

Exercise walk-through

Sustainable Forestry ■ 5.17

eXercise

You must be able to

- describe sustainable practices (**selective cutting** 择伐, replanting, rotation)
- explain how they maintain forest function
- contrast with clearcutting

Method — Sustainable forestry

Sustainable forestry harvests timber while keeping the forest healthy and productive for the future:

- **Selective cutting** — remove only some trees, leaving the forest largely intact.
- **Replanting** — replace harvested trees.
- **Rotation** — harvest no faster than the forest regrows (sustainable yield).

Method — Keeping forest function

Leaving trees standing maintains **habitat**, **soil stability**, **carbon storage**, and the **water cycle**, unlike clearcutting.

Method — Certification

Certification programs label sustainably-harvested wood so consumers can support responsible forestry.

Method — A worked contrast

Selective cutting keeps the forest canopy and roots, so it avoids the erosion, habitat loss, and flooding caused by clearcutting.

Practice 2.1 ■ 1 mark

Name one sustainable forestry practice.

Solution 2.1

Method: Sustainable forestry

Worked steps

Any one: selective cutting, replanting, rotation (sustainable yield) **B1**.

Practice 2.2 ■ 1 mark

Why is replanting important?

Solution 2.2

Worked steps

It replaces harvested trees so the forest regrows and stays productive **B1**.

Practice 2.3 ■ 1 mark

How does selective cutting protect soil?

Solution 2.3

Worked steps

It leaves most trees (and roots) in place to hold the soil **B1**.

Exam-style 3.1 ■ 1 mark

Sustainable forestry harvests trees

- A** faster than they regrow
- B** no faster than they regrow
- C** only by clearcutting
- D** never

Solution 3.1

Method: Sustainable forestry

- A faster than they regrow
- B no faster than they regrow
- C only by clearcutting
- D never



Worked steps

B — no faster than they regrow.

Exam-style 3.2 ■ 2 marks

A company switches from clearcutting to selective cutting and replanting.

- (a) Explain two environmental benefits.
- (b) State one disadvantage compared with clearcutting.

Solution 3.2

Worked steps

(a) Any two: less erosion, maintained habitat, kept carbon storage, protected water cycle **B1** **B1**. (b) It is slower and more expensive, yielding less timber at once **B1**.

Exam-style 3.3 ■ 2 marks

Explain how sustainable forestry maintains a forest's carbon storage.

Solution 3.3

Method: Keeping forest function

Worked steps

By keeping most trees standing and replanting harvested ones, the forest continues to absorb and store CO₂, rather than releasing it as a clearcut would **M1** **A1**.