

# Cook Islands Pearl Industry Pearl Biologist for Manihiki

Ministry of Marine Resources ([rar@mmr.gov.ck](mailto:rar@mmr.gov.ck))

## Terms of Reference

The Ministry of Marine Resources (MMR), Cook Islands Pearl Authority (CIPA) who handles marketing and export of Pearls and the Manihiki Pearl Farming Association (MPFA) are working together to further develop the Pearl Farm Management Plans for Manihiki and Rakahanga and to enhance the compliance of Manihiki farmers. There is an increasing need to do research to improve the productivity of pearl farming, pearl quality, production capacity, and independency in the pearl industry.

The position is to carry out research activities as stipulated in the Business Plans and as directed by the Ministry, and to implement various work plans in terms of long or short term research programs to improve pearl quality and expand production for profitable pearl farms.

A multidisciplinary expertise is required in the areas of fisheries management, marine ecosystems, water quality management and GIS to do with mapping.

The Marine Biologist appointed should see this work in the context of a range of activities that are being implemented to contribute to the revitalisation of the Cook Islands Pearl industry. The pearl industry has been a major contributor to the economy of the Cook Islands in the past and has played a significant role in providing significant cash income opportunities for people living in the Outer Islands. The pearl industry is seen as critical from both an economic as well as social perspective for the future of these islands.

The Cook Islands Pearl Authority (CIPA) in partnership with the Ministry of Marine Resources (MMR) have developed new marketing strategy to differentiate CI pearls from those from Tahiti to increase ease of market entry and penetration. The following actions are identified to aid this:

- Improving production
- Improving consistency in pearl grading
- Improving husbandry practices to improve both production and business profitability
- Improving pearl quality
- Monitoring of lagoon quality & health
- Climate change mitigation & adaptation

MMR is developing its extension services to assist farm husbandry and is working closely with the Manihiki Island Council to implement a lagoon management plan aimed at reducing the incidence of disease and mitigate the effects of climate change, support annual farm business profitability benchmarking exercises, pearl industry census and wishes to enhance its research and development support for the industry. The activities outlined here is a critical first step in MMR establishing a strong Pearl Industry Development and Recovery Plan (R&D) program.

## **PURPOSE OF THE POSITION:**

The position will be based in the Pearl Support Division at the Manihiki Research Station on the island of Manihiki and is responsible to carry out research, monitoring and outreach activities as stipulated in the Business Plans and as directed by the Ministry.

The Ministry of Marine Resources (MMR) proposes to undertake the contract for a term of 1 year (short term) and is open for review each year.

The project will focus on several key components:

- (1) Support the Water Quality Monitoring Program in Manihiki.
- (2) Assist in the farmer census, lagoon mapping and economic benchmarking surveys.
- (3) Support the Manihiki Manager with providing support to the Cook Islands Pearl Authority, Manihiki Pearl Farmers Association, Manihiki Island Councils and Pearl Farmers.
- (4) Assist in the development of Pearl Farm Management Plans for Rakahanga and farm monitoring for compliance for Manihiki.
- (5) Prioritise and undertake research to improve the productivity of pearl farming.
  - a. Proposed Research Activities
    - i. Pearl oyster collection optimisation
    - ii. Monitoring of the August 2014 research trials until completion
    - iii. Ways to improve abundance of high quality mantle donor oysters
    - iv. A genetic survey comparing cultured and wild stock
    - v. The effects of farming practices on local water quality and environmental condition
    - vi. Optimization of husbandry practices to increase the frequency of round pearls produced
    - vii. Selective breeding and screening programs.
    - viii. Suitable research program developed specifically for MMR and CI black pearl oysters.
    - ix. To have ongoing scientific and technical support available in the Cook Islands while the R&D program is established
- (6) Assist the Manihiki Manager in improving the production capacity and independency in the pearl industry.

MMR intends to review the progress of Pearl Biologist annually pending on performance on tasks allocated.

**KEY ACCOUNTABILITIES:**

<b>Key Accountabilities / Duties: Pearl Support</b>	<b>Performance Indicators / Measures:</b>
Assist and/or undertake the collection of samples for analysis in accordance with the Water Quality Monitoring Network For Cook Islands Version 5.0	<p>Sample collection in accordance with the monitoring plan.</p> <p>Best scientific practice and methodology adopted.</p> <p>Communicate results to farmers.</p> <p>Reporting according to WQ program communication plan</p>
Design and carryout farmer census, lagoon mapping and economic benchmarking surveys.	<p>Reports submitted to Director in a accurate and timely basis.</p> <p>Data entered, file and hard copy records maintained.</p>
Support the Manihiki Manager with providing support to Cook Islands Pearl Authority, Manihiki Pearl Farmers Association, Manihiki Island Councils and Pearl Farmers.	Reports submitted to Director where needed in an accurate and timely manner.
Assist in the development of Pearl Farm Management Plans for Rakahanga and farm monitoring for compliance for Manihiki	<p>Draft Management Plan for Rakahanga circulated.</p> <p>Reports for farmer compliance submitted to the MIG, Director in an accurate and timely basis.</p>
Prioritise and undertake research to improve the productivity of pearl farming.	<p>Reports on various research activities submitted to Director.</p> <p>Communication on research activities reported to Director.</p>
Assist the Manihiki Manager in improving the production capacity and independency in the pearl industry.	<p>Monitoring performed in a timely manner.</p> <p>Reports submitted to Director where needed in an accurate and timely manner.</p>
Provide support to the Secretary and/or other Divisions from time to time as requested to meet the wider needs of MMR	<p>Display willingness to support other team members when needed</p> <p>Display willingness to learn new skills to support the operations of MMR</p>
Promote MMR in positively in all internal and external communications with staff and stakeholders	<p>Develop and maintain awareness of MMR programs and their purpose</p> <p>Note that ALL communication with media (paper, radio, tv) is restricted to Director level and above.</p>
Contribute to a safe, clean working environment by maintaining neat and tidy standards of work,	Work area is clear at the end of each working day.

**ORGANISATION STRUCTURE:**

Immediate Supervisor: Manihiki Manager

Direct staff reports: Nil

Indirect staff reports: Nil

**AUTHORITIES:**

Financial Delegations: NIL

Personnel Delegations: NIL

**RELATIONSHIPS:**

Internal	External	Committees / Groups
Secretary	Manihiki Island Council	
Acting Director Pearls	Cook Islands Pearl Authority	
Manager Manihiki Research Station	Manihiki Pearl Farmers Association	
Manihiki Staff	Pearl Farmers	
MMR Staff		

**PERSON SPECIFICATION:**

Qualifications: Marine science or related degree

Experience: Previous work experience in the marine sciences

Special Skills: Competency in written and oral English;  
SCUBA diving qualifications  
GIS or mapping skills are an advantage