republic of the Marshall Islands

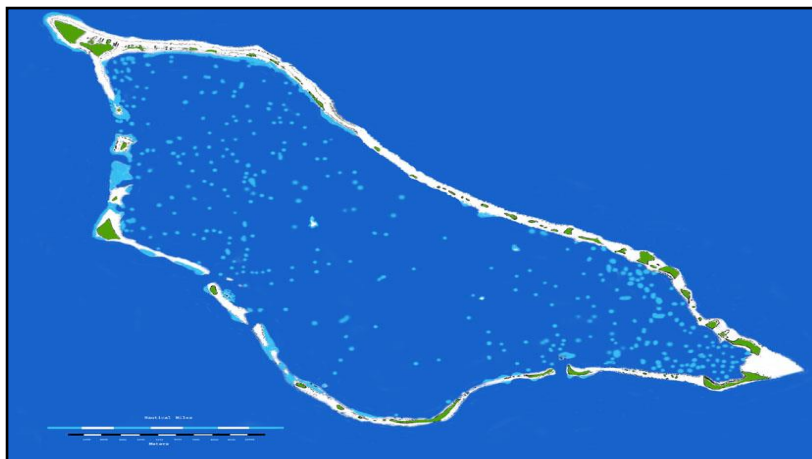


Figure 2: Map of Likiep Atoll

The population of Likiep Atoll based on the National Census is 527 people. This figure is similar to the information gathered from interviews with the Likiep Atoll Fisheries Management Advisory Committee (FMAC). There are about 320 people in Likiep village. Jebal and Melan villages or islets have an additional 90 people.

Furthermore, there are 3 truck pick-ups, 1 backhoe, 5 scooters, and 1 dune buggy. There are 5 churches in Likiep and Jebal including the Holy Rosary Catholic Church, the United Church of Christ, and the Assembly of God. The Catholic Elementary School in Likiep is managed by Catholic nuns. The three public elementary schools are owned by the national government. The Early Childhood and Head Start programs also play an important role in early development learning of children in all the three communities.

At daytime after school, there are always school children playing on the road. Likiep Atoll has small communities where everyone knows one another. At nighttime, women prepare food for their families. There is a strong tendency for communities to preserve their traditional norms and customs in welcoming guests who are visiting the islands. Examples include women from the Likiep community entertaining visitors at the hotel with Marshallese songs and local food.

The MIMRA fish base is located in the central part of Likiep village. A giant clam hatchery project is located on Loto Island, an inhabited island close to Likiep Island. A new hospital center is also located near the Fish Base.



**MIMRA Likiep Fish Base Complex**



Air Marshall Islands has two weekly flights to Likiep. The schedule normally runs on Monday and Friday via Majuro/Woja/Likiep/Kwajalein with return on the DASH 8. One of the improvements in terms of having modern goods on the island is the frequency of flights. One can receive mail or cartons of boxes filled with such items as canned meats, rice, sugar, soy sauce, tea, and coffee from relatives in Majuro and Ebeye. The regular flights are also important for establishing Likiep as an outer island destination for tourists.



**Air Marshall Islands DASH 8 at Likiep Airport**

A very comfortable and contemporary hotel owned by Tony DeBrum and family can be found in the Likiep village. It has about 10 rooms with air conditioning, hot water, and a self-serve kitchen. However, the owners will prepare food for you at your request.

A new community hall also can be found on the leeward side of Likiep village. The community hall plays a tremendous social role in the lives of the Likiep people. Official functions such as birthday (kemem), local council or visitors meetings, and funeral gatherings are a few of its functions.



**Community Hall In Likiep Village**

## **4.1 HISTORY**

Likiep as well as other villages of Jebal and Melan are significant as historic villages in the Marshall Islands because of their unique history of European influence and contact.

According to the US Department of Interior (1986: 8) as well as information gathered from the FMAC) group, Likiep Atoll is very different from other places in the Marshall Islands. In 1877, Adolph Capelle and Jose DeBrum bought the entire atoll of Likiep from the traditional chief, Iroj Jortoka. Iroj Jortoka sold his island to the two businessmen and told his people to make a choice as to whether they wanted to leave for other atolls where they had other land rights or remain on Likep and work for the Europeans. Most of the people stayed on Likiep and worked for the Europeans while a few followed the Iroj and left the island. To this day, the people in the community are practicing a unique social and economic legacy that was passed from their forefathers.

The historically significant structures remaining are mostly residential, with a few commercial buildings. The churches and schools have all been built since WWII. The Catholic Church was rebuilt after the war with materials existing on Likiep. It is presently under renovation. The village also has of large coconut groves, some of which were planted before the turn of the century and are still being used to produce copra. There is also food-producing plants and trees such as breadfruit, pandanus, and coconuts that were planted over 50 years ago and are still an integral part of the village food security (US Department of Interior 1986:7).

## 4.2 LOCAL FISHING PRACTICES

The most common fishing methods practiced by the community members in the three villages include:

- throw-nets;
- long drift nets;
- throw line;
- trolling;
- spear fishing;
- torch/machete for reef fish in the tide pools, and;
- fishing with torch and net for flying fish.

Most fishing activity is carried out by men. They are usually seen on the beach throwing fishing nets to catch the gold spot herring *Herklotsichthys delicatulus*. The fish are caught for bait and consumption. Men also commonly practice spearfishing with torches during nighttime. The types of fish that are caught using this method include goatfishes *Mulloidis vanicolensis*, red snappers *Lutjanus gibbus*, grouper *Epinephelus miliaris*, and rabbitfishes *Siganus argeneus*.

The other fishing methods that are practiced by men include trolling, long drift net, scooping flying fish with scoop nets, and torch and machete to catch reef fish in the tide pools. The types of fish that are mostly caught using these methods are red snappers, groupers, and emperors. Most of these fish are caught for consumption on a daily basis and a few for commercial purposes and sold to the MIMRA Likiep Fish Base. Some are transported to relatives in Majuro and Ebeye.

Women mostly collect seashells from the lagoon. Shells such as cowries and oysters shells are used for handicrafts and sold to visitors and other outside buyers.



Handicraft Shells



Likiep Fishermen

### 4.3 LOCAL OPTIONS FOR MANAGING FISHERIES

In March 2003, the consultation process and the basis of the community based fisheries management program tasks between the fisheries facilitators and the Likiep communities took place. The prime reason was to identify and determine a few of the suitable avenues in establishing island rules and regulations in the process of overseeing, administering and enforcing the Likiep Atoll Local Government Fisheries Management Plan. Consensus was reached from the F-MAC members in that they supported the idea of having rules and regulations being established on Likiep Atoll. This would ensure a vital role of protecting and conserving the marine and coastal resources. It would also encourage the community members to partake in more responsible and friendly ways to replenish the depleted stocks in Likiep Atoll.

A few of the island rules and regulations addressed by the community members included: banning of destructive fishing method such as the use of dynamite and chemicals, size of fishing nets, catch limits, closed and open seasons during spawning, banning foreign vessels (public and private sectors), banning harvesting of giant clams, trochus, sea cucumbers and black pearl oysters for commercial purposes and off-island demands, banning shark fishing, banning harvesting of turtles and turtle eggs, banning dredging or mining, banning unsustainable fishing methods such as small size gill nets, banning spear fishing with SCUBA, banning fishing at night with underwater flashlights, banning collection of any shells, corals, plants or relics by tourists, banning



live fish trade and collecting, and banning live rock and coral harvesting

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#### 4.4 COMMUNITY WORKSHOPS

Community workshops throughout the remainder of 2003 identified many issues that affect the marine environment in Likiep. There were many requests from the community for technical assistance from MIMRA and other relevant government agencies to devise appropriate solutions. Fisheries facilitators provided guidance and support on how they could assist over time.

Below are some of the photos taken during the meetings that were held with the different groups. The meetings consisted of men, women, and youth to discuss the problems and opportunities within the marine environment of Likiep Atoll. The purpose was to find out the likely causes and effects of fisheries issues and to come up with solutions, including responsible parties that would be charged to carry out the actions required by the solutions. Most of the participants identified many of the issues that impact their marine environment. Some of the more dominant issues that were brought up were rubbish accumulation, non-local fishing activity, and unregulated and/or destructive fishing methods.



**Womens Group Meeting**



**Mens Group Meeting**



**Youth Meeting**

#### 4.5 FISHERIES MANAGEMENT ADVISORY COMMITTEE MEETING

In May 2003, the fisheries facilitators returned to Likiep and held meetings with the FMAC group to discuss the issues and solutions that were collected during the community workshops. This was to ensure that all the information was considered in formulating the draft Likiep Atoll Fisheries Management Plan (FMP).

A number of undertakings were discussed from both parties during the meeting. The Likiep community felt that the marine resources in the Likiep waters are slightly in decline over the past several years. Seaturtles, lobsters, and reef fishes are some forms of marine life that are experiencing this decline. Setting up Marine Protected Areas (MPAs) will be one of the tools to replenish depleted stocks. This was highlighted by at least one members of the FMAC group. Other discussion points included banning of fishing by non-local vessels in Likiep. This was one of the more significant issues brought up by the FMAC group. Moreover, government vessels in the South Pass have been fishing regularly at night before leaving the atoll. Hence, there is an urgent need to deal this problem.



The members of the FMAC group reached consensus and elected a few of their members to be on the monitoring and compliance subcommittee. This committee will monitor the regulations and bylaws that will evolve from the Likiep Atoll Fisheries Management Plan over time.

## **5 Objectives**

The objectives of the plan are as follows:

(a) Development for Fishery

- develop fishery to stabilize livelihoods of fishery communities, maximize economic benefits to Likiep Atoll community and realize stable supply for consumer within and outside of the Likiep Atoll.

(b) Fishery resources sustainable use

- realize sustainable use of fisheries resources in the Likiep Atoll.

(c) Conservation of marine environment

- conserve marine environment in the Likiep atoll water area.

(d) Ensure fishermen and local government's accountability to fisheries

- Define obligations and rights of Likiep community residents and duties and powers of the Local Government in order to ensure implementation of fishery management and to achieve the above objectives.

## **6 Strategies for attainment of the objectives**

The Local Government and Likiep Atoll community residents must implement the following measures:

(a) Defining of obligations of Likiep Atoll community residents

(b) Defining of rights of community residents

(c) Establishment of Fishery Management Organizations

(d) Preparation of Fisheries Management Ordinance (FMO)

(e) Monitoring of fishing

(f) Monitoring of catches

(g) Evaluation and Revision of Fishery Management Plan (FMP)

## **7. Duties and powers of the Local Government**

7-1 Establishment of Likiep Atoll Fisheries Management Advisory Committee

(FMAC) and call for meetings accordingly

The Local Government is responsible for establishment of FMAC and convening of the committee members for the meeting whenever deemed necessary.

#### 7-2 Establishment of Fisheries Management Ordinance (FMO)

The Local Government is responsible for preparation of FMO in consultation with FMAC. Prior to the introduction of the FMO to the council, the Local Government shall consult with the Director of MIMRA and the Attorney General to examine whether it is appropriate and in consistent with the existing law and regulations.

#### 7-3 Enforcement of Fisheries Management Ordinance (FMO)

The Local Government is responsible for enforcement of the adopted FMO.

### **Part 2 Obligations for Likiep Atoll community residents**

It is necessary to put Likiep Atoll community residents under obligations on fishery management for the purpose of sustainable use of fishery resources in the all Likiep Atoll waters:

To achieve the strategy, the following obligations will be clarified in the Fishery Management Ordinance:

- Implementation of fishery management;
- Establishment of organization on fishery management and participation to the organization;
- Obedience of the Rules;
- Monitoring of catches;

### **Part 3 Rights of Likiep Atoll community residents**

It is necessary to protect rights of Likiep Atoll community residents to exclusively utilize the fishery resources in all Likiep Atoll water area.

To achieve the strategy, the following rights will be clarified in the Fishery Management Ordinance:

- Exclusive fishing right in all Likiep atoll water area



- Exclusive fishing rights in limited inshore water area managed by communities
- Rights for aquaculture

## **Part 4. Fishery Management Organization**

### **1. Likiep Atoll Fisheries Management Advisory Committee (FMAC)**

It is necessary to establish FMAC to fill the following roles that:

- (a) consensus building on fishery management among community residents, and coordinating matters regarding use of fishing grounds and fishery resources in the Likiep atoll water area for establishment of a systematic and orderly fishery.
  
- (b) Reflecting the results of discussed matters to the fishery administration of the Local Government as a advisory committee. The process of formation of the organization, members to be involved, responsibilities of the organization will be clarified in the Fishery Management Ordinance.

## **Part 5 Establishment of Fishery Management Ordinance (FMO)**

In accordance with the Act, the Local Government is responsible for establishment of FMO considering the following items:

### **1 Public hearing from fishermen**

The Local Government shall implement public hearings on contents of FMO by means of holding an FMAC meeting in prior to adoption of FMO.

### **2 Rules on fishing**

FMO may include provision of rules on fishing for achievement of this plan regarding to:

- (a) Registration of fishery and fishermen
- (b) Fishing grounds
- (c) Target Species
- (d) Fishing gear and methods
- (e) Fishing seasons
- (f) Fishing boats
- (g) Penalty to violator
- (h) Establishment of community's exclusive fishing grounds

### **3 Licenses of fishing, aquaculture and sales**

#### 3-1 License for fishing boat

Regulations may be made regarding registration and licensing of fishing boats operating in the Likiep Atoll water area whether the boat is owned by Likiep Atoll fishermen or not.

#### 3-2 License for aquaculture

Regulations may be made regarding licensing to ones intending to operate aquaculture within certain occupies water areas.

#### 3-3 License for sale to outsides of the atoll

Regulations may be made regarding licensing to sales of fishery products from the Likiep Atoll to the outside.

### **4 Procedure for approval of FMP**

The Local Government, in accordance with the Act, shall consult with the Director of MIMRA and Attorney General for their comments and approval of the FMP draft.

### **5 Public announcement of FMO**

The Local Government shall officially announce the establishment and contents of FMO to the public in and out of the Likiep Atoll by means of distribution of printed matters, radio broadcasting and/or others.

## **Part 6. Surveillance and Penalty for Violation**

For the enforcement of FMO, surveillance and punishment of violation shall be implemented by cooperation of community residents and the Local Government.

### **1 Responsibility of community residents**

#### 1-1 Watch on fishing grounds and marine protect areas

Community residents have a responsibility of keeping watch over the fishing grounds and marine protect areas in Likiep water area against violation of FMO and other regulations.

#### 2-2 Reports to the Local Government

Community residents have a responsibility of report to the Local Government when violation is observed.

## **2 Responsibility of the Local Government**

### 2-1 Enactment of penalties

The Local Government has a responsibility of enacting penalties to violator.

### 2-2 Infliction of penalty to violator

The Local Government has a responsibility of inflicting a penalty to the violator.

## **Part 7 Monitoring of Catches**

For the achievement of the objectives of FMP, Likiep Atoll fishermen and the Local Government shall implement monitoring of catches and report the results of those to MIMRA.

### **1 Survey methods**

Each members of FMAC shall collect data of catch from each Community Group engaging in any Fishing Activities and submit those to MIMRA.

### **2 Assistance by MIMRA**

FMAC and the Local Government may request an assistance for implementation of monitoring of catches.

## **Part 8 Evaluations and Revision of Fishery Management Plan (FMP)**

Fishery Management Plan shall be periodically evaluated and revised in order to keep the FMP suitable of the present fisheries state.

### **1 Evaluation of FMP**

#### 1-1 Implementation of evaluation

MIMRA shall conduct evaluation of FMP in accordance with the Act and submit an evaluation report to the Local Government. The evaluation shall be basically implemented every two (2) years after enforcement of this FMP. However, it may be conducted anytime if MIMRA finds a necessity.

## 1-2 Contents of evaluation

The evaluation of FMP shall be includes the following contents:

- (a) Degree of achievement of the objectives
- (b) Effectiveness of FMP and FMO
- (c) Performance of the Local Government, FMAC

Also, it is preferable to employ the following indices in the report:

- (a) Change of catches of fishery resources
- (b) Change of stock of fishery resources
- (c) Enforcement situation of FMO (e.g. contents of violation, change of number of violator)

## **2 Revision of FMP**

The Local Government shall follow the procedures mentioned below when FMP is revised:

### 2-1 Review of evaluation report

The Local Government shall submit the evaluation report prepared by MIMRA to FMAC and hear its opinions on the report.

### 2-2 Preparation of revised draft of FMP

The Local Government shall prepare a draft of revised FMP reconsidering the opinions of FMAC.

### 2-3 Approval of revision of FMP

The Local Government shall consult with the Director of MIMRA and the Attorney General for their comments and approval on the revision of FMP.

### 2-4 Adoption of revised FMP

The Local Government shall submit the revision of FMP with the comments by the Director of MIMRA and the Attorney General to FMAC. When FMAC accepts the comments and revision of FMP, it may be brought up to the Local Government Council for adoption.

## **Part 9        Miscellaneous**

### **1        Collection permits for research and study**

The Local Government may issue a permit to collect marine organisms in the Likiep Atoll water areas without restriction of FMO to a person or persons engaged in bona fide scientific research by affiliation with or sponsorship by a duly constituted governmental agency, an accredited educational organization or other recognized scientific research institution if the purpose of collection is limited to researches and studies and seemed to be reasonable. The person or persons who collected marine organisms with the collection permit has a responsibility of reporting the results to the Local Government.

### **2        Multipurpose utilization of fishery resources**

The Likiep Atoll community residents shall make efforts for development of multipurpose use of fishery resources such as aquaculture, offshore fishing and tourism related to fishery resources and fishery activities, and canoe buildings activities and handicrafts.

## **Part 10       Commencement of Fishery Management Plan (FMP)**

This Fishery Management Plan shall be effective and commenced upon the adoption of the Likiep Atoll Government Council.