

2510101

THE UNIVERSITY *of York*

Degree Examination 2004

ENVIRONMENT DEPARTMENT

BSc in Environment, Economics and Ecology, Part 1a

ECOLOGY AND ECONOMICS: A GLOBAL PERSPECTIVE

Time allowed: **one and a half hours**

Answer **ONE** question from **SECTION A** and **ONE** question from **SECTION B**

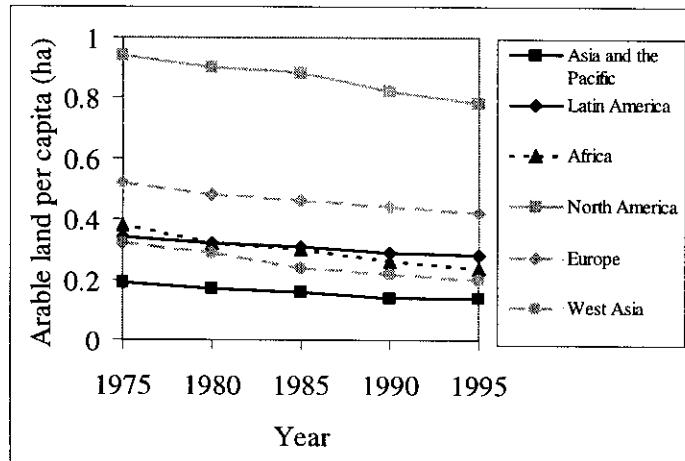
Pay adequate attention to spelling, punctuation and grammar, so that your answers can be readily understood

SECTION A

Question 1

- 1a. Define biodiversity. **(6 marks)**
- 1b. Name two indices used to measure biodiversity. What are the key parameters used by these indices to assess biodiversity and how do these indices differ in their assessment of diverse habitats? **(8 marks)**
- 1c. Briefly describe some of the implications agriculture may have for biodiversity? **(5 marks)**
- 1d. Intensification of agriculture has allowed food production to keep pace with population growth. With reference to Figure 1 discuss whether the apparent decrease in arable land per capita over time is a cause for concern in relation to food security and biodiversity. **(6 marks)**

Figure 1. Regional decrease in arable land per capita (UNEP, 2000).



Question 2

- 2a. Describe four “natural” causes of climate change giving an indication of the time scales over which these perturbations would be likely to occur.
(8 marks)

- 2b. What evidence exists to suggest that anthropogenic influences may be leading to climate change.
(3 marks)

- 2c. Name three greenhouse gases and briefly describe how increases in their atmospheric concentration may alter the Earth’s energy budget.
(8 marks)

- 2d. The Kyoto protocol aims to gain international agreement to reduce global greenhouse gas emissions.
 - i) Explain the rules of “entry into force” of the Protocol.
(3 marks)

 - ii) How close is the international community to having this agreement entered into force?
(3 marks)

SECTION B

Question 3 (25 marks)

Discuss the links between poverty, undernourishment, high human fertility and degradation of the local environmental resource base in developing countries.

Question 4 (25 marks)

Discuss the following statement: “There is no need for economic growth to be abandoned as a policy objective. If there are adverse environmental effects, the market economy provides feedbacks so that the system can adjust itself and allow higher levels of consumption/production to the protection of the natural environment.”