

Some Additional Study Questions:

Overexploitation and Sustainable Exploitation of Biological Resources

Conservation Biology
Spring 2011

1. How would one go about estimating a growth curve ($g(N)$) for fish or trees? How about a full demographic model? Why are fish populations so hard to estimate directly.
2. What is the importance of catch and effort data in establishing yields for fish stocks? Why are these used and why might they be unreliable?
3. Be sure you can explain why constant yield models set near Y_{MSY} fail so often – and the reasons (there are many) why there is pressure to harvest near the Y_{MSY} . Be able to explain the effects of misestimates of N , K and the $g(N)$ curves (not generally – but with some thought as to the specifics) on populations. Relate the ideas and models we learned about exploitation of the commons to the failure of all types of management models.
4. Be able to explain why proportional effort approaches are less likely to cause population crashes than are constant yield management techniques. What factors can cause proportional yield harvest models to fail (think about this).
5. Discuss stochasticity with regard to constant and proportional yield models. How is stochasticity factored into threshold models?
6. In class we discussed the notion of harvest of certain species as justification for wild areas. What are the advantages and potential pitfall to such an approach. For example, what would be the effect of style on the alligator trade and conservation based on alligator habitat?
7. Explain the economics of exploitation switching in terms of the commons and an ideal free distribution.