



## MPAs: Now and Then

### > Section A) Kapus in Hawaii: Environmental Protection in the Ocean Before MPAs

#### Defining Environment

When we talk about protecting the environment, what do we mean? What exactly is our environment? It is a complex combination of all the living and non-living elements that surround us and that we depend on to survive. Our environment includes everything in our physical surroundings, along with the climate, chemicals, or any other conditions that affect how we live. To protect our environment, we need to understand exactly how all the elements in our surroundings interact. Scientists still have much to learn about how all the factors in our environment relate to each other.

Some cultures have ancient traditions and laws that encourage conservation and environmental protection. By studying their traditions, we can take these lessons and apply them to our conservation practices today.

The lush, tropical islands of Hawaii, America's southernmost state, have been home to the Hawaiian First Nation for over 2000 years. In traditional Hawaiian culture, fishing was a critical part of daily life. Fish were the main source of protein for Hawaiians, so skilled fishers were valued members of the community who were celebrated in stories. These tales were also created to teach the importance of conserving and protecting ocean resources.

Many of these stories tell of a family so skilled at fishing, they became gods. Ku'ula-kai, his wife Hina-puku-i'a, and their son Ai'ai were worshiped for their power over fish. They were also protectors of the fishing grounds who would punish people for overfishing.



Name: \_\_\_\_\_

It was the high chief's responsibility to make sacred laws, called kapus, that prevented people from fishing in the same places all year round. Fishing a species during its spawning season was also forbidden, which allowed time for the mature fish to give birth, and juvenile fish to grow and replenish their population.

Fishing kapus also changed with the season. During the summer, when fish were most abundant, fishers were permitted to fish close to shore. During the winter, inshore fishing was kapu, and deep-sea fishing was allowed. The inshore fishing kapu was not lifted until a high chief inspected the area to be sure that new growth had matured. While a kapu was enforced, it included every kind of life in the selected area. Taking any fish, seaweed or shellfish from that area was strictly forbidden, and could be punished by death.

In the Hawaiian tradition, the ancestral gods of many families were animals, plants, fish or other animals. It was kapu for members of a family to eat from the species of their ancestral god. These families also protected and cared for their animal, fish or plant relation. In this way, conservation, enforced by kapu, was central to Hawaiian culture, imbedded in day-to-day life, stories, law and tradition.

1. In what ways are ancient Hawaiian fishing kapus similar to MPAs? In what ways are they different?

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2. Short Essay: How should we establish and enforce MPAs?

In ancient Hawaiian culture, the tradition of conservation was passed down through generations by way of stories, religious beliefs and tribal laws. On a blank piece of paper write a short essay. How can we learn from the Hawaiian kapu tradition to make MPAs a part of global culture? Who do you think should be in charge of enforcing today's MPAs, and deciding where they should be?



> **Section B) Trading Cards: MPAs Today**

Less than one percent of the world's oceans are protected. With so much strain on our ocean resources, countries must commit to creating more MPAs as a way to safeguard our oceans today and for the future. Here are some examples of MPAs around the world.

### **The Great Barrier Reef Marine Park, Australia**

#### **Size**

At 344,400 square km, the Great Barrier Reef is the largest coral reef system on Earth. Most of it is protected, making it the second largest MPA in the world.

#### **Species**

Supports more than 15,000 species of fish, over 30 species of whales, and 350 species of coral, among others.

#### **Did You Know?**

Established in 1975, the Great Barrier Reef Marine Park is the best known MPA in the world. Its management and structure is often used as a model for newer MPAs.

### **The Northwestern Hawaiian Islands National Monument, U.S.A.**

#### **Size**

360,000 square km of reefs and deep sea. The largest MPA in the world.

#### **Species**

Supports more than 7,000 species including endangered animals such as the green sea turtle and the monk seal.

#### **Did You Know?**

By 2011, there will be no commercial fishing allowed in this MPA.



Name: \_\_\_\_\_

## Trading Cards: MPAs Today

### **The Ligurian Sea Cetacean Sanctuary, Mediterranean Sea**

#### **Size**

84,000 square km

#### **Species**

This sanctuary was created to protect marine mammals (cetaceans) like whales, dolphins and porpoises.

#### **Did You Know?**

The sanctuary was established by France, Italy and Monaco, making it the first (and only) MPA in international waters.

### **Cape Peninsula, South Africa**

#### **Size**

900 square km

#### **Species**

One of the most diverse stretches of coastline in South Africa, species protected include abalone, rock lobster, linefish and penguins.

#### **Did You Know?**

This area has the longest history of commercial fishing in South Africa. This protected area was established to help many overfished species recover.



Name: \_\_\_\_\_

## Trading Cards: MPAs Today

### **Gau Island, Fiji**

#### **Size**

Not yet established

#### **Species**

This is an area with diverse habitats. Many species flourish in the mangroves along the coastline. Mangroves are the only trees that can filter salt from water. Their roots extend into the ocean, providing a protective habitat for many species and fish nurseries.

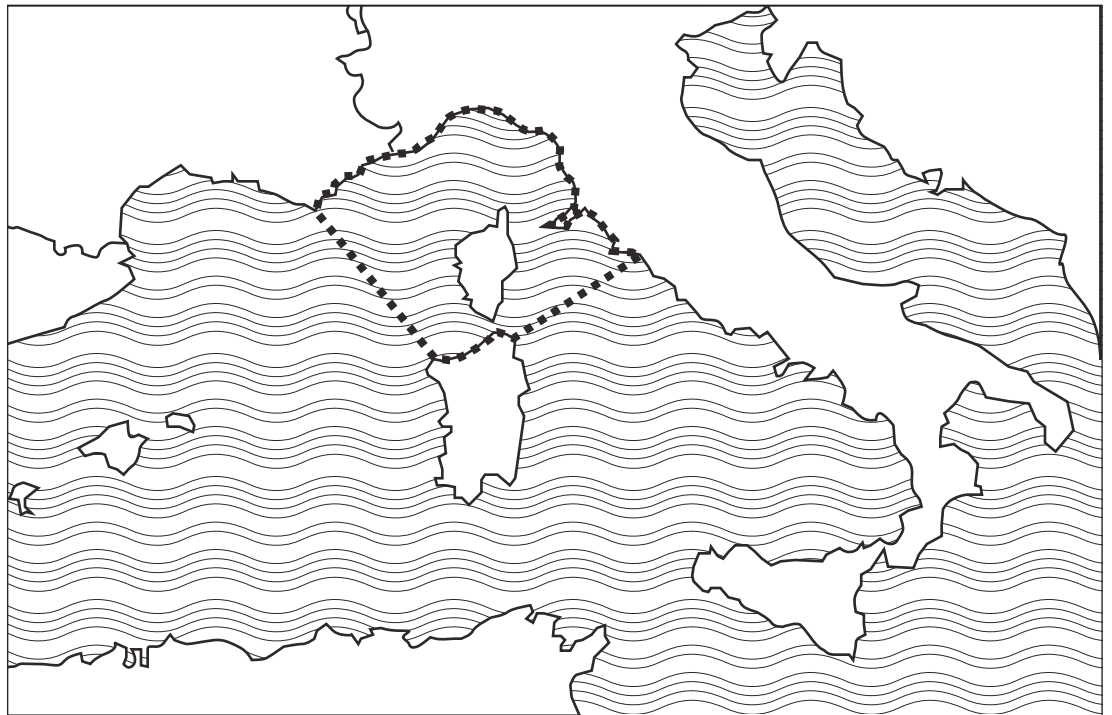
#### **Did You Know?**

Communities on Gau Island are working with WWF-Canada to develop locally managed marine protected areas.



Name: \_\_\_\_\_

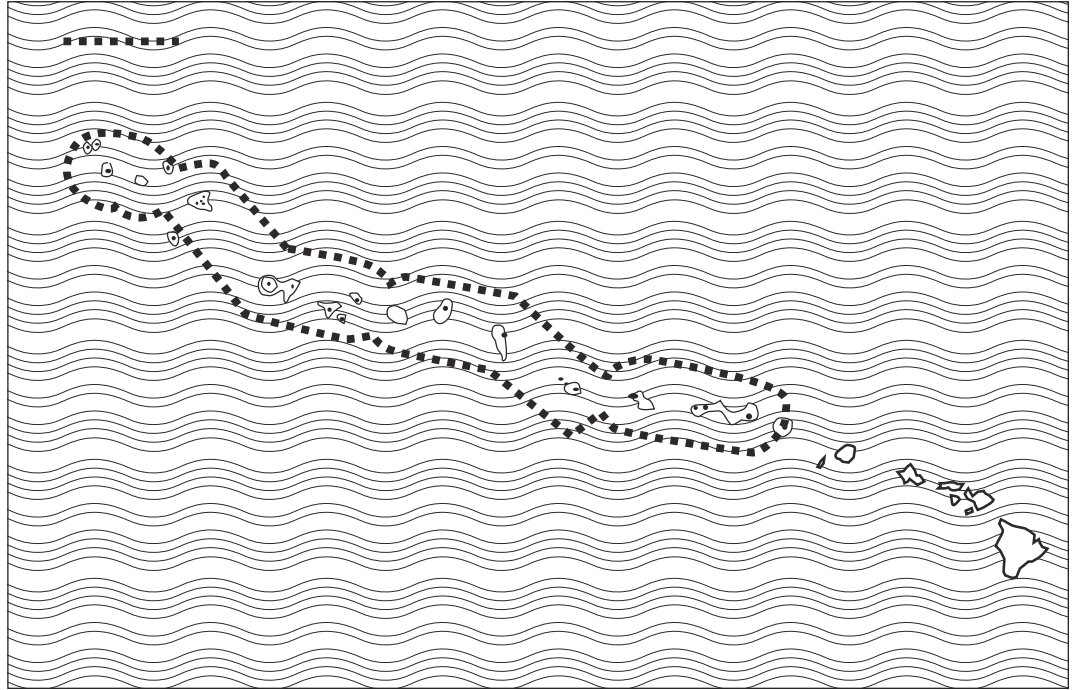
- i) Cut out the trading cards.
- ii) Use your atlas to match the maps below with the descriptions of MPAs in Section B. Redraw each map on the back of the corresponding trading card. Colour any open ocean in light blue. Colour MPAs in dark blue.
- iii) Label and colour in the country (or countries) that border the MPA. Are there any large cities or national parks near the MPA? If so, label them on the map.



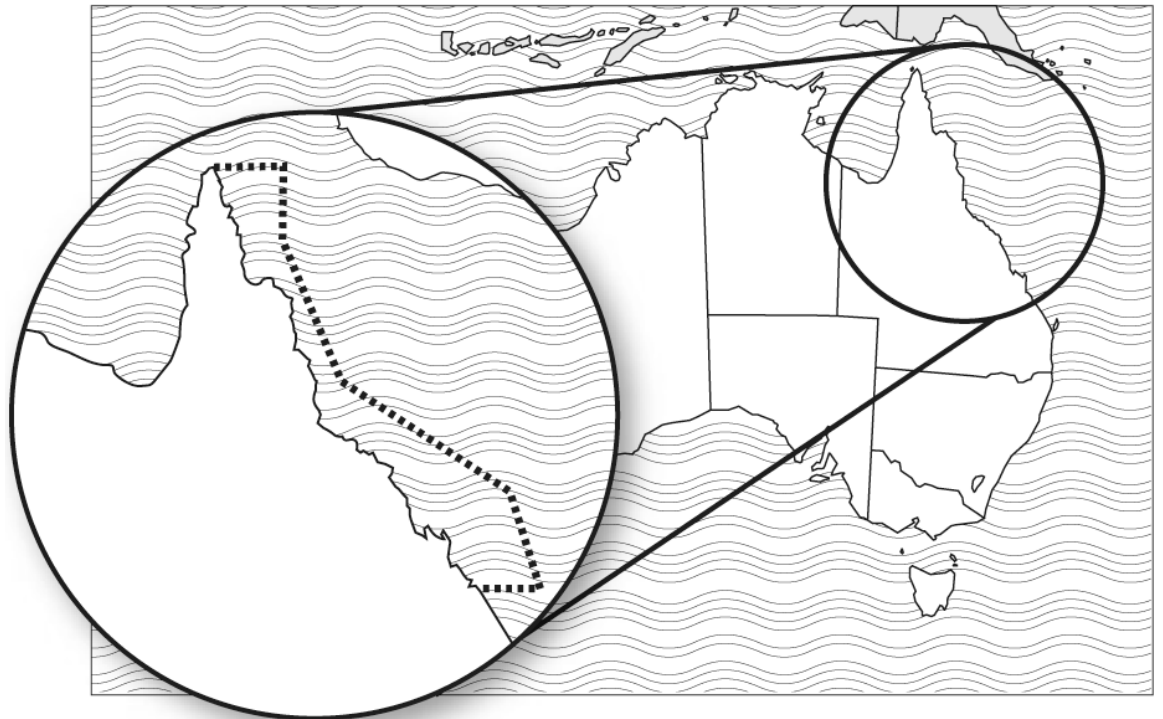
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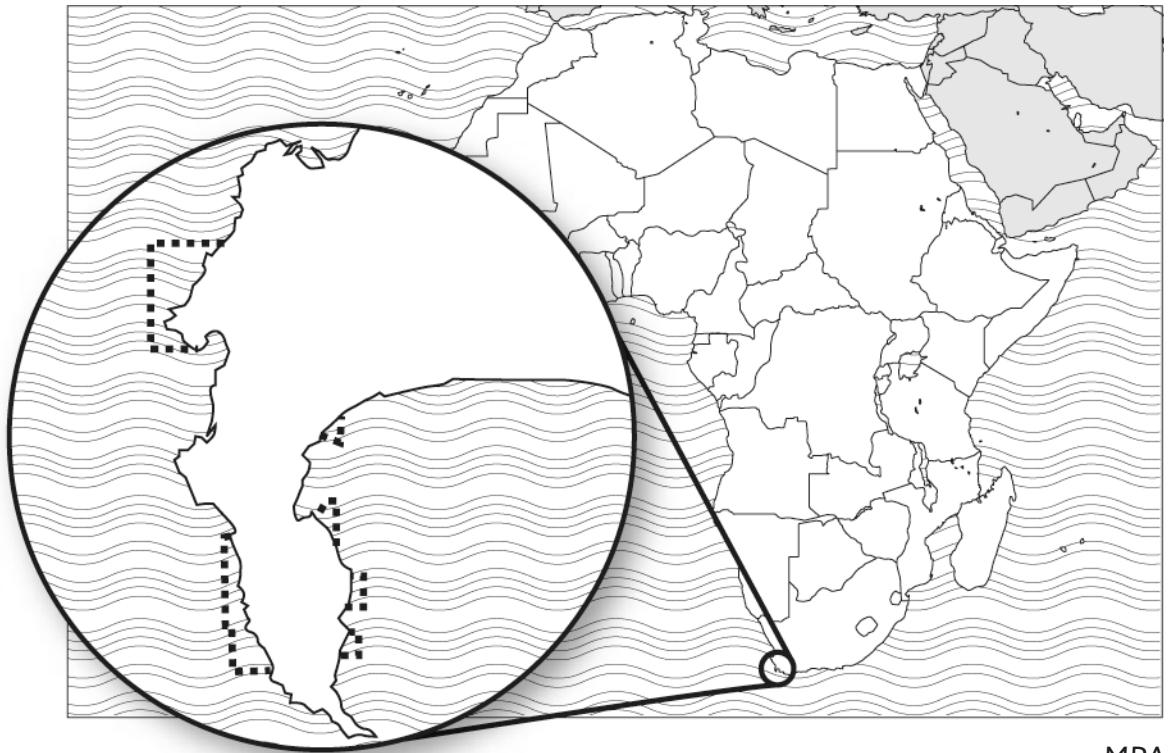
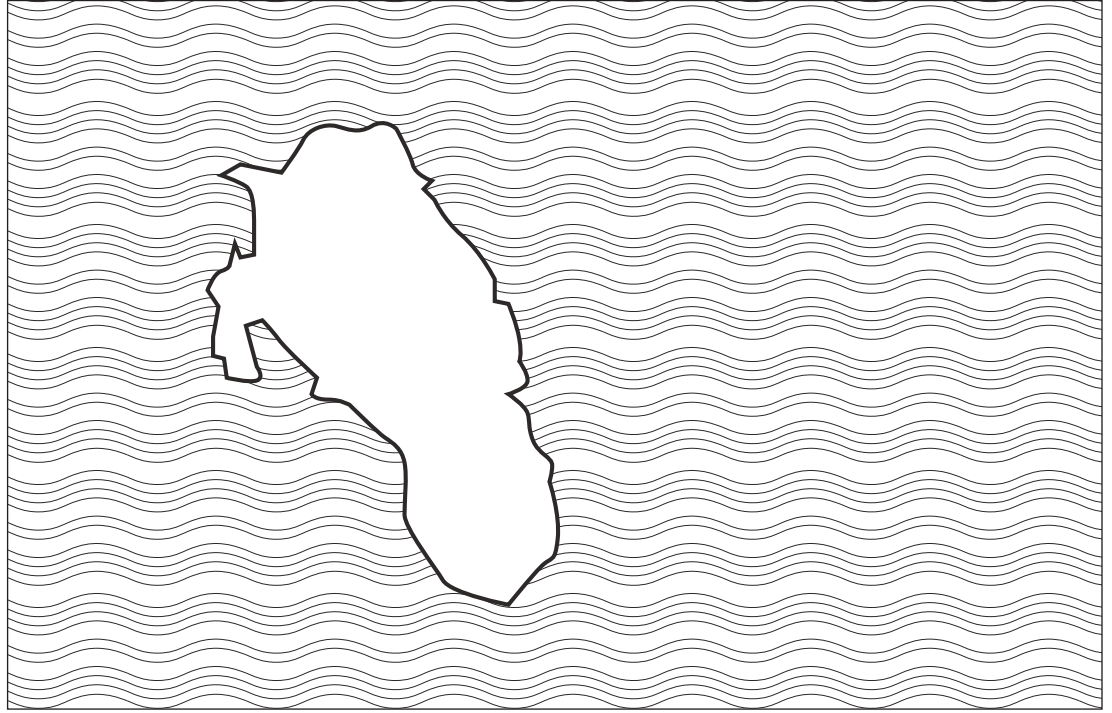
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> **Section C) MPAs in Canada**

i) In Canada, we have six designated Marine Protected Areas, and four MPA-Areas of Interest. These Areas of Interest are areas that need protection but have not been designated as MPAs yet.

**MPAs**

Eastport

Gilbert Bay

Basin Head

The Gully

Musquash Estuary

Endeavour Hydrothermal Vents

**MPA-Areas of Interest**

Bowie Seamount

Leading Ticks

Manicouagan

Race Rocks

ii) Divide your class into groups. Each group must research one Canadian MPA or MPA-Area of Interest. For information, visit the Fisheries and Oceans Canada webpage for **Marine Protected Areas**.

iii) Create a deluxe trading card for your group's Canadian MPA or Area of Interest. Research and fill in the information on the next page, including three interesting "Did You Know" facts about your selected area. Draw a map of the area on the back of your card. Once you've finished, "trade" information about your MPAs and Areas of Interest by presenting what you've learned to other groups in your class.



Name: \_\_\_\_\_

**Area:**

\_\_\_\_\_

**Bordering Provinces or Territories:**

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**Size:**

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**Species That Need to be Protected:**

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**Did You Know?**

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2. \_\_\_\_\_

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3. \_\_\_\_\_

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# Answers: MPAs: Now and Then

## Section A) Kapus in Hawaii: Protecting the Oceans Before MPAs

### 1. Open

- Compare kapus with MPAs. Kapus are similar to no-take zones or an area within an MPA where fishing is restricted.
- Both are attempts to regulate fishing by designating certain areas of the ocean as off-limits to fishers.
- Both MPAs and kapus are created in an effort to conserve ocean resources and protect the health and biodiversity of ocean ecosystems.
- Locations chosen for MPAs and kapus shifted according to fisher needs, and the health of fish populations. MPAs are usually in place for the long-term.
- Both can restrict fishing in areas of spawning (MPAs don't necessarily include spawning grounds, it just depends on the type and purpose of MPA if needed), and use methods of observation to determine the health of populations before protected areas can be reopened for fishing.
- Both relied on a system of government to enforce restrictions.
- MPAs are relatively new in our global culture, while the Hawaiian tradition of kapus is over 2,000 years old.

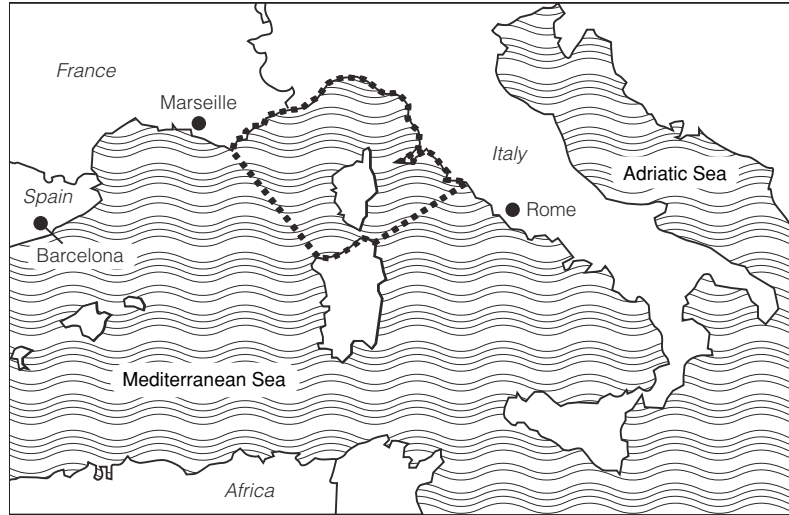
### 2. Open

- Student should use what they have learned about ancient Hawaiian kapus to provide suggestions on how to enforce and educate people about MPAs.
- Elaborate on methods used by ancient Hawaiians, like stories, religious beliefs and laws, and think about whether these same tools would be effective in our culture today.
- Does the student think MPAs should be created and regulated by governments? If not, then who should take responsibility for them?
- Student should also address the best way to disseminate information about MPAs today and encourage a culture that takes responsibility for conservation.
- Some suggestions on how to do this could be through cultural ethics taught by parents, in schools or in religious groups.
- Student might also compare ancient myths with current communication tools like newspapers, TV and the internet.

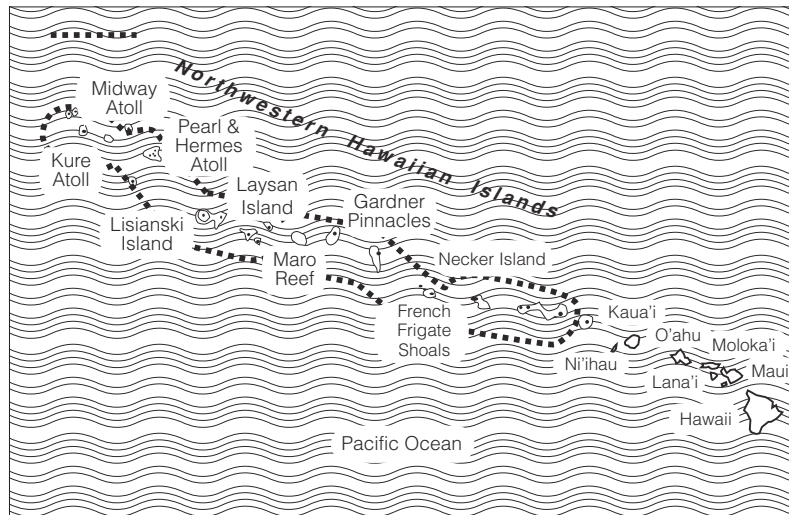


# Answers: MPAs: Now and Then (continued)

## Section B) Trading Cards: MPAs Today



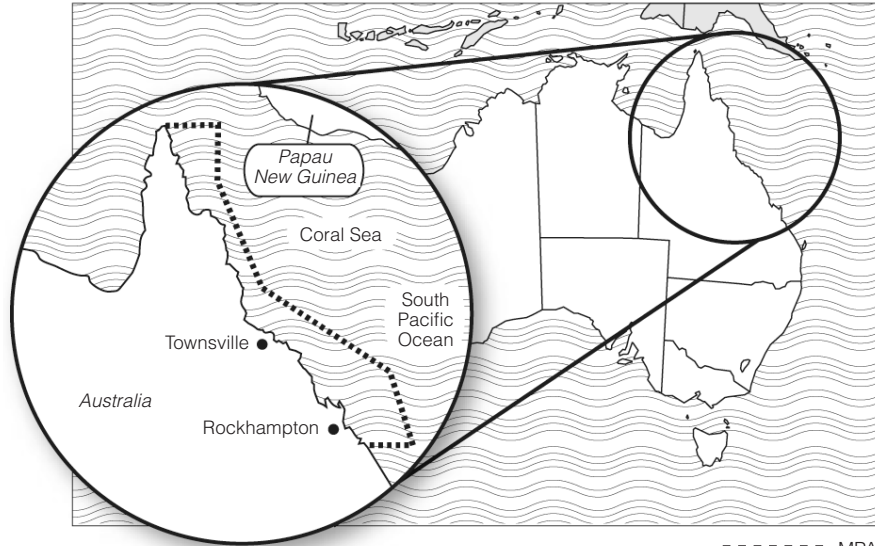
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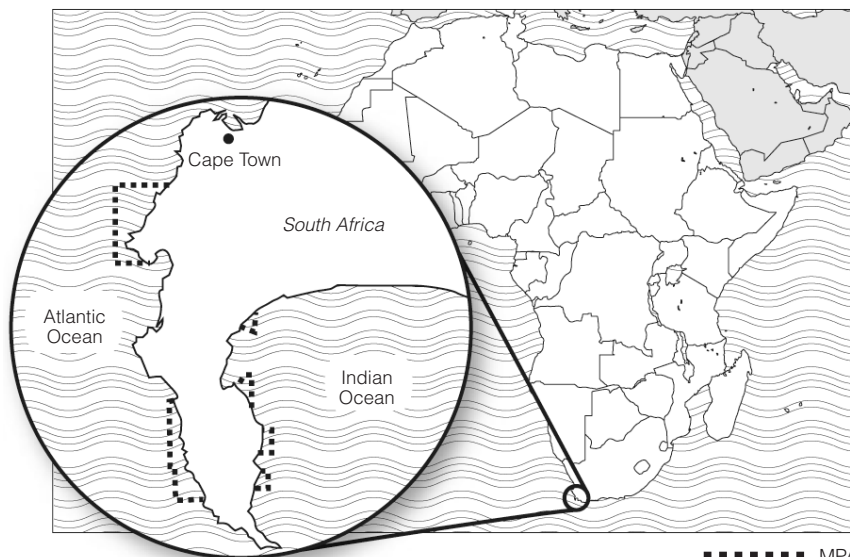
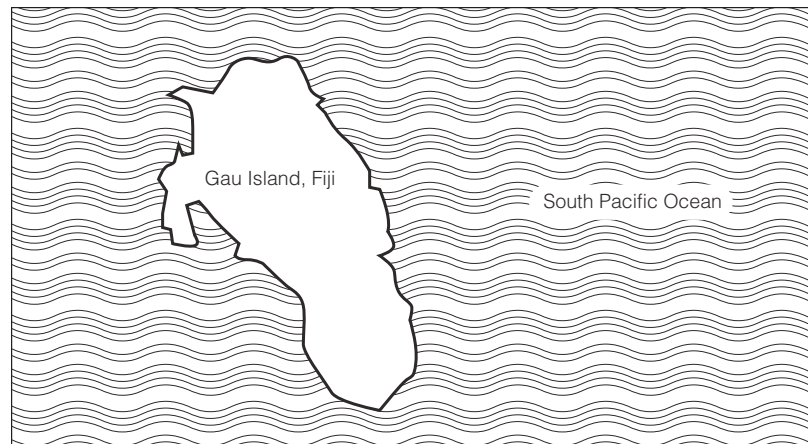
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# Answers: MPAs: Now and Then (continued)



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