

5 Impacts and sustainability – Part 2

Name: _____ Class: _____ Date: _____

Vocabulary

Write each word three times.

English

Write it 3 times (English)

Overfishing

Urbanization

ecological foot-
print

Sustainability

Recall

In Part A you saw how using land can harm the environment. Now measure that impact and reduce it:

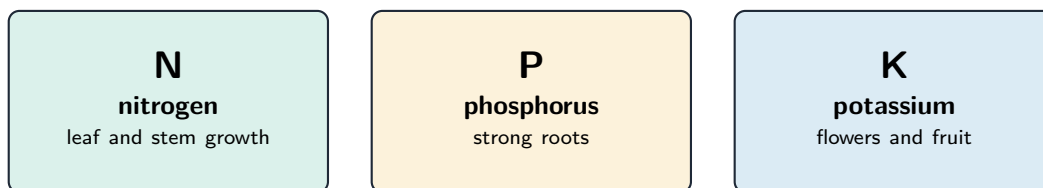
- Cities, mines, and fishing fleets all leave a mark on nature.
- We talk about living “sustainably” – using resources without using them up.

Each idea has a short worked example before the Practice.

New ideas

■ 1 Impacts of using resources

- **Overfishing** removes fish faster than they can breed, collapsing stocks.
- **Mining** scars the land and can pollute water.
- **Urbanization** covers land with roads and buildings, increasing runoff and pollution.



NPK fertilisers contain all three - ammonium salts and nitrates supply the nitrogen

■ 2 Ecological footprint

An **ecological footprint** measures the land and water one person needs to supply their resources and absorb their wastes. Wealthy, high-consumption lifestyles have much larger footprints.

Worked example. Earth provides about 1.6 global hectares per person. If someone's footprint is 8 global hectares, it would take $\frac{8}{1.6} = 5$ Earths if everyone lived that way.

■ 3 Sustainability

Sustainability means meeting today's needs without harming the ability of future generations to meet theirs – using resources no faster than they renew.

■ 4 Sustainable methods

Better practices reduce harm: **integrated pest management** (using natural predators plus minimal pesticide), crop rotation, sustainable forestry (replanting), and fishing limits.

Watch out: an ecological footprint is measured **per person**, so a small rich country can have a bigger total impact than a large poor one. Consumption per person, not just population, drives the footprint.

Practice

Try these in order. The methods are all above.

2.1 Explain what overfishing is and why it is a problem. [2]

2.2 State one environmental impact of urbanization. [1]

2.3 An average footprint is 2.4 global hectares and Earth provides 1.6 per person. Find how many Earths would be needed if everyone lived this way. [2]

2.4 State what “sustainability” means. [2]

2.5 Give one sustainable farming or fishing practice. [1]