

9.10 Human Impacts on Biodiversity

Name: _____ Class: _____ Date: _____

Total: 11 marks

KEY WORDS invasive species 入侵物种 • greenhouse gases 温室气体

Objective

Build the skills to answer exam questions on **human impacts on biodiversity**.

You must be able to:

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

1 Worked examples

Study these first. Each one shows the method for a question type used later — follow the steps and you can do the Practice and Exam-style questions yourself.

■ 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**.

■ 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.

■ Solutions

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

■ 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.

2 Practice

Now apply the methods above.

2.1 Name two human causes of biodiversity loss. [2]

2.2 State one reason biodiversity matters to humans. [1]

2.3 State one solution to biodiversity loss. [1]

3 Exam-style questions

3.1 The current rapid loss of species is sometimes called the [1]

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

3.2 A government wants to protect its biodiversity.

(a) Suggest two effective strategies. [2]

(b) Explain why protecting biodiversity also protects human well-being. [2]

3.3 Explain why habitat protection is often the most effective single conservation action.^[2]

Solutions

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

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

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

3.1 B — the sixth mass extinction.

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

3.3 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.