

Exercise walk-through

5.1

The Tragedy of the Commons

AP Environmental Science

The tragedy of the commons

A shared **common resource** open to all tends to be over-used:

- the gain goes to **one** user
- the cost is shared by **all**

Fix it with **regulation** (catch limits) or **private ownership** (owner protects it).



Open pit mine

Exercises 2.1-2.3

2.1 What is the tragedy of the commons?

[1]

2.2 Give one example of a commons problem.

[1]

2.3 State one solution.

[1]

Exercises 2.1-2.3

2.1 What is the tragedy of the commons? [1]

2.1

- A shared, unowned resource is overused because individuals benefit from taking more while the cost is shared

2.2 Give one example of a commons problem. [1]

2.2

- Any one: overfishing, overgrazing, air/water pollution

2.3 State one solution. [1]

2.3

- Any one: regulation, quotas, privatization

Exercise 3.1

3.1 The tragedy of the commons happens because each user gains the full benefit but^[1]

☐

A bears the full cost

B shares the cost with everyone

C gains no benefit

D owns the resource

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3.1 B

- shares the cost with everyone

Exercise 3.2 (a)

3.2 Fishers all take as many fish as they can from an open ocean.

(a) Explain why this leads to collapse of the fishery.

[2]

Exercise 3.2 (a)

3.2 Fishers all take as many fish as they can from an open ocean.

(a) Explain why this leads to collapse of the fishery.

[2]

(a)

- Each fisher gains fully from catching more but shares the cost of depletion, so all overfish and the stock collapses

Exercise 3.2 (b)

3.2 Fishers all take as many fish as they can from an open ocean.

(b) State one solution that could prevent it.

[1]

Exercise 3.2 (b)

3.2 Fishers all take as many fish as they can from an open ocean.

(b) State one solution that could prevent it.

[1]

(b)

- Any one: catch quotas, regulation, protected areas

Exercise 3.3

3.3 Explain how assigning ownership (privatization) can protect a shared resource. [2]

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3.3

- An owner bears the full cost of overuse, so they have an incentive to use the resource sustainably to preserve its long-term value