

# Collaborative Community-Based Research and Development of Resource Management Tools – A Pacific Water Case Study

## Overview

- A. Traditional Hawaiian ecological knowledge integration into Northwestern Hawaiian islands management
- B. Māori input and participation into land and water management
- C. Collaborative community-based research within Hawai'i

# Native Hawaiian Practices

## Permitted Activities

- Perpetuate traditional knowledge
- Care for and protect the environment
- Strengthen cultural and spiritual connections to NWHI



## Monument Management Planning

- Native Hawaiian Culture and History
- Native Hawaiian Community Involvement



# Kumulipo

Source of deep darkness

...Hānau ka pō  
Hānau Kumulipō i ka pō, he kāne  
Hānau Pō'ele i ka pō, he wahine ...

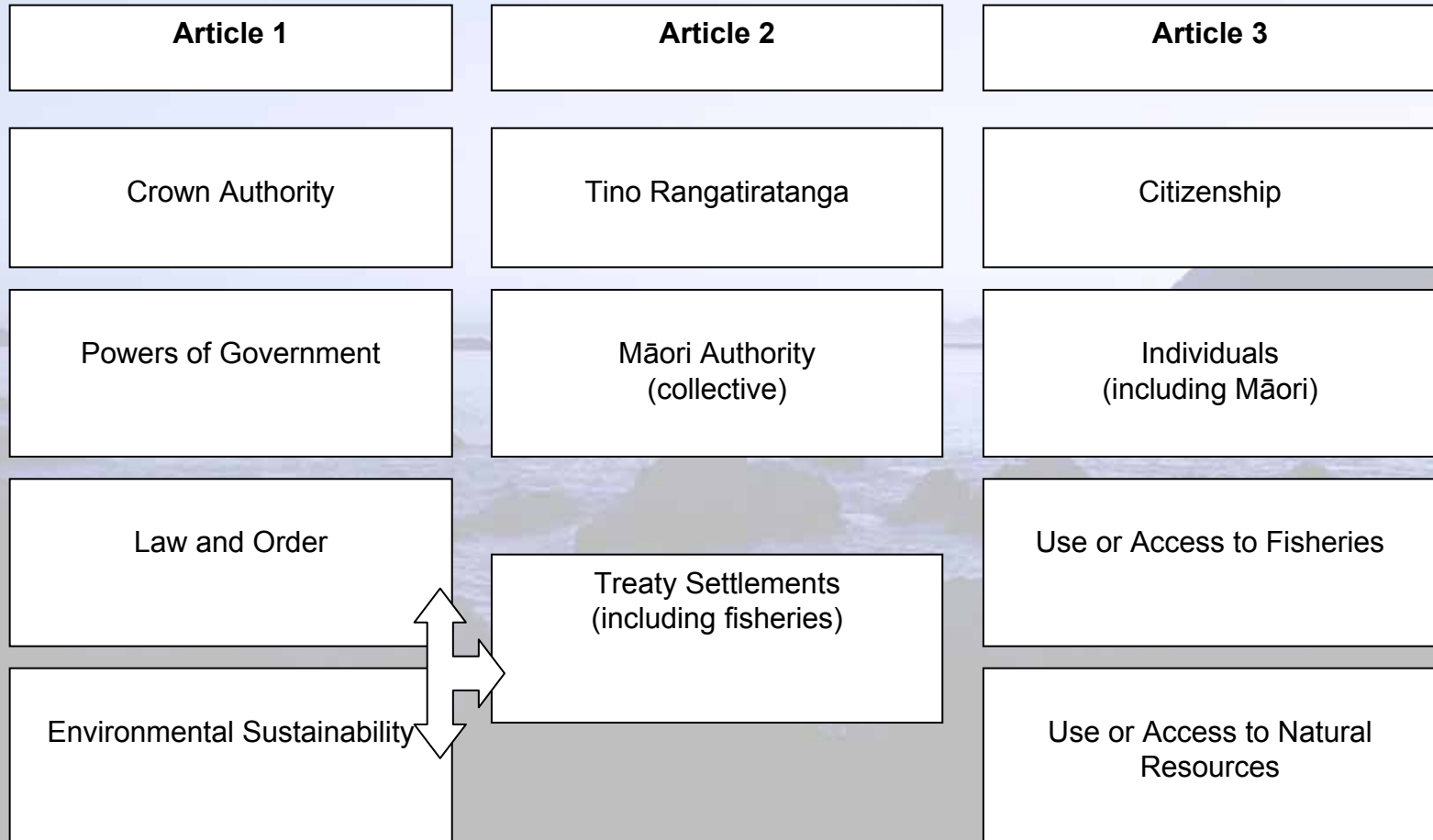
The night gave birth,  
Born was Kumulipō in the night, a male  
Born was Pō'ele in the night, a female



# New Zealand Resource Management

- 1840 Treaty of Waitangi (ToW) lays the foundation for partnership – Crown & Māori
- 1986 ToW first appeared in resource law - Environment Act
- 1992 Treaty of Waitangi (Fisheries Claims) Settlement Act
- Now a Treaty section and / or a section on Māori values are found in most resource laws

# Treaty of Waitangi Articles



# Freshwater Cultural Health Index Development

- Starting point are indicators of stream health used by Māori
- Chose two rivers
  - That were significant to Māori
  - Where western scientific information & traditional knowledge was available
- We chose 46 sites across the catchments
  - On different size streams, with different landuses, differing levels of significance to Māori

Data was collected at all 46 sites

# Cultural Health Index structure

<b>COMPONENTS OF CHI</b>	<b>VALUES</b>
<b>1. Status of site</b> Traditional (A) - Non-traditional (B) Will return (1)– will not return (1)	e.g. settlements, campsites etc
<b>2. Valued uses &amp; species</b> (4 indicators rated 1-5 and averaged)	Cultural use
<b>3. Overall health</b> (8 indicators rated 1-5 and averaged)	Health and wellbeing



Hogburn  
A-0 / 1.38 / 1.31



# Marine

## Goal 1

- Collate Māori customary fisheries knowledge
- Identify customary fishery goals & indicators
- Build confidence & enduring outcomes

## Goal 2

- Collaborating with stakeholders
- Develop culturally appropriate tools & frameworks
- Supported by e.g:

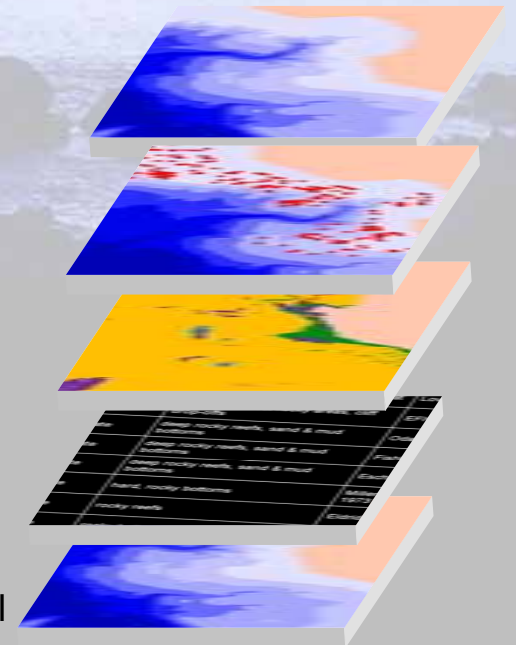
Fisheries Management (Mātaitai Reserve)

Catch Data

Habitat

Taonga spp life history & data

Scientists – spatial extent



# Marine

The background of the slide is a photograph of a coastal landscape. It shows a wide bay or inlet with a small boat in the distance. The water is a light blue-grey color. In the foreground, there are dark, rocky outcrops. The sky is a pale, hazy blue. The overall scene is serene and natural.

## Goal 3

- Implement & assess
  - customary fisheries management strategies & bylaws
  - compliance & monitoring
  - enforcement

## Goal 4

- Framework to integrate different spatial scales into fisheries management

# Integration of Indigenous Knowledge into Papahānaumokuākea Management

## Approach

- Native Hawaiian Research Plan development alongside Natural Science Plan
- Collaborative Research Initiative: 'OPIHI Project, Cultural Health Index Project
- Pacific Traditional Knowledge Workshop
- Response to Climate Change Workshop



# Key Lessons

- Incorporate an inter-generational perspective management practice
- Strengthen indigenous information systems and data management
- Build a cadre of resource managers skilled in science and customary practices



**Mahina Duarte**

**[mahina.duarte@noaa.gov](mailto:mahina.duarte@noaa.gov)**

**Gail Tipa**

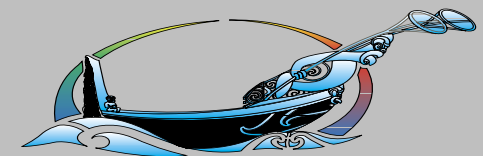
**[gtipa@ihug.co.nz](mailto:gtipa@ihug.co.nz)**

**Kelly May**

**[k.may@niwa.co.nz](mailto:k.may@niwa.co.nz)**



Tipa & Associates



**NIWA**  
Taihoro Nukurangi