

Exercise walk-through

Human Impacts on Biodiversity ■ 9.10

eXercise

You must be able to

- summarize how human activities reduce biodiversity
- explain why biodiversity loss matters
- describe solutions

Method — The overall picture

Human activities — **habitat loss, pollution, overexploitation, invasive species, and climate change** — are driving a rapid loss of biodiversity, sometimes called a **sixth mass extinction**.

Method — Why it matters

Biodiversity provides **ecosystem services** (food, clean water, pollination, climate regulation, medicine) and makes ecosystems **resilient**. Losing it reduces these benefits and destabilizes ecosystems.

Method — Solutions

- **Protect and restore habitat** (reserves, corridors).
- **Reduce pollution** and greenhouse gases.
- **Sustainable resource use** (fishing, forestry, farming).
- **Laws and international cooperation.**

Method — A worked reasoning

Protecting a large connected habitat conserves many species at once and maintains the services (like pollination and water filtration) that people depend on.

Practice 2.1 ■ 2 marks

Name two human causes of biodiversity loss.

Solution 2.1

Method: The overall picture

Worked steps

Any two: habitat loss, pollution, overexploitation, invasive species, climate change

B1 **B1**.

Practice 2.2 ■ 1 mark

State one reason biodiversity matters to humans.

Solution 2.2

Method: Why it matters

Worked steps

Any one: ecosystem services (food, water, pollination, medicine), resilience **B1**.

Practice 2.3 ■ 1 mark

State one solution to biodiversity loss.

Solution 2.3

Method: The overall picture

Worked steps

Any one: protect/restore habitat, reduce pollution, sustainable use, laws **B1**.

Exam-style 3.1 ■ 1 mark

The current rapid loss of species is sometimes called the

- A** first mass extinction
- B** sixth mass extinction
- C** ice age
- D** green revolution

Solution 3.1

Method: The overall picture

A first mass extinction

B sixth mass extinction 

C ice age

D green revolution

Worked steps

B — the sixth mass extinction.

Exam-style 3.2 ■ 2 marks

A government wants to protect its biodiversity.

- (a) Suggest two effective strategies.
- (b) Explain why protecting biodiversity also protects human well-being.

Solution 3.2

Method: The overall picture

Worked steps

(a) Any two: protected areas/corridors, pollution reduction, sustainable resource use, laws **B1 B1**. (b) Biodiversity provides essential services (food, clean water, pollination, medicine) and resilience, so protecting it safeguards the benefits people depend on **M1 A1**.

Exam-style 3.3 ■ 2 marks

Explain why habitat protection is often the most effective single conservation action.

Solution 3.3

Method: Solutions

Worked steps

Protecting a habitat conserves all the species living in it at once, along with the ecosystem processes and services they support — far more efficient than saving one species at a time **M1** **A1**.