

(Land use (deforestation, peat bogs))

Q1.(2019)

any **one** from:

- growing crops / biofuels
- grazing animals
- building houses

- quarrying / mining
- dumping waste

Q2.(2019)

there is less photosynthesis

the trees are burned

Q3.a)(2019)

$$9 \times 30$$

$$270$$

Q3.b)(2019)

- displaced animals can move to adjacent areas
- where suitable habitat is found **or** where the trees have not been cut down

- seeds return to deforested area
- from other (forested) areas

- plants / trees begin to grow back
- so provide food / shelter / nest sites / suitable habitat for animals

- animals return to re-growing area
- from other (forested) areas

- sufficient time for regeneration

- old growth area is a source of recolonising organisms

Q4.a)(2020)

$$\frac{6.0}{1.6}$$

$$3.75$$

Q4.b)(2020)

$$\frac{2.5 - 1.6}{50}$$

0.018 (billion per year)

Q4.c)(2020)

suitable extrapolation line on
Figure 2

reading taken at 2050 from
student's line

Q4.d)(2020)

fewer fish caught **or** limit the
number of fish caught

(remaining fish) can reproduce

Q4.e)(2020)

human land use

- increasing population requires more food
- crops / livestock for food
- farming crops for biofuels
- peat use as compost
- peat use as fuel
- increased use of pesticide / insecticide / herbicide / fertilisers
- use of free-range / organic methods increases land use (for same yield)

link to biodiversity

- deforestation
- monocultures
- loss of hedgerows to make fields larger
- loss of habitat
- consequence of loss of habitat eg (change in) migration
- fertiliser run off polluting water
- use of pesticide / insecticide / herbicide reduces insects / plants which damages food chains
- more soil erosion

link to atmospheric pollution

- more carbon dioxide (from farm animals / machinery)
- more methane (from cows)
- climate change **or** global warming
- example of impact on biodiversity
- acid rain
- desertification

Answers referring to only land use or only biodiversity are level 1

Q5.a)(2024)

Ecology

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lack of oxygen for (aerobic)
respiration

(so) less / no energy (released)

(for) microorganisms / bacteria /
fungi / microbes / decomposers

OR

low pH denatures enzymes (1)

(so) less / no (chemical)
reactions / metabolism /
respiration **or** less / no energy
released (1)

in microorganisms / bacteria /
fungi / microbes / decomposers
(1)

Q5.b)(2024)

34 g/m²/year

Q5.c)(2024)

DNA

Q5.d)(2024)

protein

Q5.e)(2024)

Ecology

<http://www.pcfgstudy.com>

increase in temperature

(because) carbon dioxide is
released (from the peat bog)

(because) carbon dioxide is
produced by burning / decay of
peat

(because) methane is released
(from the peat bog)