

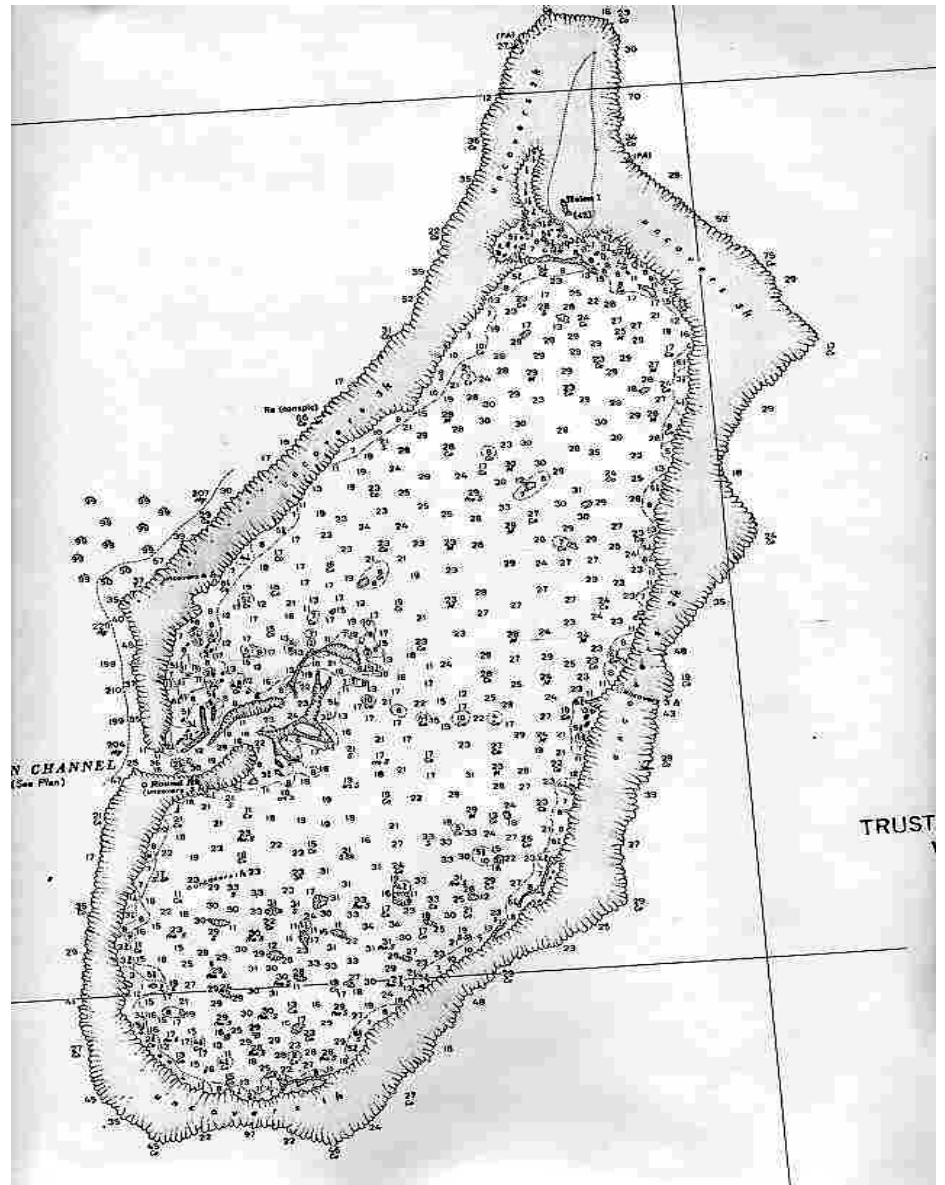
Conceptual Model Development for the Helen Reef LMMA Project

September 2000 – July 2001

Prepared by the
Hatohobei Community,
Helen Reef Action Committee,
The Hatohobei State Government,
and
the Community Conservation Network

HELEN REEF, HATOHOBELI STATE, REPUBLIC of PALAU

- 40 miles from nearest island
- 40 hours by ship to Palau's capital city
- 165 sq km
- Rich biodiversity
- Frequented by foreign fishing vessels and supply ships



Conceptual Modeling Process

The process of conceptual modeling for the Helen Reef Project took place in a series of steps.

Modeling progressed from simply from merely discussing the interests, problems and possible actions that the community could take...

...to more detailed outlining of the conservation targets and threats identified.

This development is displayed in the following Models 1, 2, & 3.

Model 1

Simple textual table of project goals,
obstacles, and actions.

**Table of Preliminary Conceptual
Modeling Process**

Regarding Hatohebei State Marine Resources
Atoll Way; September 1, 2000

**Table of Preliminary Conceptual
Modeling Process**

Regarding Hatohebi State Marine Resources
Atoll Way; September 1, 2000

Goals for the future:

Table of Preliminary Conceptual Modeling Process

Regarding Hatohebei State Marine Resources
Atoll Way; September 1, 2000

Goals for the future:

1. Abundance of Resources
2. Healthy Environment
3. Good Management

Table of Preliminary Conceptual Modeling Process

Regarding Hatohebei State Marine Resources
Atoll Way; September 1, 2000

Problems/Challenges:

Goals for the future:

1. Abundance of Resources
2. Healthy Environment
3. Good Management

Table of Preliminary Conceptual Modeling Process

Regarding Hatohobei State Marine Resources
Atoll Way; September 1, 2000

Problems/Challenges:

1. Enforcement (lack of); Sovereignty (lack of)
2. Lack of Training (education)
3. Lack of Funds
4. Community Support/Cooperation
5. Poor Communication

Goals for the future:

1. Abundance of Resources
2. Healthy Environment
3. Good Management

Table of Preliminary Conceptual Modeling Process

Regarding Hatohebei State Marine Resources
Atoll Way; September 1, 2000

Actions:

Problems/Challenges:

Goals for the future:

- | | |
|---|---------------------------|
| 1. Enforcement (lack of); Sovereignty (lack of) | 1. Abundance of Resources |
| 2. Lack of Training (education) | 2. Healthy Environment |
| 3. Lack of Funds | 3. Good Management |
| 4. Community Support/Cooperation | |
| 5. Poor Communication | |

Table of Preliminary Conceptual Modeling Process

Regarding Hatohobei State Marine Resources
Atoll Way; September 1, 2000

Actions:

1. Look for funds for activities
2. Increase enforcement capacity/activity
3. Promote community awareness and involvement
4. Develop a long-term management plan
5. Develop useful partnerships

Problems/Challenges:

1. Enforcement (lack of); Sovereignty (lack of)
2. Lack of Training (education)
3. Lack of Funds
4. Community Support/Cooperation
5. Poor Communication

Goals for the future:

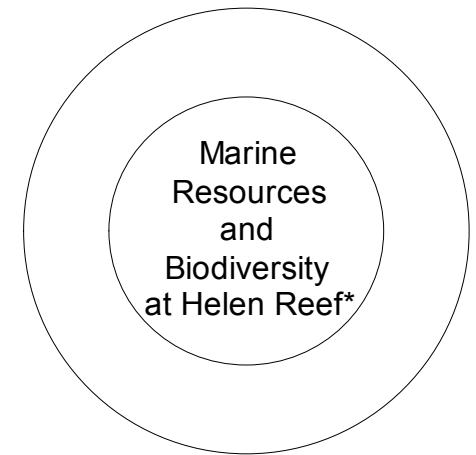
1. Abundance of Resources
2. Healthy Environment
3. Good Management

Model 2

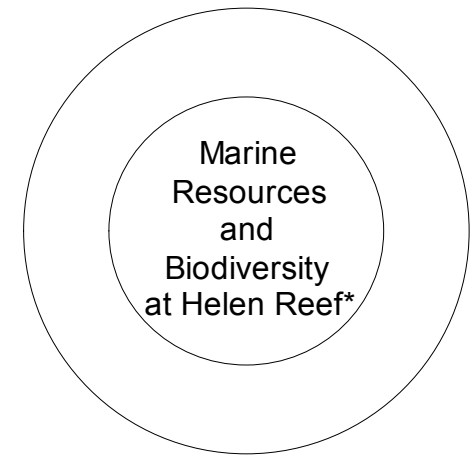
Identifying conservation target, basic threats, contributing factors, and actions.

**Conservation
Target**

Conservation Target



Conservation Target

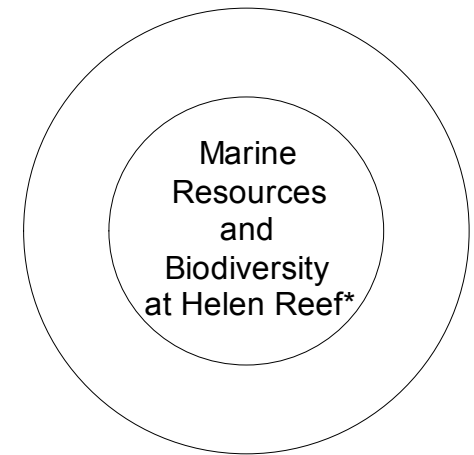


*Site Goals:

1. Abundance of Resources
2. Healthy Coastal Ecosystems
3. Good Management

Threats and Contributing Factors

Conservation Target

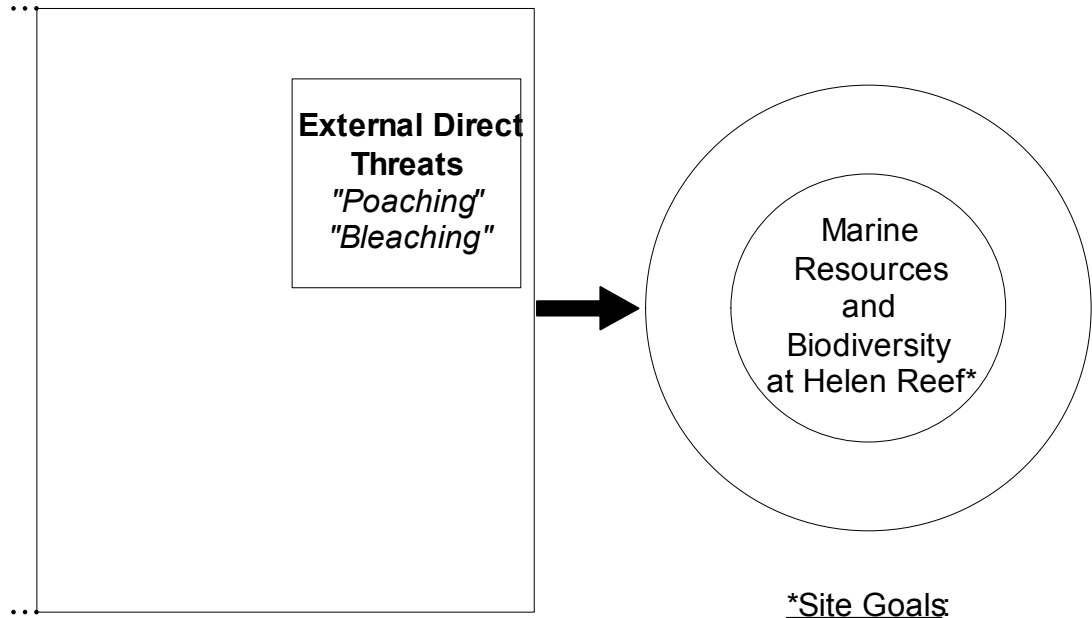


*Site Goals:

1. Abundance of Resources
2. Healthy Coastal Ecosystems
3. Good Management

**Threats and
Contributing
Factors**

**Conservation
Target**



**External Direct
Threats**
"Poaching"
"Bleaching"

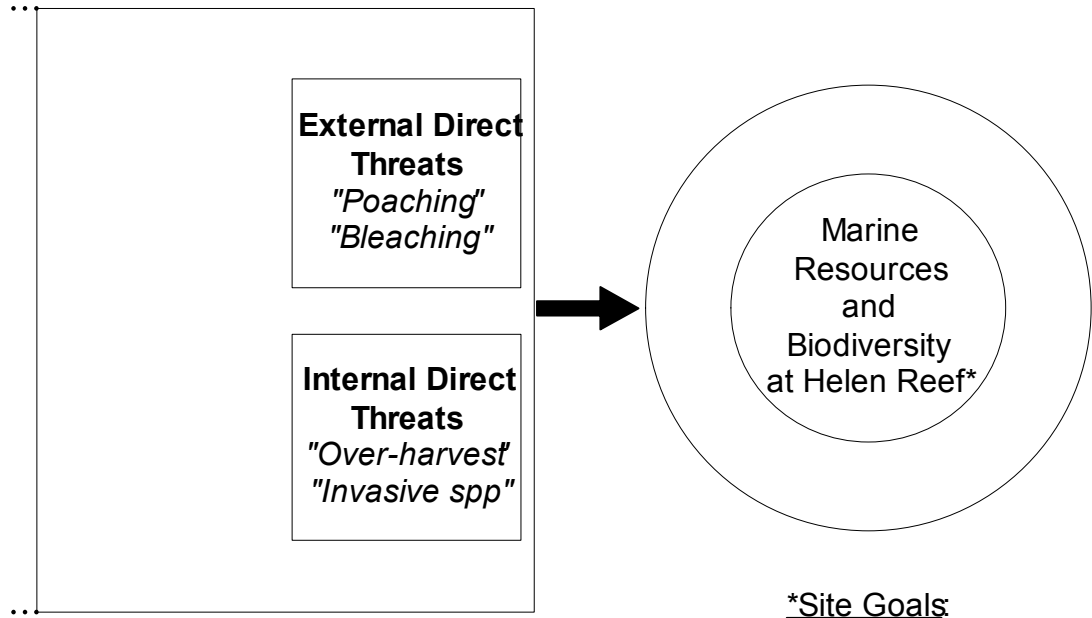
Marine
Resources
and
Biodiversity
at Helen Reef*

*Site Goals:

1. Abundance of Resources
2. Healthy Coastal Ecosystems
3. Good Management

**Threats and
Contributing
Factors**

**Conservation
Target**

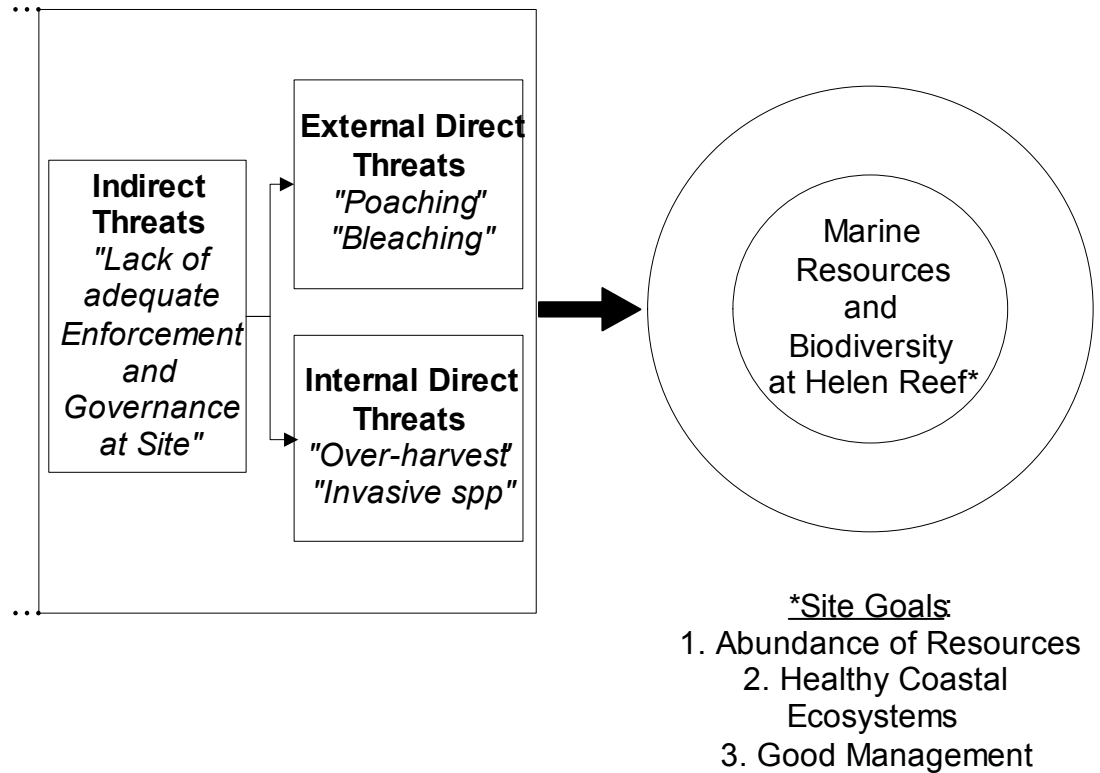


*Site Goals:

1. Abundance of Resources
2. Healthy Coastal Ecosystems
3. Good Management

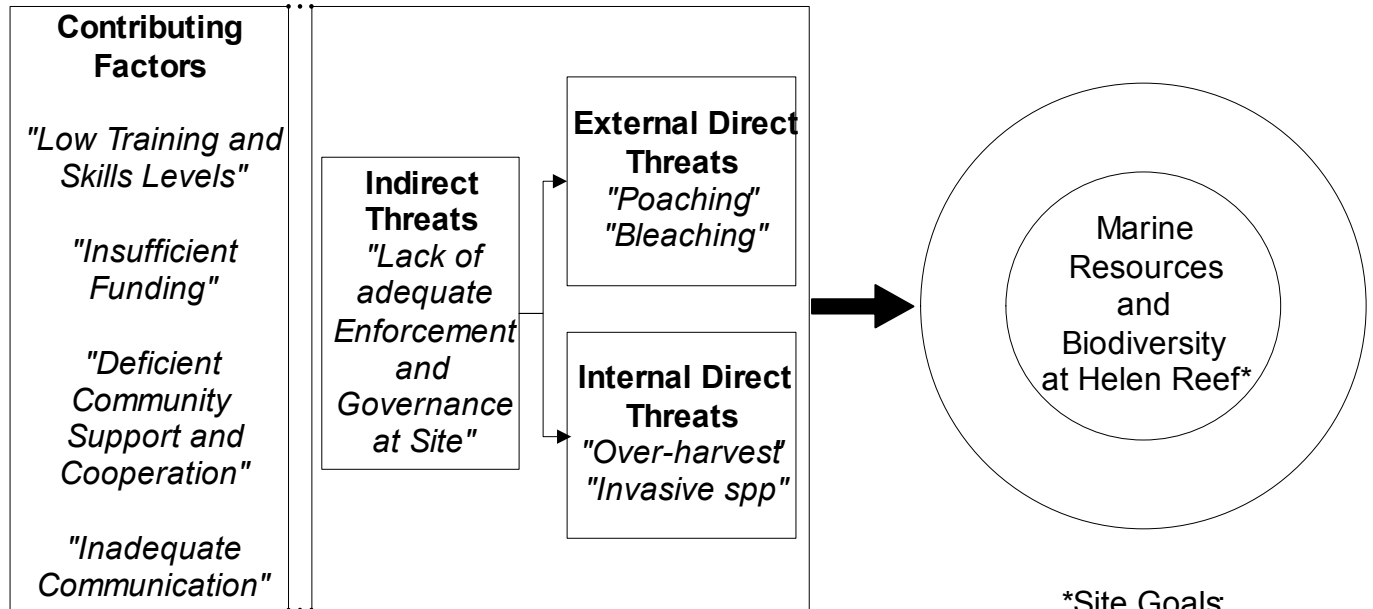
Threats and Contributing Factors

Conservation Target



Threats and Contributing Factors

Conservation Target



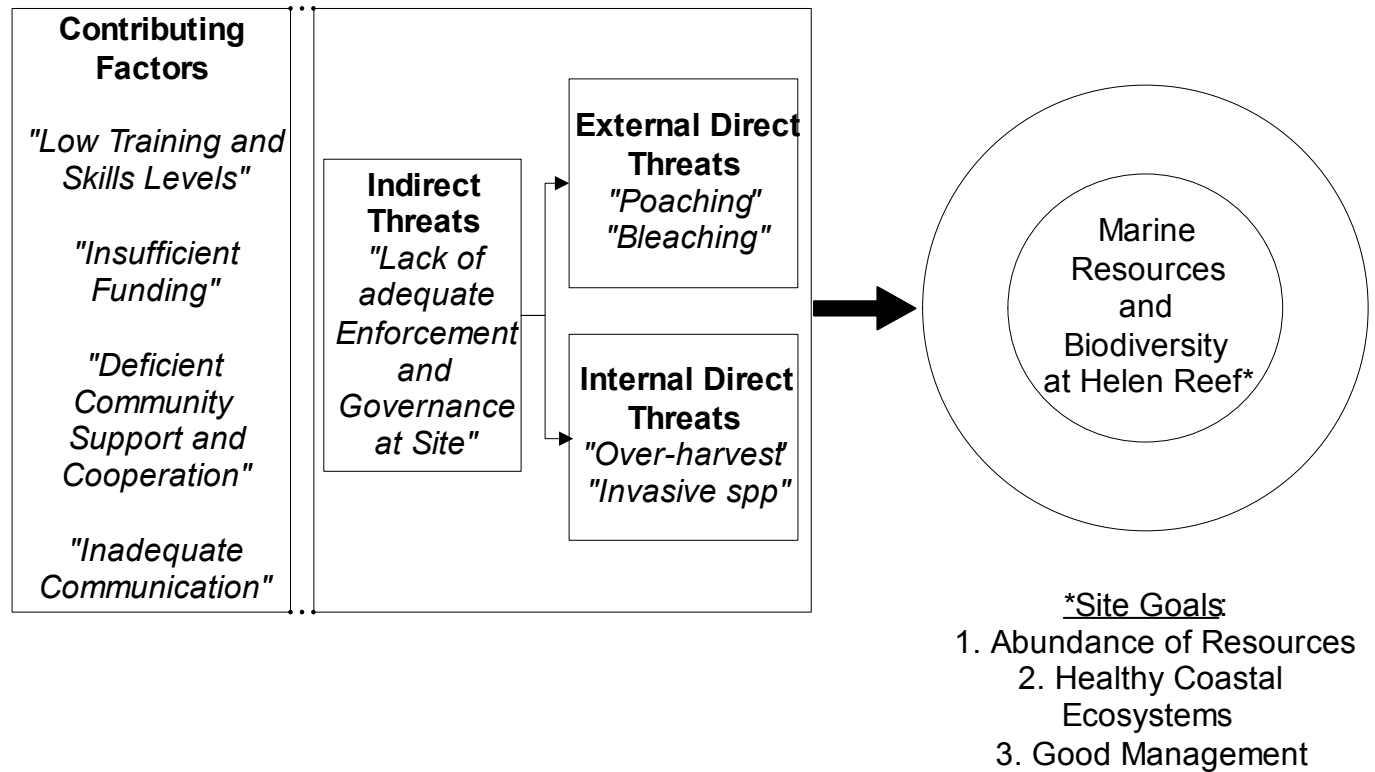
*Site Goals:

1. Abundance of Resources
2. Healthy Coastal Ecosystems
3. Good Management

LMMA Actions

Threats and Contributing Factors

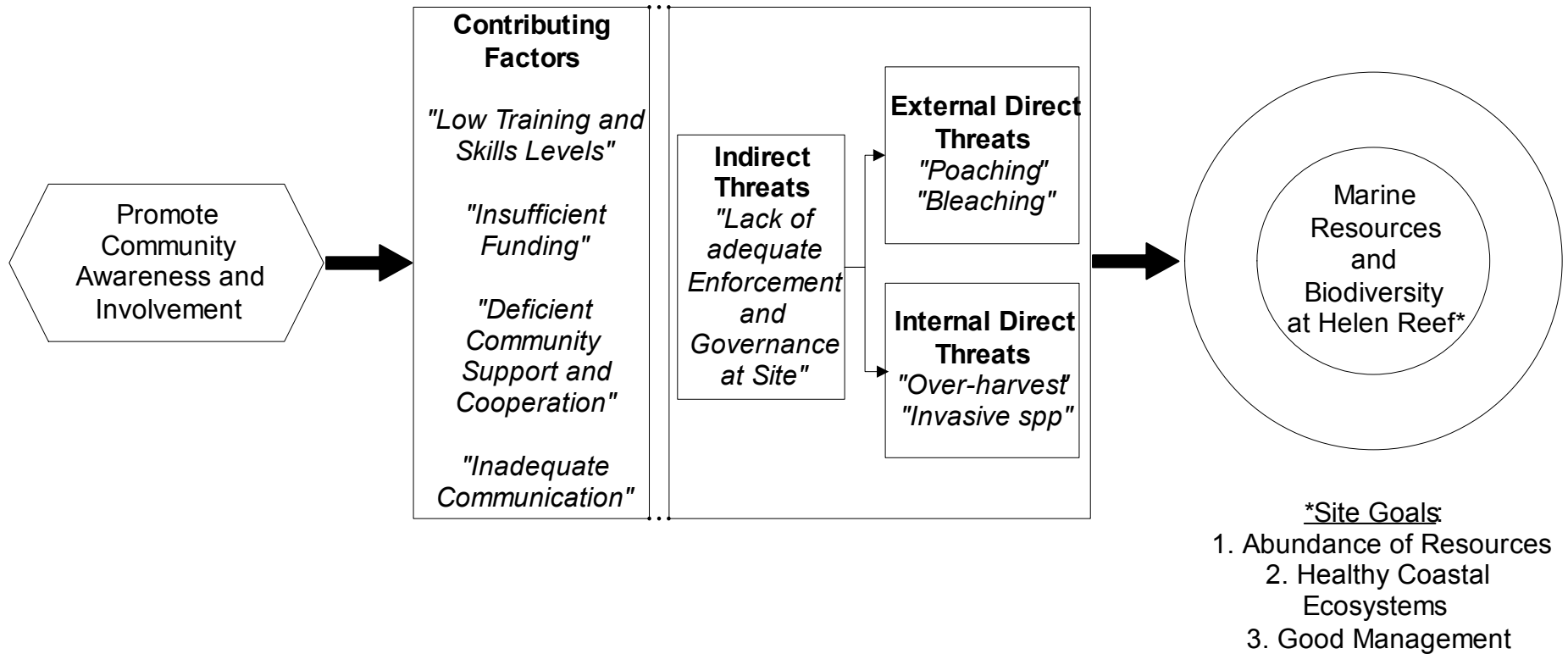
Conservation Target



LMMA Actions

Threats and Contributing Factors

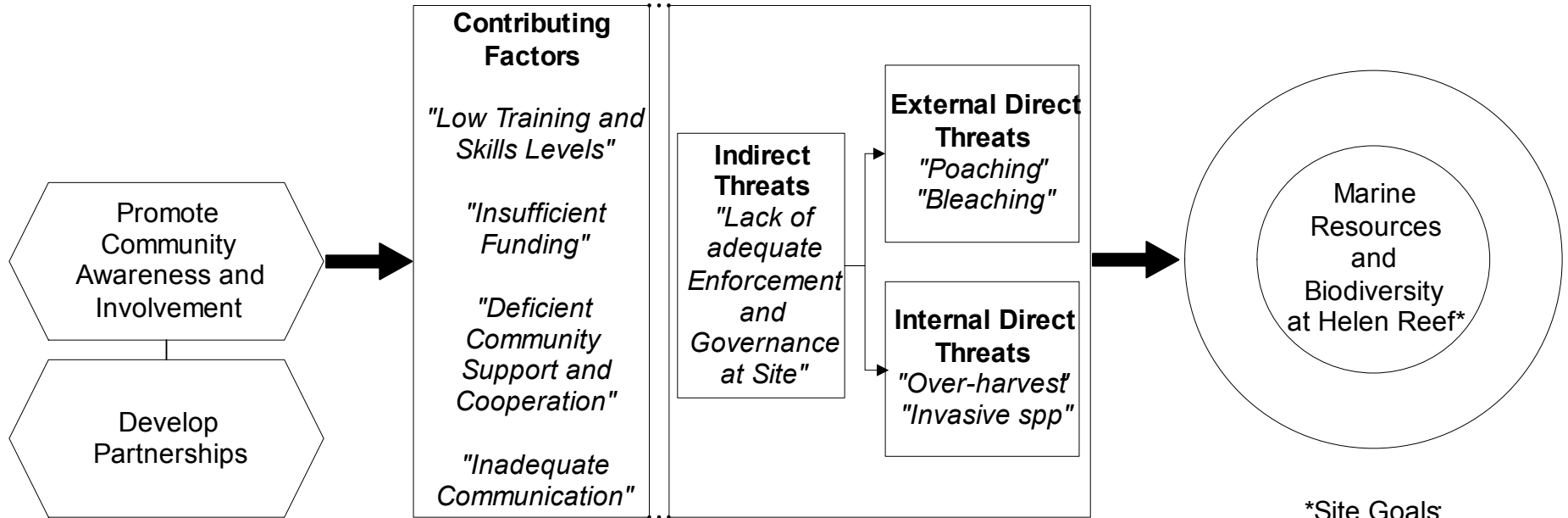
Conservation Target



LMMA Actions

Threats and Contributing Factors

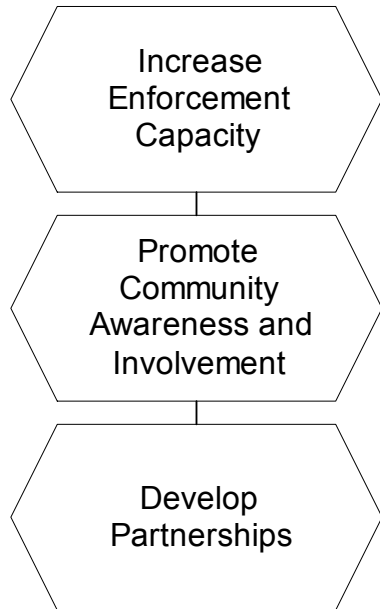
Conservation Target



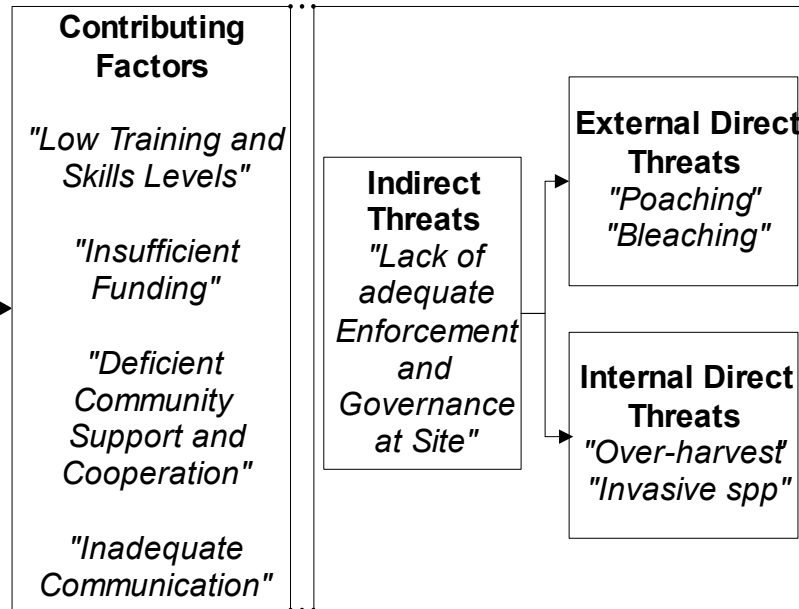
*Site Goals:

1. Abundance of Resources
2. Healthy Coastal Ecosystems
3. Good Management

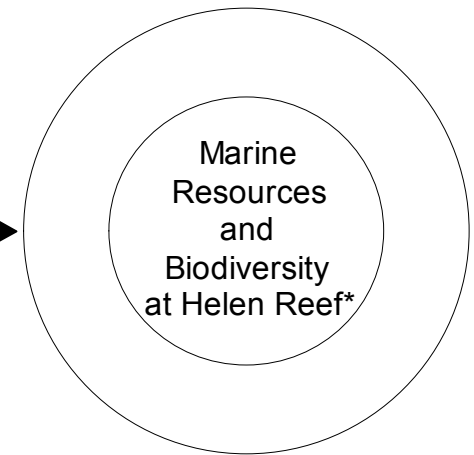
LMMA Actions



Threats and Contributing Factors



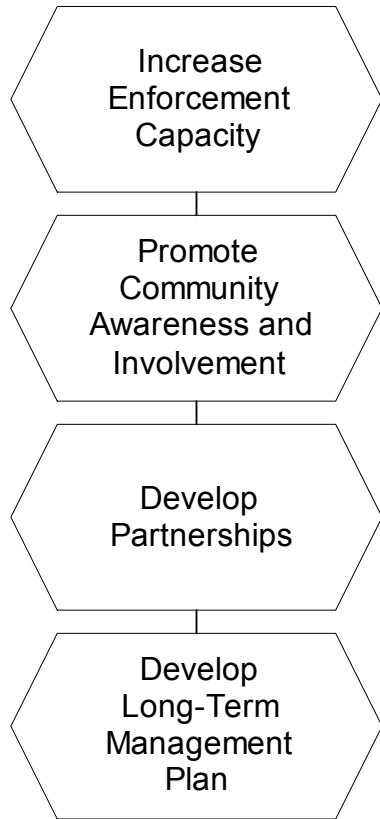
Conservation Target



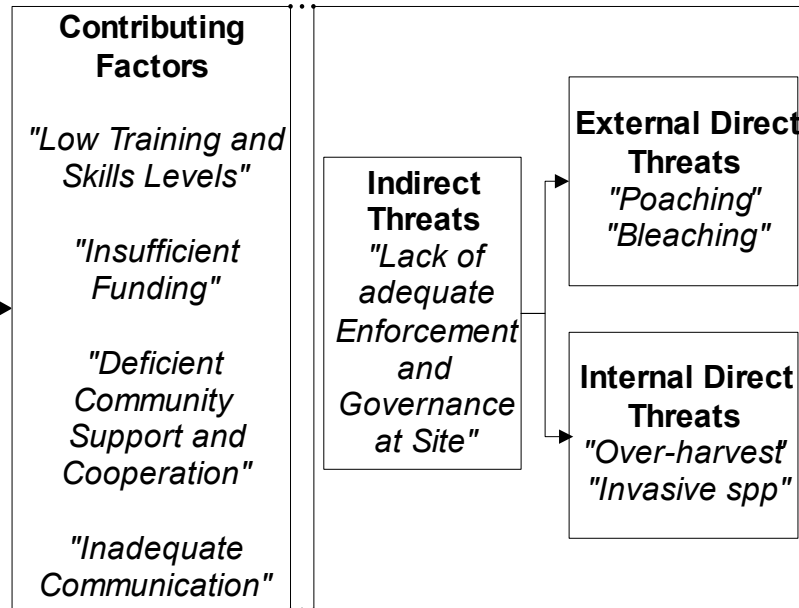
*Site Goals:

1. Abundance of Resources
2. Healthy Coastal Ecosystems
3. Good Management

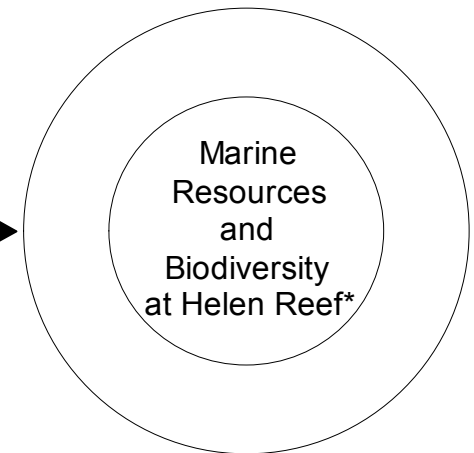
LMMA Actions



Threats and Contributing Factors



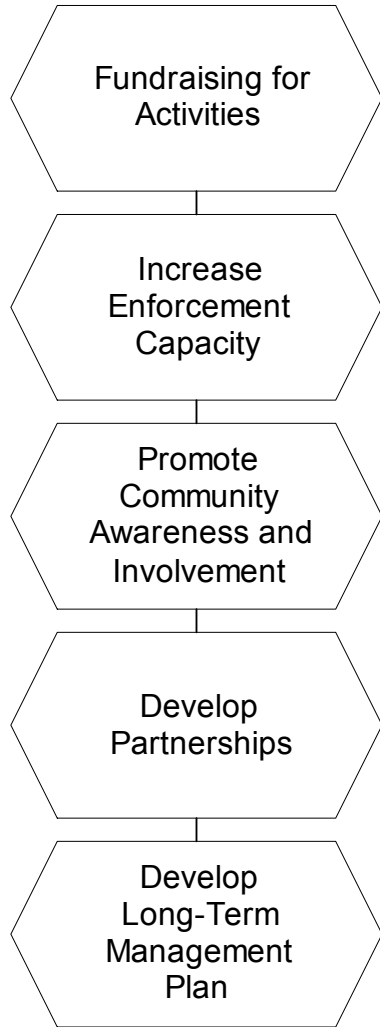
Conservation Target



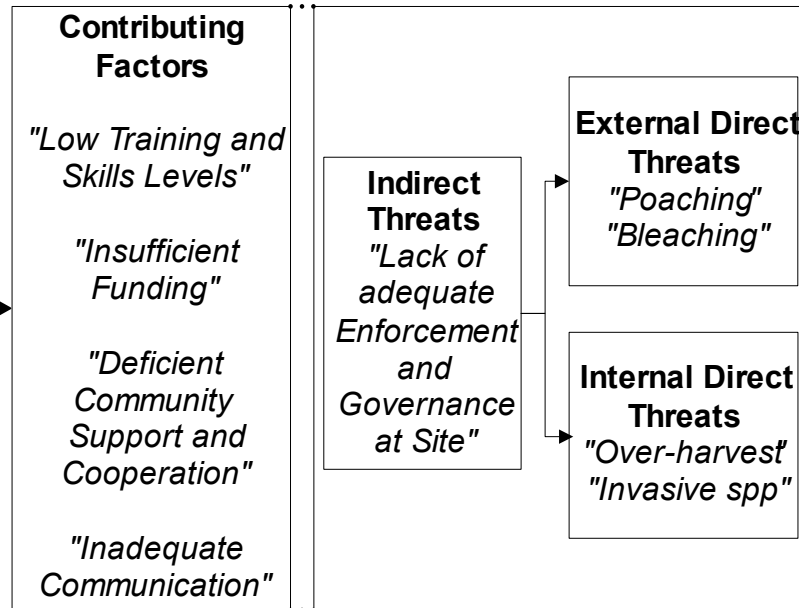
*Site Goals:

1. Abundance of Resources
2. Healthy Coastal Ecosystems
3. Good Management

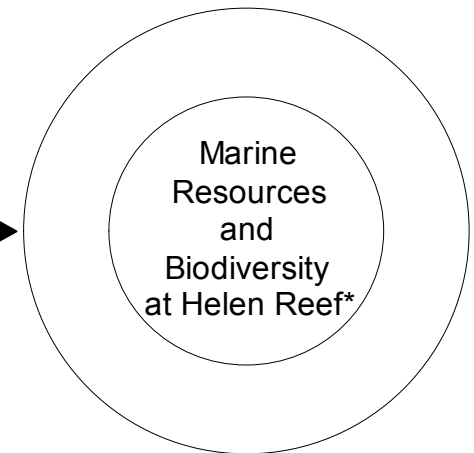
LMMA Actions



Threats and Contributing Factors



Conservation Target



*Site Goals:

1. Abundance of Resources
2. Healthy Coastal Ecosystems
3. Good Management

Model 3

Adding greater detail to conservation target and distinguishing internal and external threats.

Conservation Target

Conservation Target

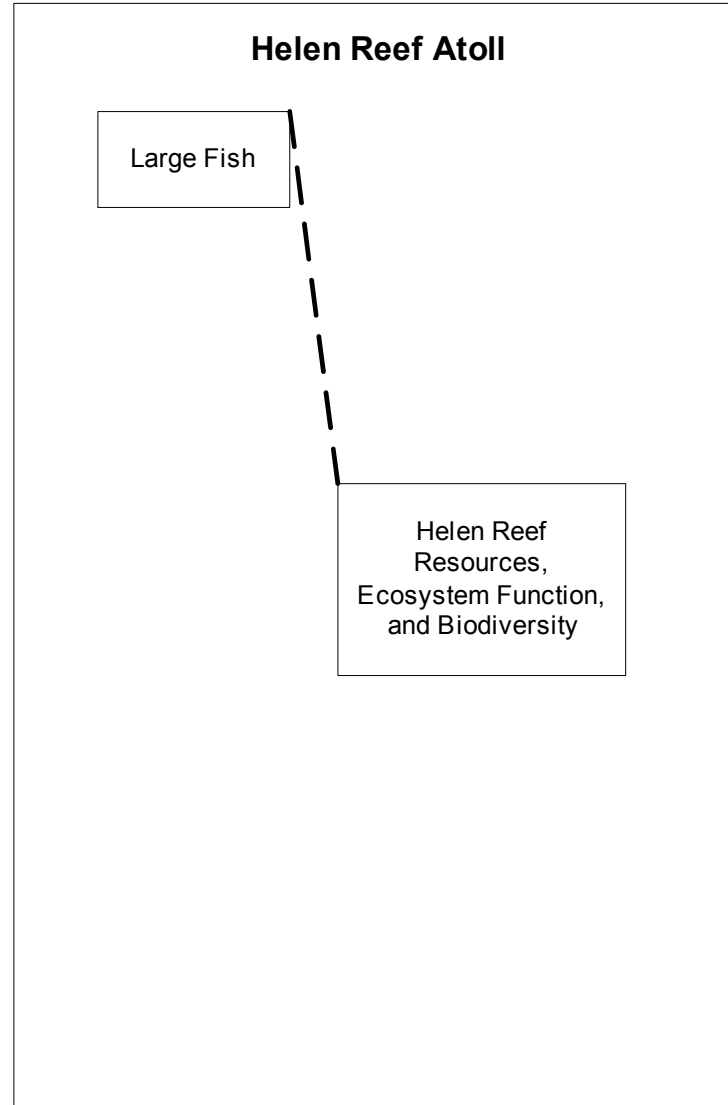
Helen Reef Atoll

Conservation Target

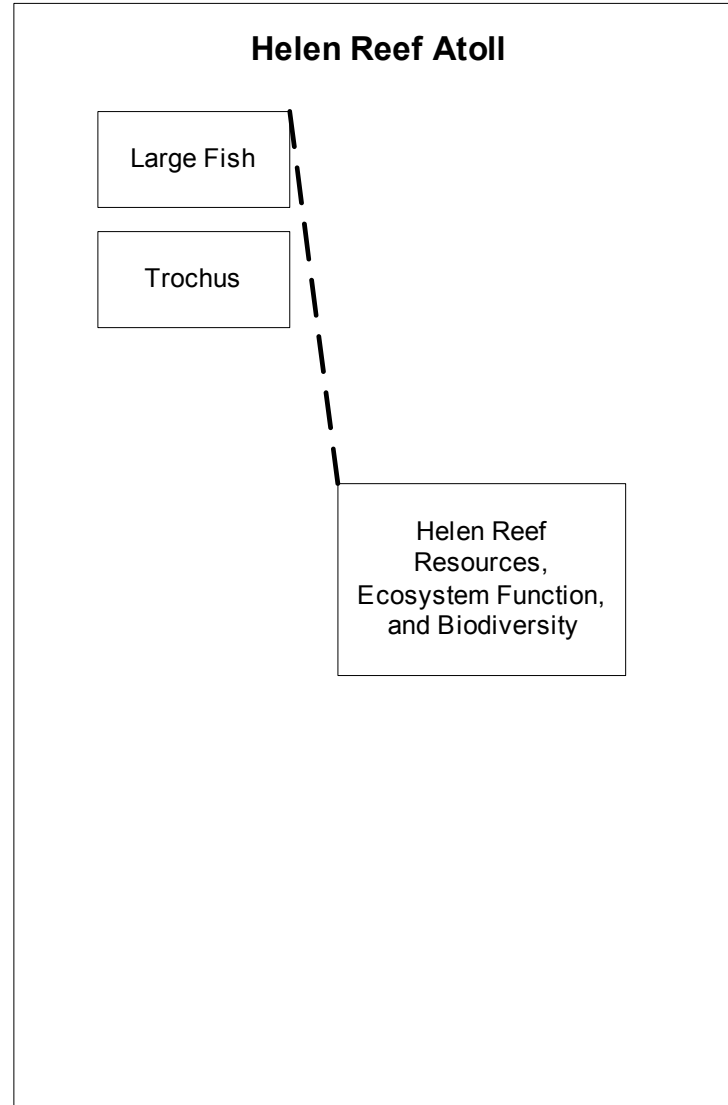
Helen Reef Atoll

Helen Reef
Resources,
Ecosystem Function,
and Biodiversity

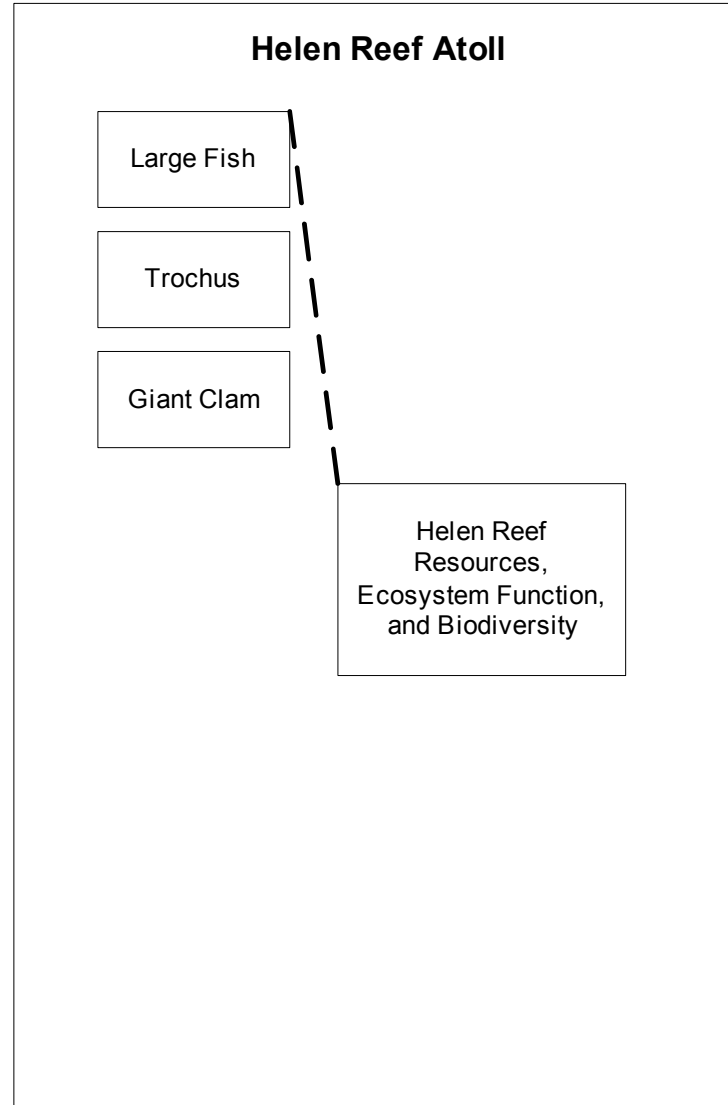
Conservation Target



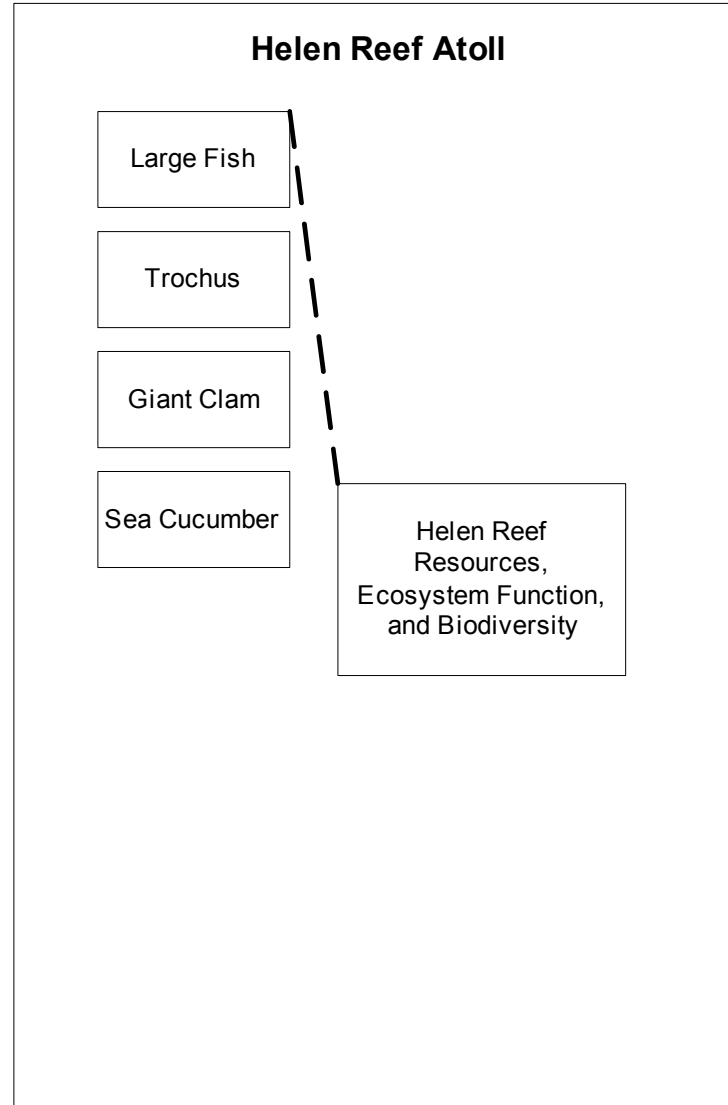
Conservation Target



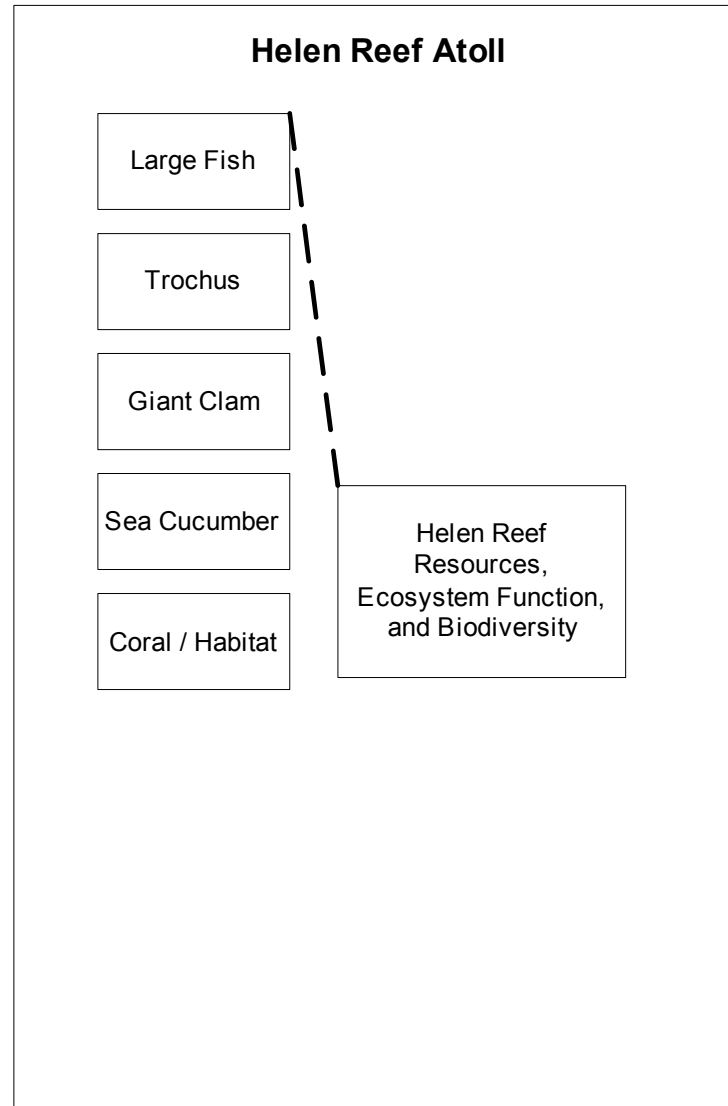
Conservation Target



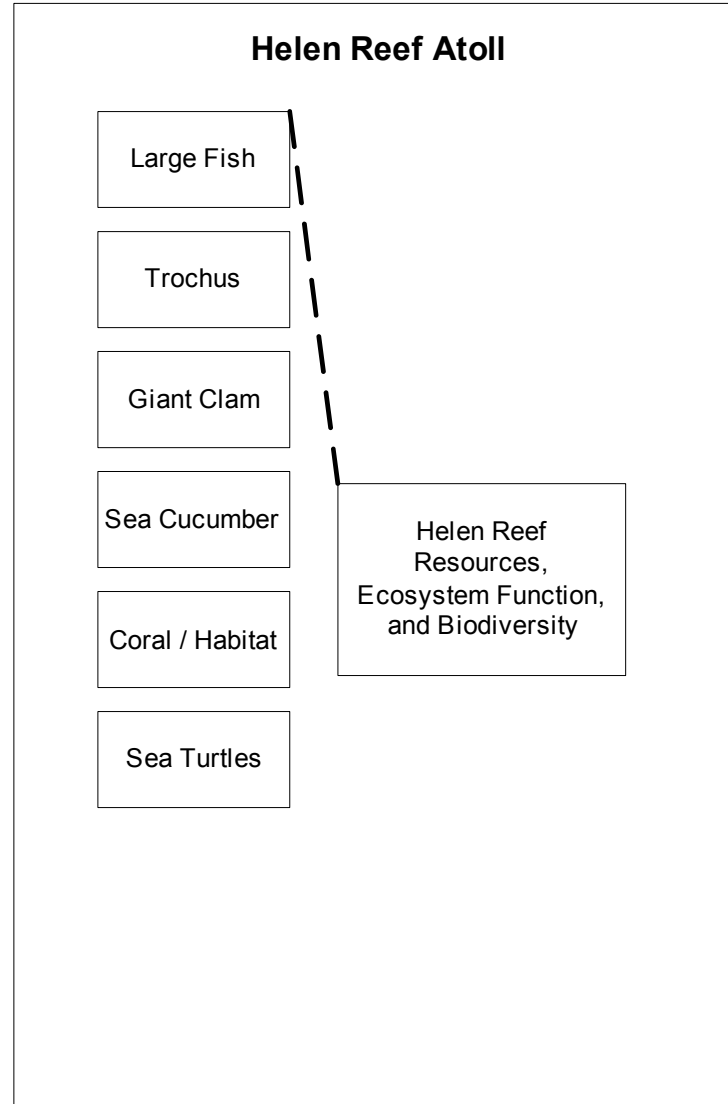
Conservation Target



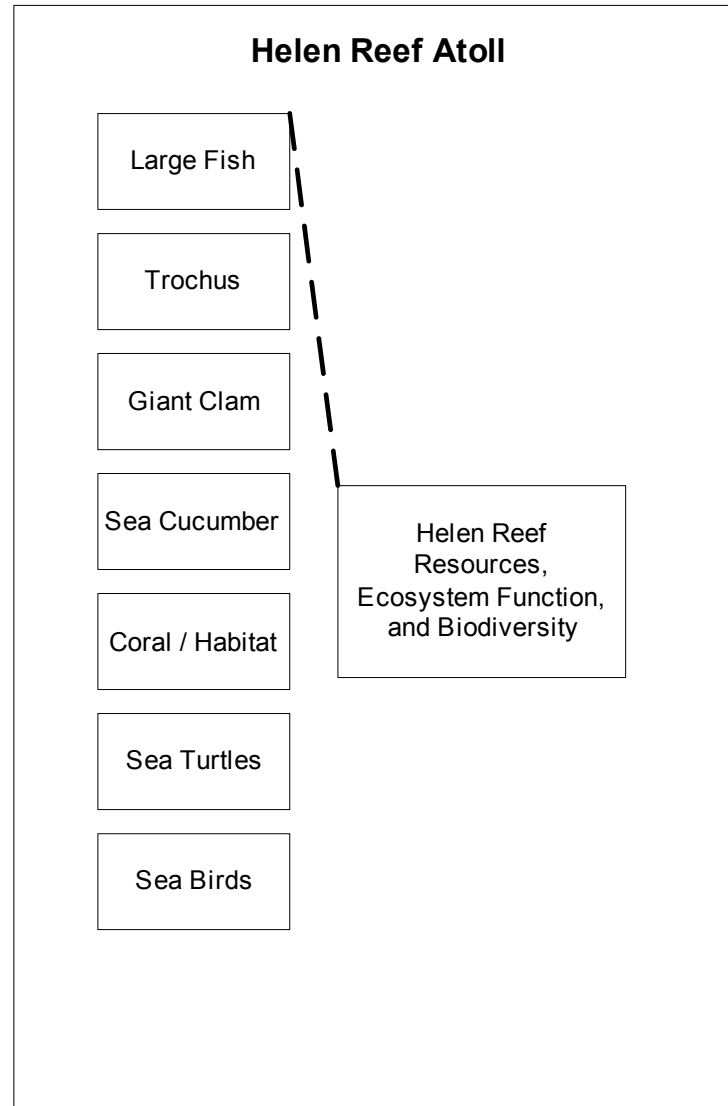
Conservation Target



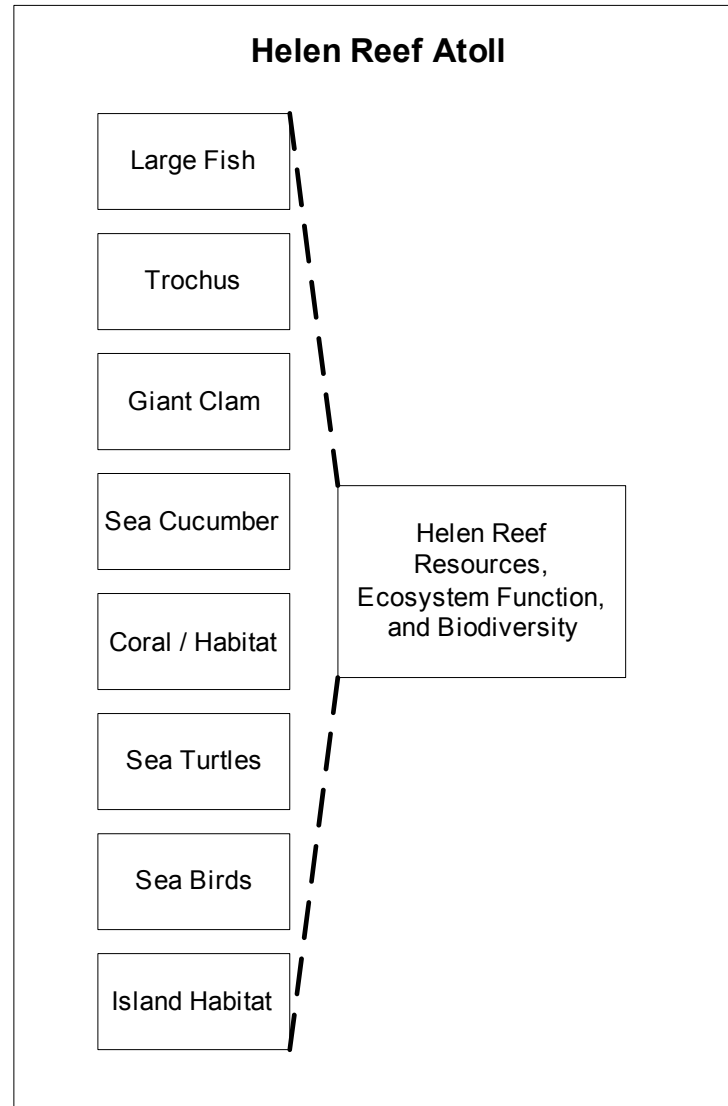
Conservation Target



Conservation Target

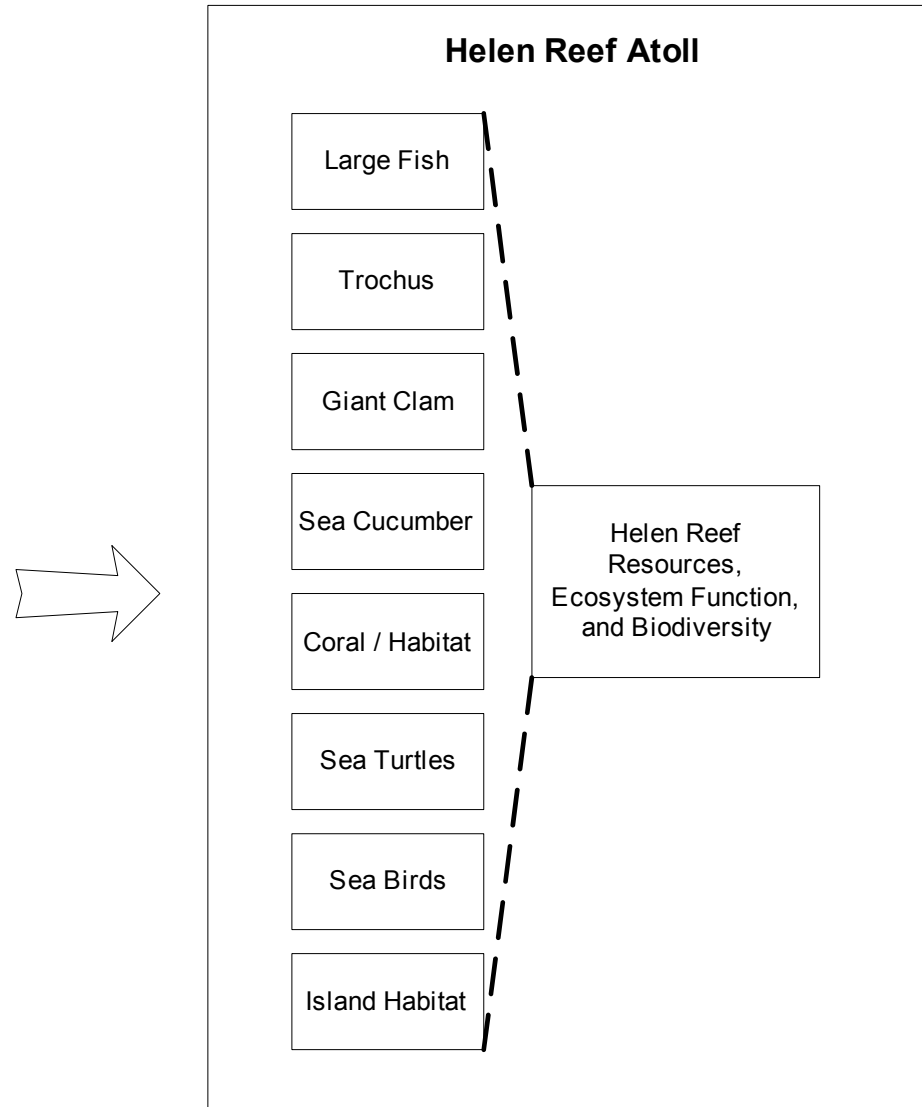


Conservation Target

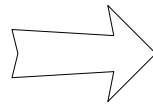


Direct Threats

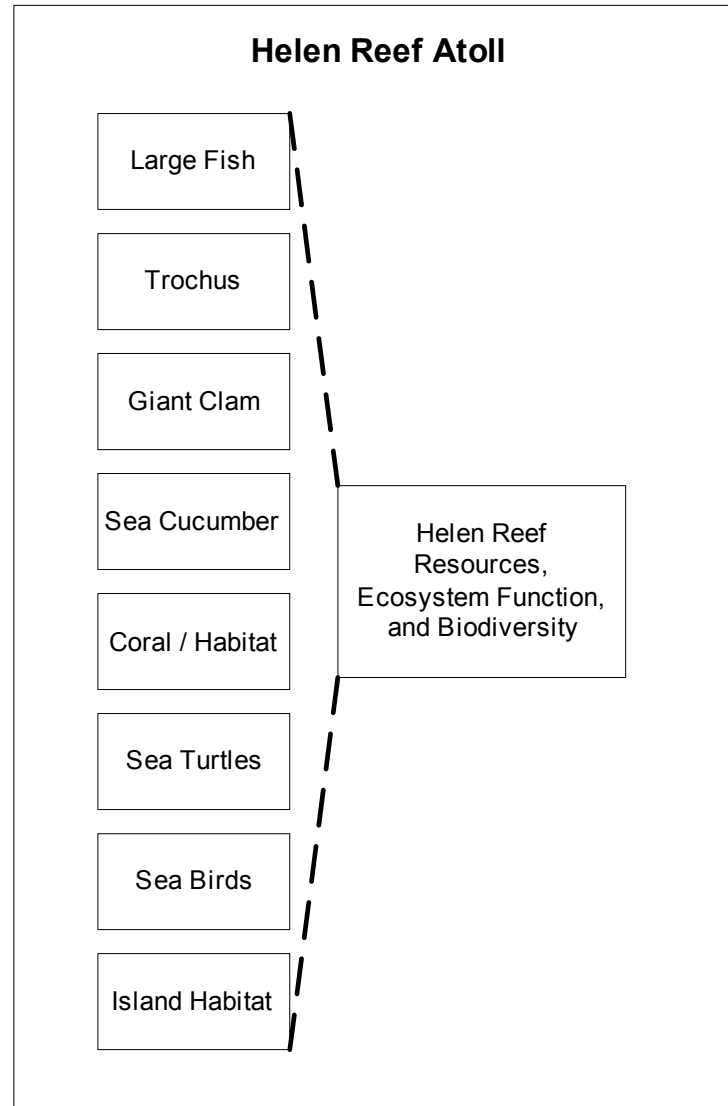
Conservation Target



Direct Threats



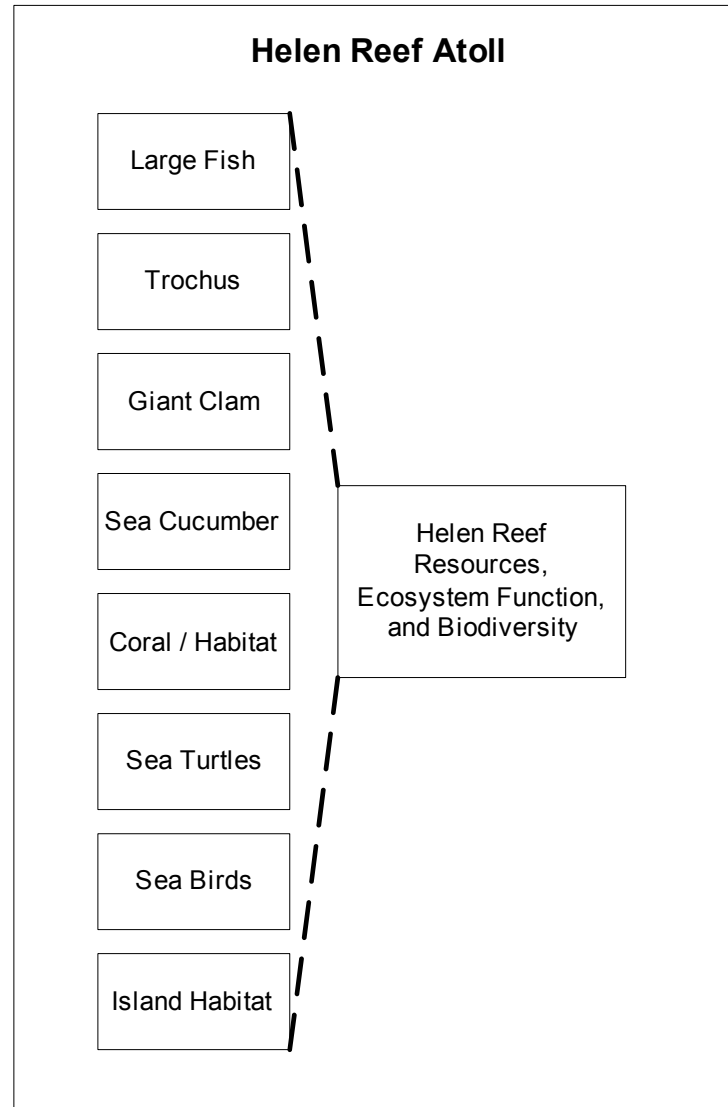
Conservation Target



Direct Threats



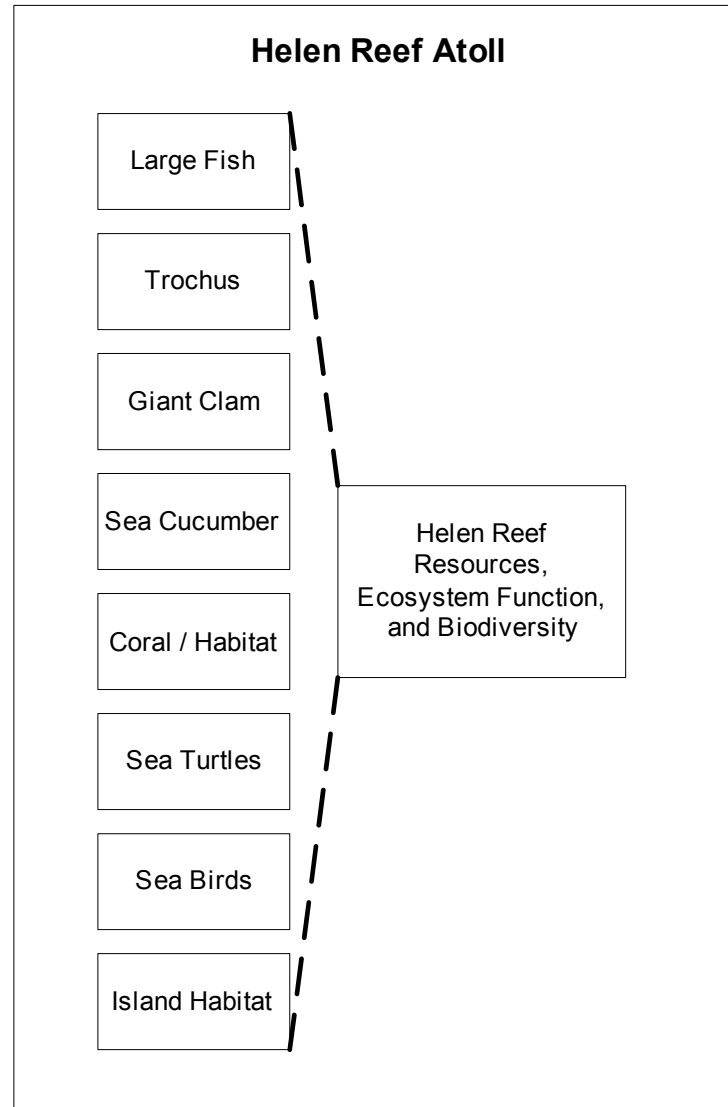
Conservation Target



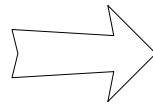
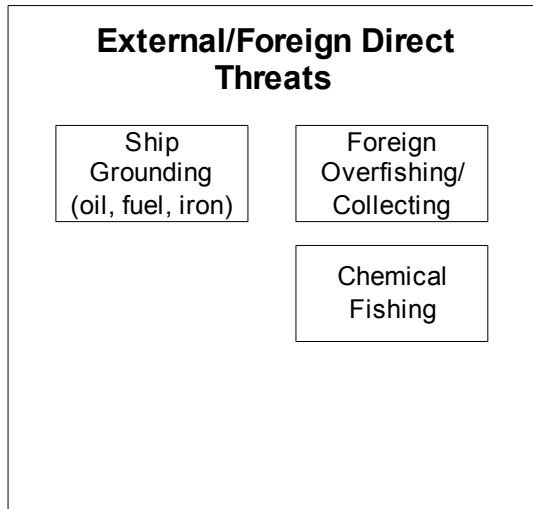
Direct Threats



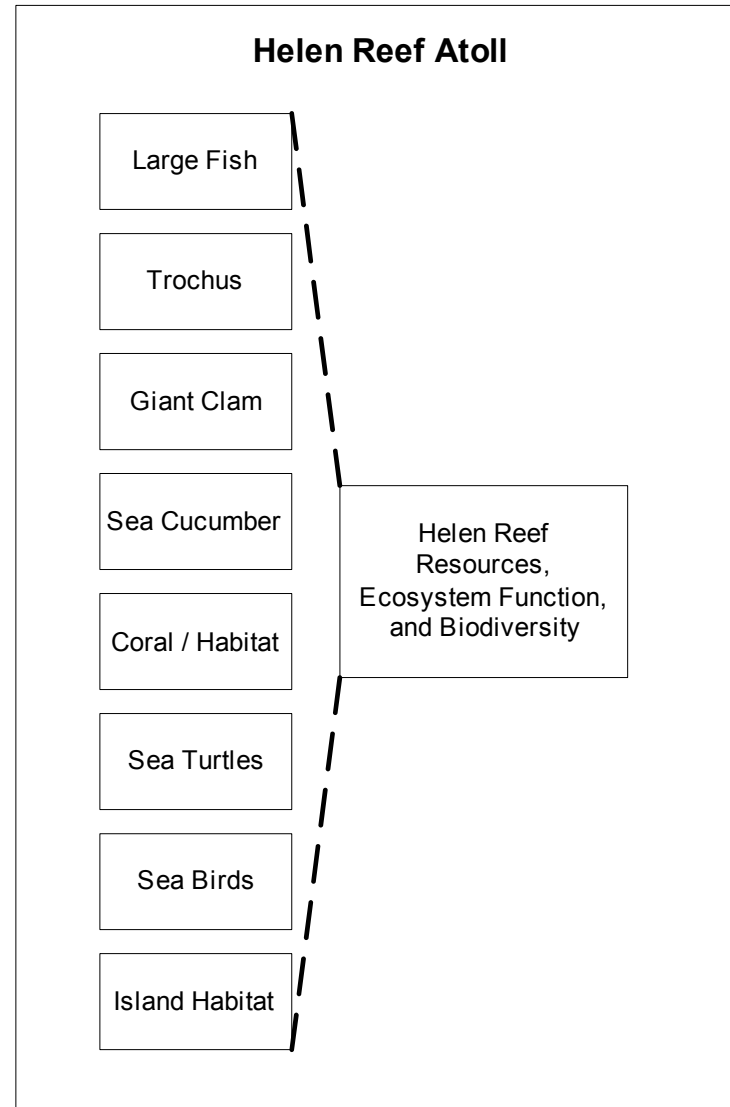
Conservation Target



Direct Threats



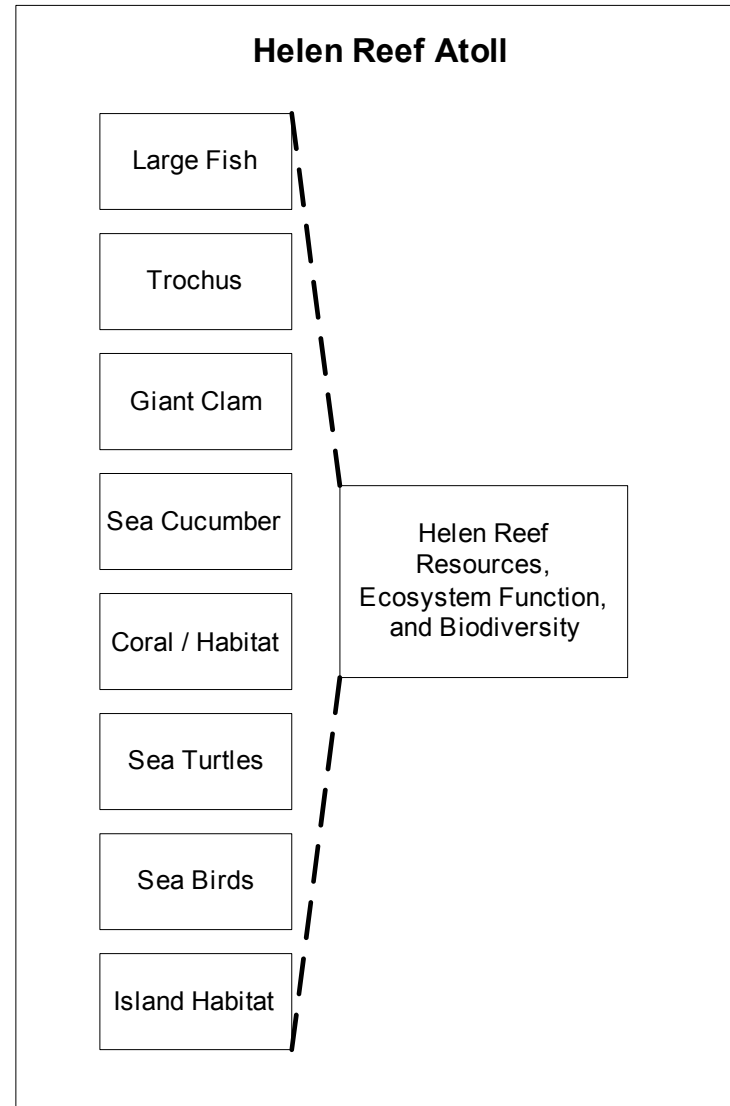
Conservation Target



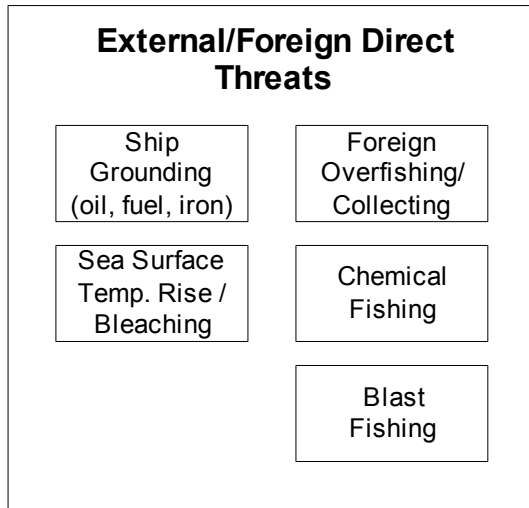
Direct Threats



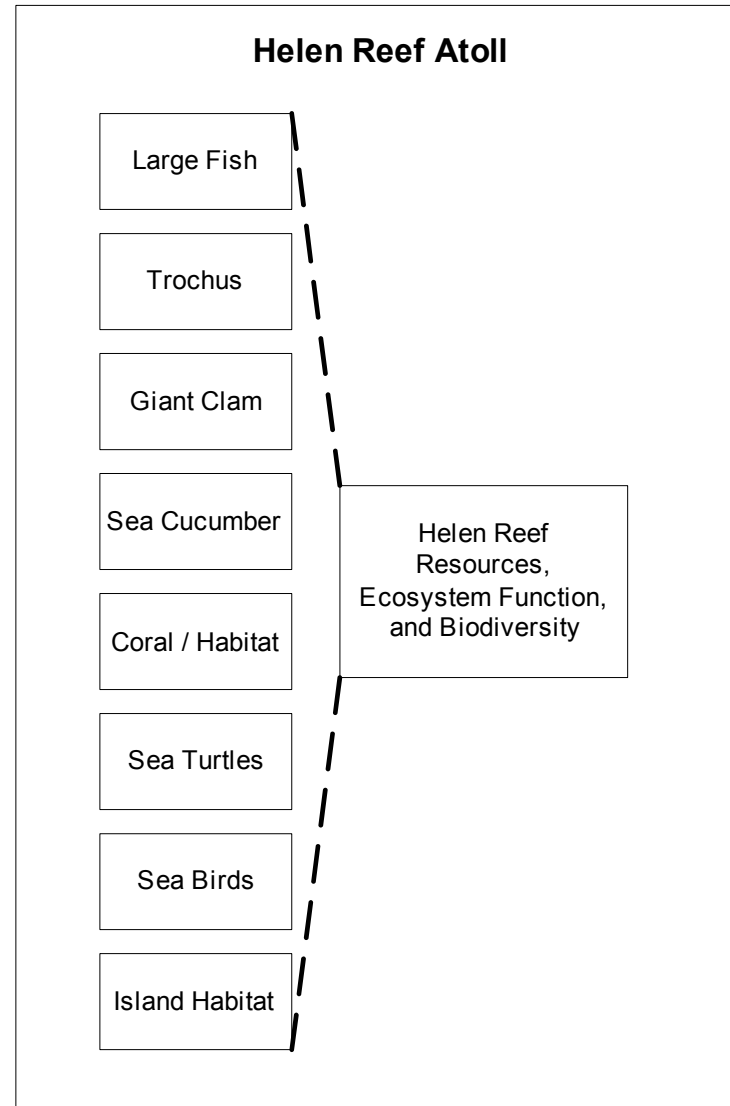
Conservation Target



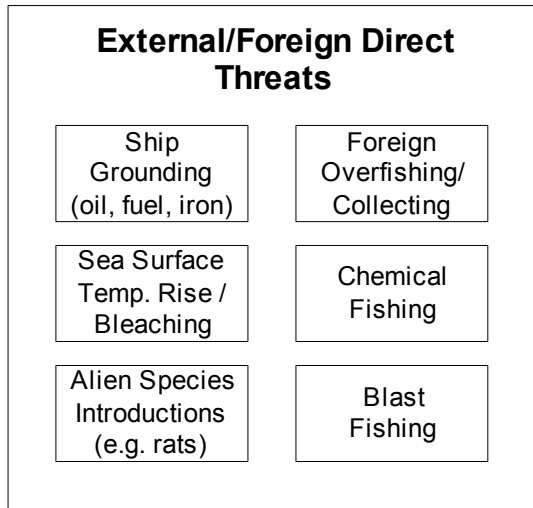
Direct Threats



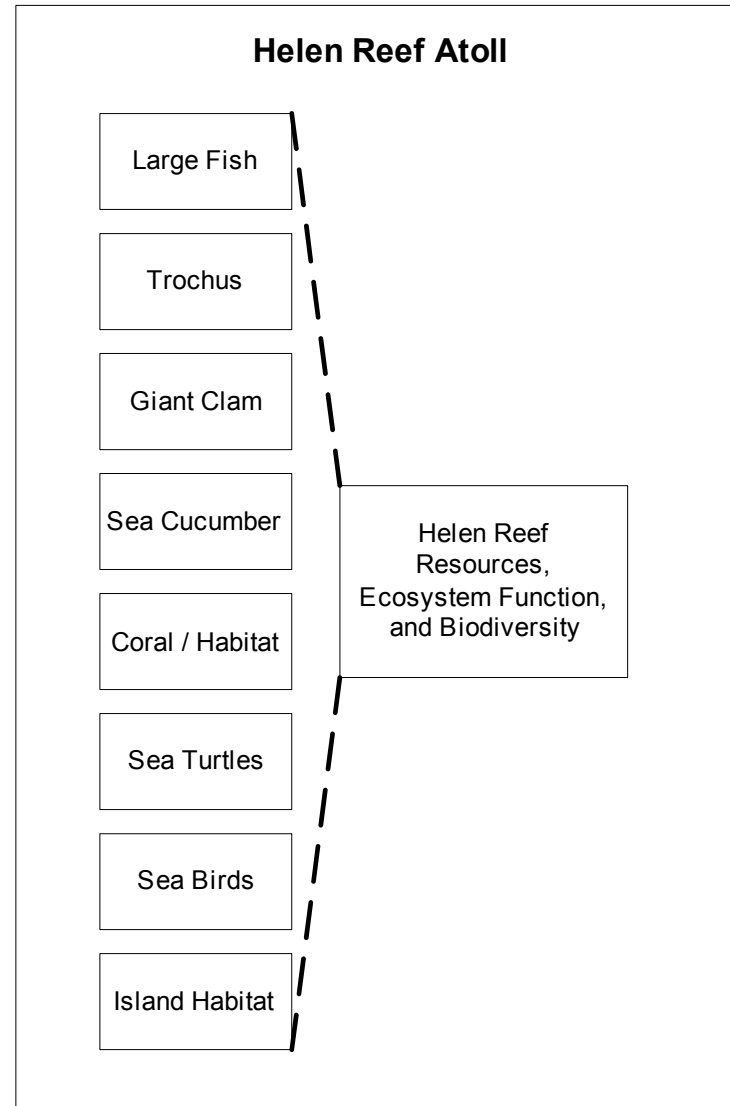
Conservation Target



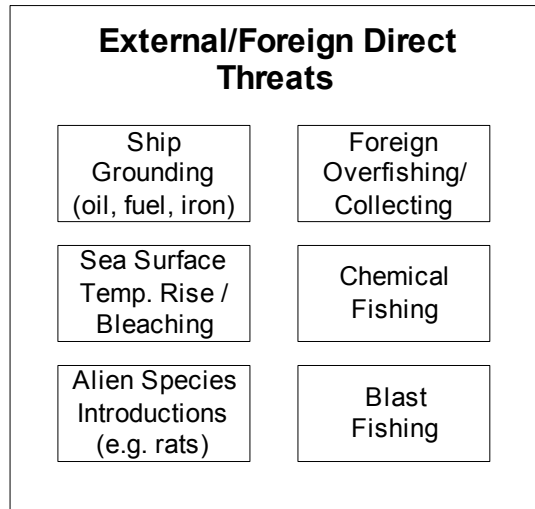
Direct Threats



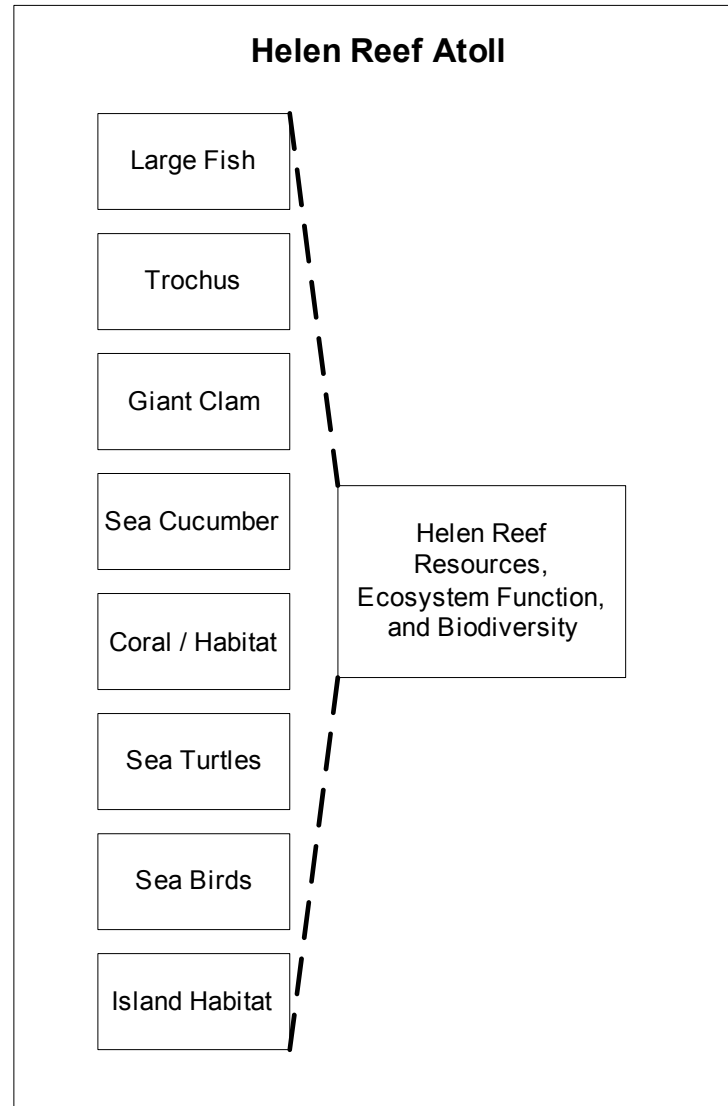
Conservation Target



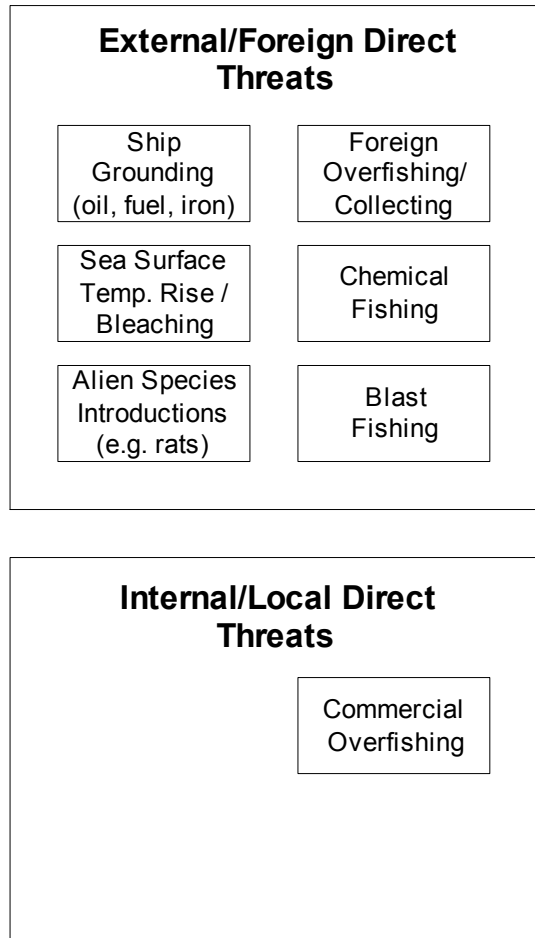
Direct Threats



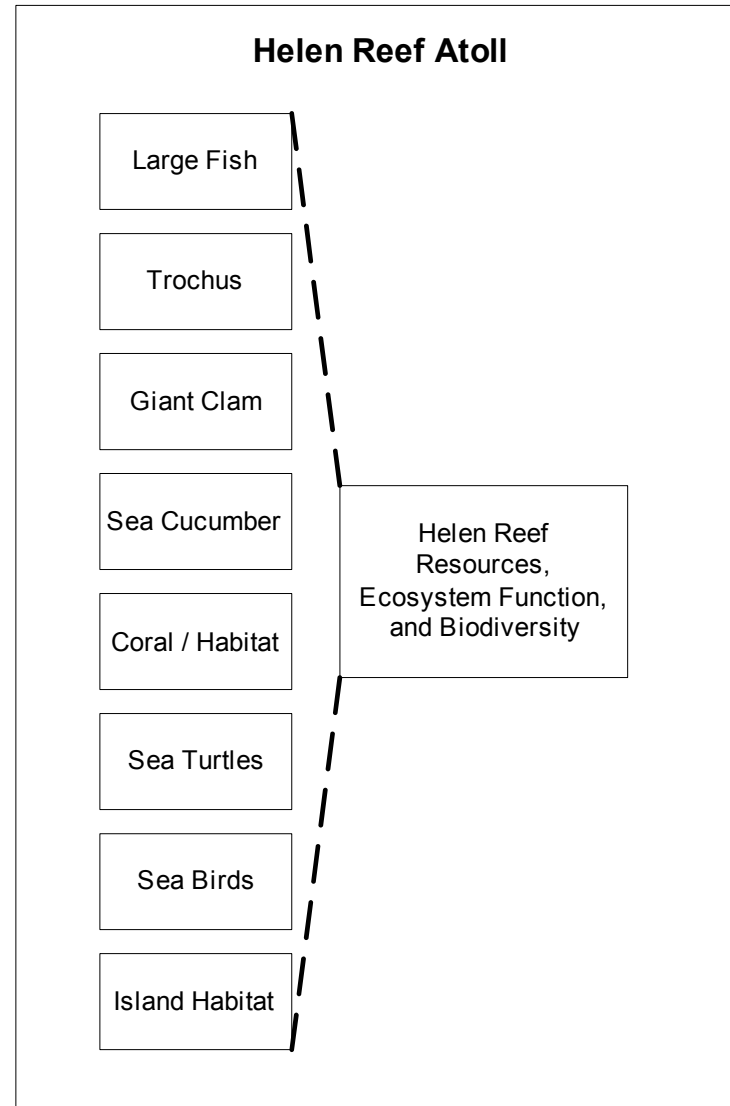
Conservation Target



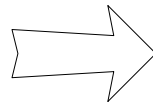
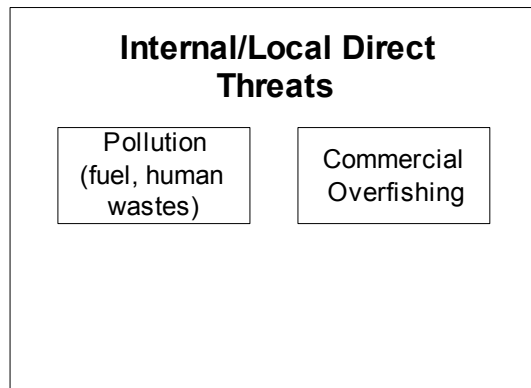
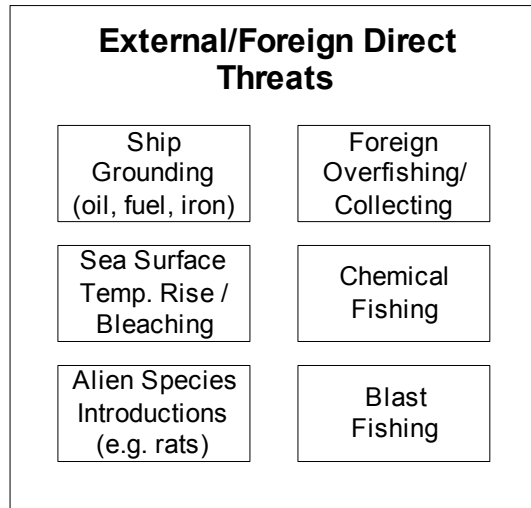
Direct Threats



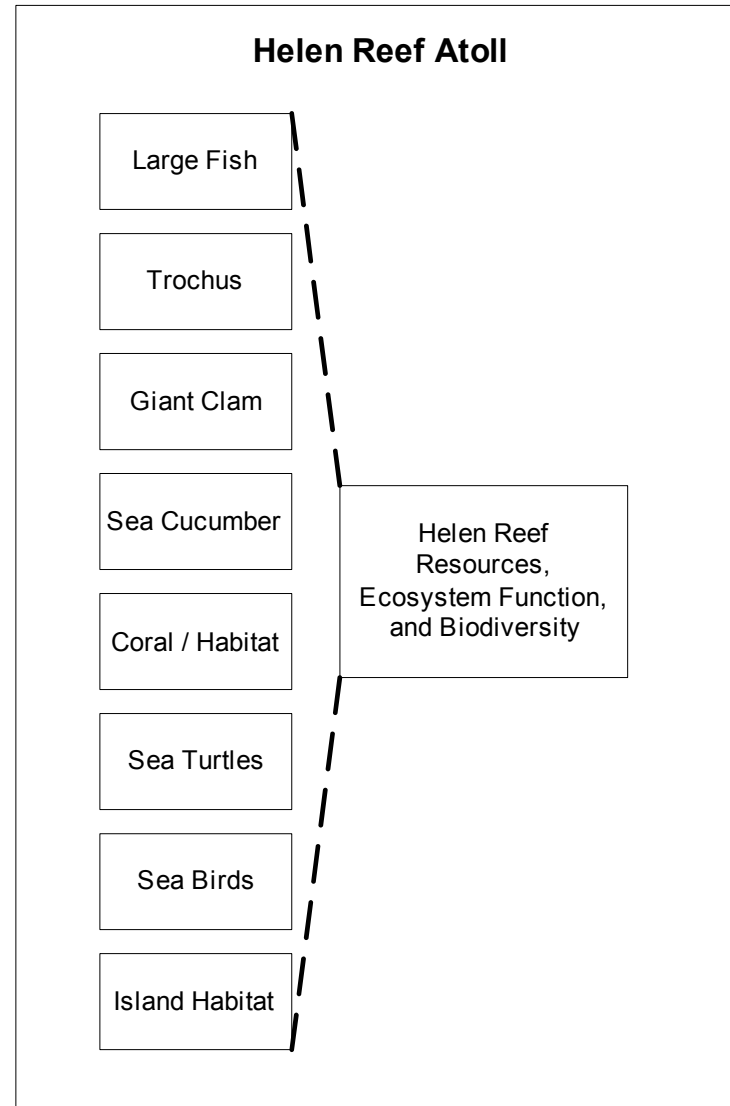
Conservation Target



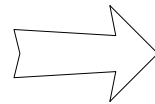
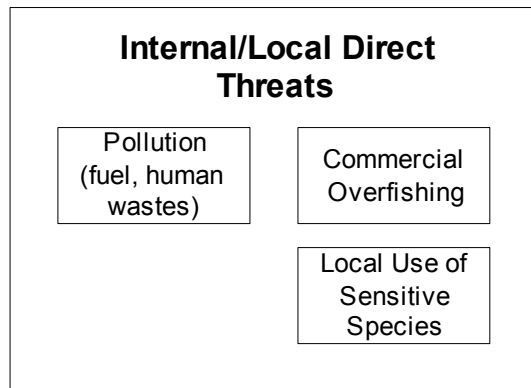
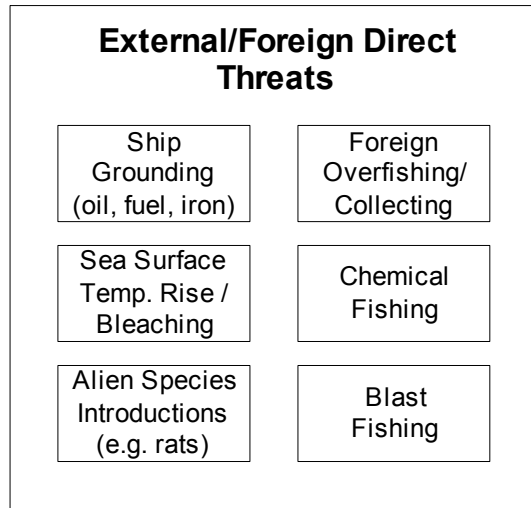
Direct Threats



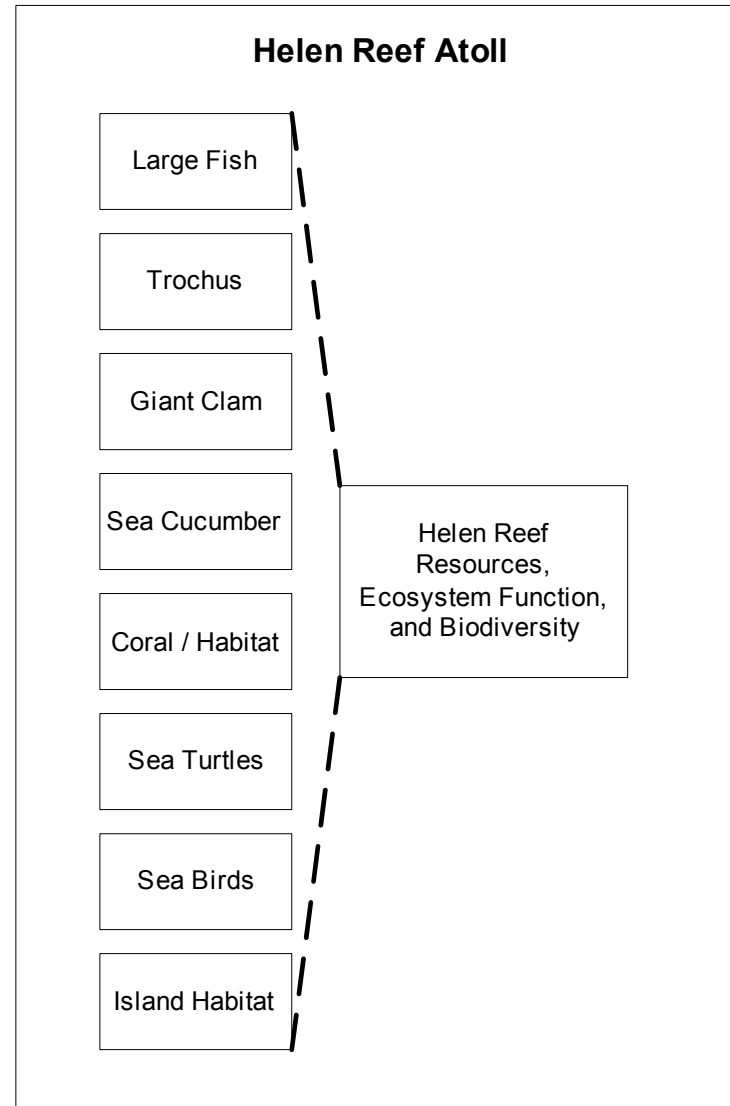
Conservation Target



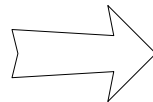
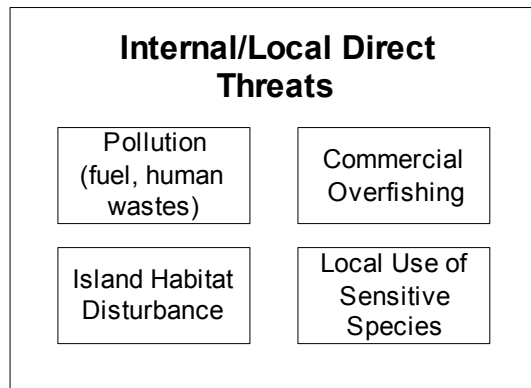
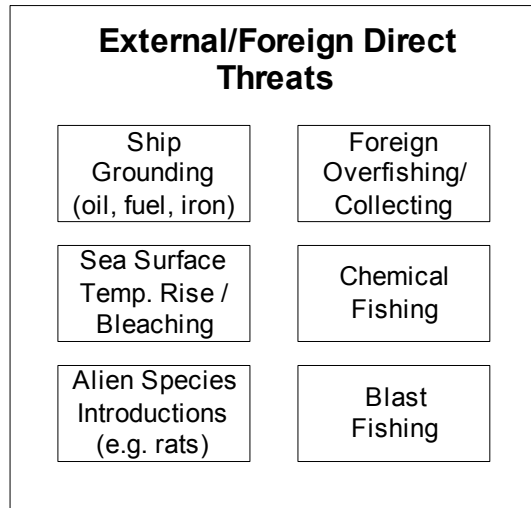
Direct Threats



Conservation Target



Direct Threats



Conservation Target

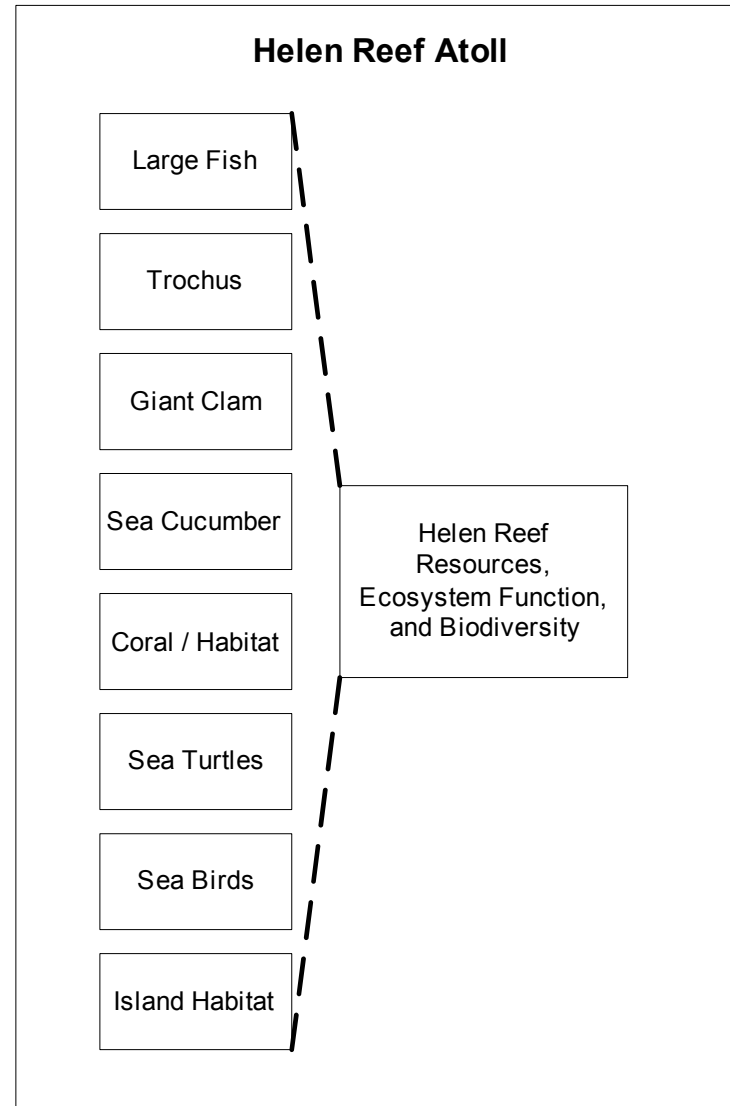


Table of Preliminary Conceptual Modeling Process

Regarding Hatohobei State Marine Resources
Atoll Way; September 1, 2000

Actions:

1. Look for funds for activities
2. Increase enforcement capacity/activity
3. Promote community awareness and involvement
4. Develop a long-term management plan
5. Develop useful partnerships

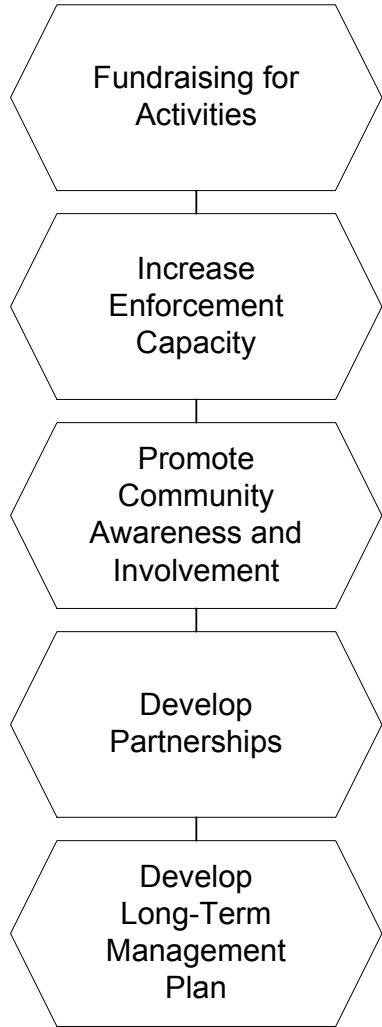
Problems/Challenges:

1. Enforcement (lack of); Sovereignty (lack of)
2. Lack of Training (education)
3. Lack of Funds
4. Community Support/Cooperation
5. Poor Communication

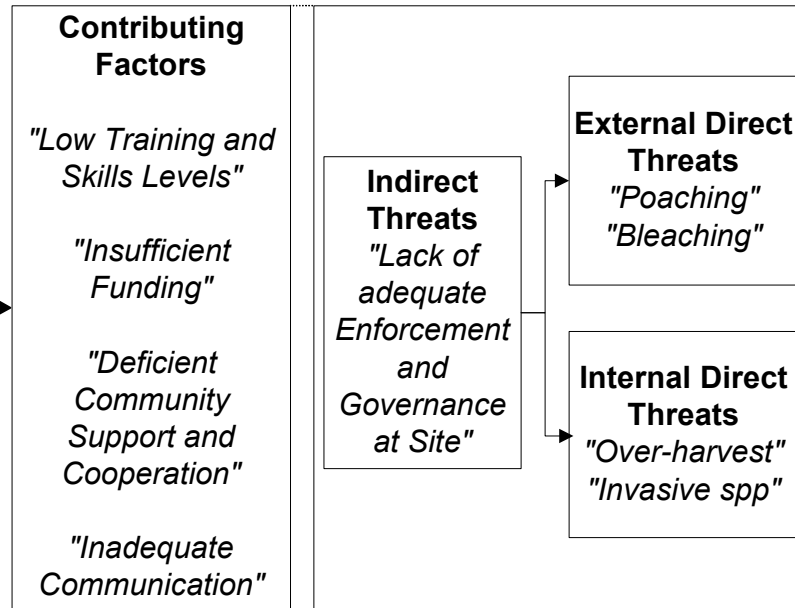
Goals for the future:

1. Abundance of Resources
2. Healthy Environment
3. Good Management

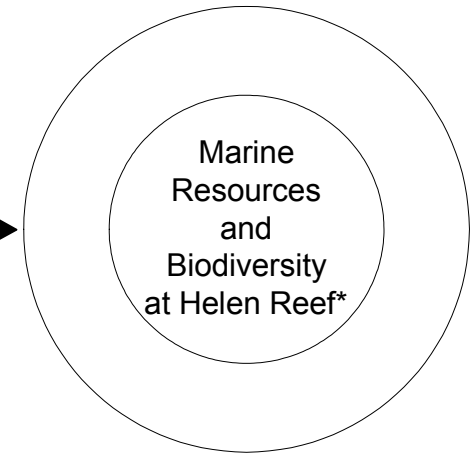
Actions



Threats and Contributing Factors



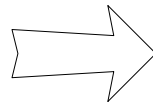
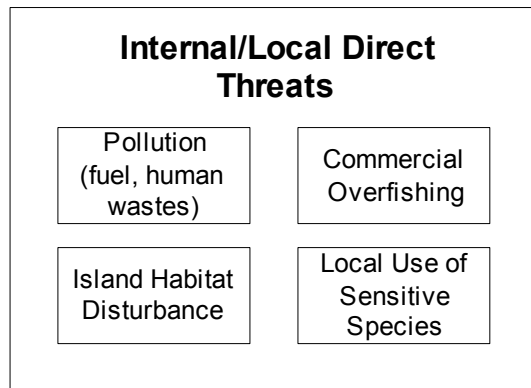
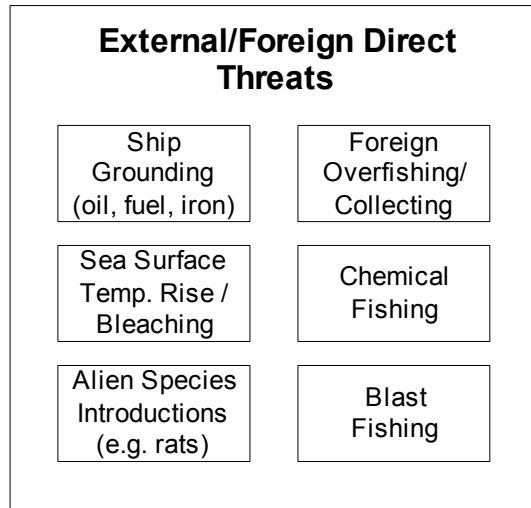
Conservation Target



*Site Goals:

1. Abundance of Resources
2. Healthy Coastal Ecosystems
3. Good Management

Direct Threats



Conservation Target

