

# **Scenario-based approaches to Environmental and Conservation Ethics**

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# 1. General approach

In our four-year degree programme, our approach to the teaching of Bioethics is:

**Level 1 Biology:** Introductory plenary lecture on the importance of ethics in science, covering a) personal ethics related to disciplines within the biosciences, b) professional ethics topics such as plagiarism and other aspects of misconduct in science.

Laboratory classes also cover aspects of ethics e.g. anti-plagiarism workshop; cloning of embryos.

**Level 2: Large variety of bioscience options:** several of these include ethics discussions e.g. in Reproduction and Development, a discussion on ethical dimensions of Assisted (human) Reproductive Technologies.

**Level 3: Honours programme foundation:** most programmes include a short course covering aspects of ethics related to the programme e.g. Sports Science includes a discussion on drug misuse in sport.

**Level 4: Option system:** Students choose four options (five weeks each) from a wide menu. Generally they choose options closely related to their Honours programme, but we also have several “general interest” options open to all. Bioethics is one of these.

## **2. Where does environmental ethics fit in?**

### **2.1 Level 2 Ecology and Conservation**

- 10 credit course, taken by about 120 students.
- Includes a 2.5 h 'tutorial'  
Why should we conserve wildlife – and how?
- Sections of about 30 students, three activities, all carried out in small groups (5-6 students).
- Each activity has the same basic structure: read, discuss, report back to the whole class.

- Activities are:
  1. Reasons for conserving wildlife: make a **ranked** list
  2. Conservation cases
    - a) Hunting and conservation
    - b) Elephant conservation in Southern Africa
    - c) Native peoples' rights in areas of high biodiversity.

We explicitly say that we are interested in identifying issues that are essentially ethical in nature.

  3. Costs and benefits of “re-wilding” Scotland (beavers, wild boar, wolves)

In all cases, students readily recognise that ethical issues are embedded amongst the factors that need to be considered. We make no effort at this stage to introduce any formal theories of environmental ethics .

# 2.2 Level 3 Zoology: Bioethics mini-course

- Two lectures (Animal Welfare) plus three structured discussions (2-5h each) with preparatory reading.
- Discussion 1: Methods of ethical enquiry (utilitarianism; deontology; existentialism; ethic of care), followed by discussion of animal and human experimentation.
- Discussion 2: Malaria control – use of DDT and GM mosquitoes.
- Discussion 3: Professional ethics in science: do we need an enforceable code of conduct?
- Where is the environmental ethics? In the malaria discussion – but not obvious till the students get more deeply into the topic. There is a lot of science to grapple with too, so the topic shows the complexity of real life cases.  
The ethical aspects are a mix of human rights issues (healthcare; pollution; decision-making) and environmental ethics (the costs of environmental contamination; ‘playing god’ by genetically modifying an important wild species).

## 2.3 Level 4: Bioethics option

- 10 3h sessions, one of which gives a good grounding in ethical theories, at the start.
- One 3h session is on environmental ethics
- The lecture part covers:
  - Utilitarian environmental ethics
  - Intrinsic value of the environment
  - Religious and atheistic approaches
  - What should we be trying to protect?
  - Sentience, biocentrism, ecocentrism
  - Environmental conservation and people: environmental justice
  - Professional ethics of conservationists
  - Animal rights, welfare and conservation (alien species, conservation research, zoos).
- We feel it is good practice, after some theory, to take a down to Earth approach that asks the students to tackle some hard, practical, realistic scenarios. The approach, again, is for small groups to read, discuss and report back.

- The scenarios we use are:
  - Alien species elimination** (we mention Scottish examples: hedgehogs on the Uists, rats on Ailsa Craig, sika deer hybridisation with red deer)
  - Native peoples' rights** in areas of high biodiversity
  - Conservation funding limitations** and 'triage' as a means of settling priorities.
  - Re-wilding**
  - Climate change, windfarms and wild birds**
- Some of these cases are also covered at Level 2, but at Level 4, we find a deeper, more nuanced discussion.

## 2.4 Conclusion

- Our approach is probably not especially novel. But others may find the cases/ scenarios useful. The general principle – where students discuss and report back on realistic dilemmas – seems to me how we should facilitate student learning of the value of bioethics thinking.
- What I'm less sure of is : how best to package Bioethics at higher levels. Our Option at Level 4 attracts only 10-15 students, limiting the impact of this depth of teaching. Environmental ethics might be better embedded in a Level 4 Conservation option.