

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Class: \_\_\_\_\_

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## IB ESS

# 5.3 Soil Degradation and Conservation

### Significant ideas:

Fertile soils require significant time to develop through the process of succession.

Human activities may reduce soil fertility and increase soil erosion.

Soil conservation strategies exist and may be used to preserve soil fertility and reduce soil erosion.



## Soil Fertility and Succession

1. Outline how soil fertility changes through succession.

*(Consider the changes in organisms present, nutrient cycling, and soil erosion.)*

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## Soil Degradation

1. Explain how the following human activities can affect soil fertility.

*Deforestation*

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*Intensive grazing*

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*Urbanization*

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*Irrigation*

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*Monoculture farming*

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2.

a) Describe the processes of soil erosion: sheet wash, gullyng and wind erosion.

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b) For each of the above processes, outline how farming (or other human practices) may result in soil erosion.

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3. Which farming practices tend to reduce soil fertility more: industrialised commercial farming or small-scale subsistence farming? Explain your answer.

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## Soil Conservation

1. Describe how soil conditioners can be used to improve soil quality.

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2. Explain how the following techniques are beneficial in conserving soil quality:

*Terracing*

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*Plowing*

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*Contour farming*

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3. Explain how improved irrigation technique may conserve soil quality.

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4. Explain how crop rotation may conserve soil quality.

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5. Describe what is meant by the term *marginal lands* and explain why their use must be considered carefully in order to conserve soil quality.

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