

THE CAPE GANNET CURRENT THREATS

LESSON PLAN 4

THEMES

1. The impact of commercial fisheries on Cape Gannets.
2. Global warming impacts.
3. The threat of oil pollution.
4. Predation.

AIM

To learn more about the current threats faced by Cape Gannets and create an action plan for the future conservation of the species.

LESSON OBJECTIVES

- Learn about the current threats to gannets.
- Create an action plan to help conserve the species.

RESOURCES REQUIRED

- Infographic 5: Current Threats.
- Fact Sheet 5: Current Threats Fact Sheet.
- Pencil and eraser.
- Computer/printer/projector to show images.
- Questionnaire 4 (1 per student).
- Answer Sheet 4.

INTRODUCTION

There are many threats impacting the Cape Gannet today. They face serious challenges because of competition with commercial fisheries, resulting in a scarcity of food in their natural foraging area. Global warming is driving pelagic fish eastwards and climatic changes are impacting their breeding habitat and success. Oil pollution at sea remains a constant threat to gannets. Increased predation by Cape Fur Seals, Kelp Gulls and Great White Pelicans is also of concern. All these threats need to actively be managed to protect the species.

KEY WORDS / PHRASES

HABITAT	The natural home or environment of an animal, plant, or organism.
PURSE-SEINE	A large fishing net which may be drawn into the shape of a bag, used for catching shoaling fish.
SCARCITY	The state of being scarce or in short supply.
GLUTTONOUS	Excessively greedy.
NUTRITIOUS	Nourishing food.
AVIAN	Relating to birds.
OPPORTUNISTIC	Taking advantage of immediate opportunities and circumstances.
BYCATCH	The unwanted fish and other marine creatures trapped by commercial fishing nets during fishing for a different species.
MORTALITY	Death
GLOBAL	Worldwide
REHABILITATE	Restore to health.
ROGUE	A wild animal that displays savage or destructive tendencies.

FUTURE CONSERVATION ACTIONS SUMMARY

- Continued **scientific research** is needed to monitor the health of gannet populations.
- Key **foraging hotspots** of both breeding and non-breeding gannets from all colonies need to be identified and protected.
- Revised **fishing quotas** and/or **'no-take' zones** are needed to reduce competition with purse-seine fishing activities targeting small pelagic fish in South Africa.
- **Bycatch mitigation measures** are needed to prevent bycatch mortality in the trawler fisheries.
- **Oil spill prevention measures** need to be developed and strictly enforced.
- **Global warming** needs to be taken seriously and urgent action implemented to reduce contributing factors.

LESSON PLAN 4: Approximately 60 minutes

	ACTIVITY	DESCRIPTION	TIME/ minutes
1	Lesson Introduction	Briefly describe the current threats faced by gannets, referring to Infographic 5.	5
2	Discussion	Discuss with students why gannets are Endangered and what the current threats are to their survival.	10
3	Reading	Ask students to read Fact Sheet 5.	5
4	Group discussion and planning	Create an Action Plan: Ask students to get together in groups of 2 - 4 and think about what can be done to help gannets in the future, making a list of possible future actions to reduce the current threats.	15
5	Class discussion	Discuss the students Action Plans and read out the 'Future Conservation Actions Summary' to compare solutions.	10
6	Worksheet	Answer questions 1-9 in Questionnaire 4.	15
7	Evaluation	Read the Answer Sheet 4 out loud and ask them to peer mark one another.	5
			60

QUESTIONNAIRE 4 (15 points)

1. What is the preferred prey of Cape Gannets? List two species of fish. (2)

1:

2:

2. What type of fishing practice targets pelagic fish around southern Africa? (1)

3. What caused pelagic fish stocks to crash in the 1960s and 70s off the western coast of southern Africa? (1)

4. Why is hake not a good diet for breeding gannets? (1)

5. Why is it dangerous for a gannet to scavenge for fish behind a trawler? (1)

6. List three impacts of Global Warming on climate that pose a threat to the survival of gannets. (3)

1:

2:

3:

7. It is not good that 70% of the world's Cape Gannet population is now found breeding on one island. List two examples of potential threats that could impact the survival of the species if they should occur in the region surrounding the island. (2)

1:
2:

8. What type of pollution seriously threatens gannets at sea? (1)

9. List three animals that prey on gannets. (3)

1:
2:
3:

ANSWER SHEET 4 (15 points)

1. Q: What is the preferred prey of Cape Gannets? List two species of fish. (2)

A:

1: Anchovies

2: Sardines

2. Q: What type of fishing practice targets pelagic fish around southern Africa? (1)

A: Purse-seine netting/fisheries.

3. Q: What caused pelagic fish stocks to crash in the 1960s and 70s off the western coast of southern Africa? (1)

A: Over-fishing of sardines (and anchovies) by purse-seine vessels.

4. Q: Why is hake not a good diet for breeding gannets? (1)

A: It is not as nutritious a diet when compared to a diet of the highly energy rich sardines and anchovies.

5. Q: Why is it dangerous for a gannet to scavenge for fish behind a trawler? (1)

A: They are at risk of getting tangled in the net and warp cables of the trawl equipment which can result in them drowning.

6. Q: List three impacts of Global Warming on climate that pose a threat to the survival of Cape Gannets. (3)

A:

1: Sea surface temperature increases (driving fish eastwards).

2: More frequent extreme weather events which can lead to destructive, large waves and high rainfall and to gannet colonies being flooded and chicks drowned.

3: A rise in summer temperatures which cause adults, eggs, and chicks to overheat and adults to abandon their nests.

7. Q: It is not good that 70% of the world's Cape Gannet population is now found breeding on one island. List two examples of potential threats that could impact the survival of the species if they should occur in the region surrounding the island. (2)

A:

1: An outbreak of an avian disease.

2: An oil spill.

3: A major storm.

8. Q: What type of pollution seriously threatens gannets at sea? (1)

A: Oil pollution.

9. Q: List three animals that prey on gannets. (3)

A:

1: Cape Fur Seal

2: Great White Pelican

3: Kelp Gull



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