

20.2 Habitat destruction

Name: _____ Class: _____ Date: _____

Total: 21 marks

KEY WORDS deforestation 森林砍伐 • carbon dioxide 二氧化碳 • species 物种 • extinction 灭绝
• biodiversity 生物多样性

Objective

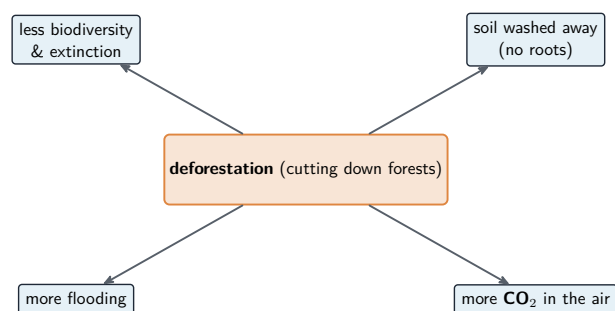
Build the skills to answer exam questions on **habitat destruction** 栖息地破坏 — **biodiversity** 生物多样性 and the effects of **deforestation** 森林砍伐.

You must be able to:

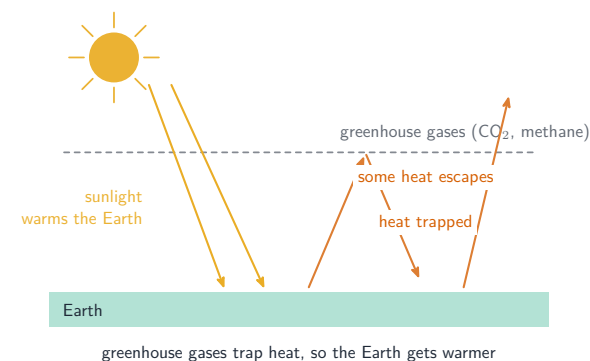
- explain how humans destroy habitats and reduce biodiversity
- list the effects of deforestation
- link habitat change to food webs

1 Worked examples

■ Deforestation



Deforestation lowers biodiversity, washes away soil, causes flooding and adds CO₂



Habitat loss links to the enhanced greenhouse effect

- **biodiversity** = the number of different species in an area.

2 Practice

2.1 Define biodiversity. [1]

2.2 State one way humans destroy habitats. [1]

3 Exam-style questions

3.1 Deforestation increases the amount of carbon dioxide in the air because: [1]

- A trees release it when cut
- B fewer trees take it in by photosynthesis
- C soil makes it
- D rivers flood

3.2 A large area of forest is cleared.

(a) State two effects of this deforestation. [2]

(b) Explain why removing the trees leads to soil being washed away. [2]

3.3 A large area of tropical rainforest is cleared for cattle farming.

(a) State what is meant by *biodiversity*. [2]

(b) Describe **four** effects of deforestation on the environment, explaining each. [8]

(c) Explain why species that live only in that forest are at risk of extinction. [2]

(d) Suggest **two** ways of reducing the impact of using forest land. [2]

Solutions

2.1 the number of different species living in an area.

2.2 any of: clearing land; mining; pollution.

3.1 B. Fewer trees take in less carbon dioxide by photosynthesis.

3.2 (a) any two of: lower biodiversity/extinction; soil loss; flooding; more CO₂.

(b) the tree roots no longer hold the soil, so rain washes it away.

3.3 (a) Biodiversity is the number of different species present in an area, and how many individuals there are of each.

(b) **Loss of habitat** — the organisms living in the trees lose their food, shelter and breeding sites, so populations fall and some become extinct. **Soil erosion** — tree roots no longer bind the soil, and there are no leaves to break the rainfall, so the topsoil is washed away. **Flooding** — less water is taken up by roots and lost by transpiration, so more runs straight into rivers. **More carbon dioxide in the atmosphere** — fewer trees photosynthesise, so less is removed, and burning the timber releases more, adding to the greenhouse effect. (Also accept: less transpiration means lower local rainfall.)

(c) A species found nowhere else has no other population to survive elsewhere; once its only habitat is destroyed there is nowhere left for it to live, so it becomes extinct.

(d) Replant trees after felling, or fell in rotation so the forest can recover; protect areas as reserves and use land already cleared more productively instead of clearing more.