

Study Questions and Reading Guide: Kareiva & Marvier, Chapter 18
Conservation Biology
Spring 2011

Reading: This is a very interesting and disturbing chapter. The questions below ask you not only to answer questions based on the text but also to do some reading on your own, for example, from news and other sources. Please pay particular attention to the "Consider This" section at the end of the chapter. The authors make a number of points that I have been trying make all semester, especially in regard to credibility, and they do it far better than I have.

I. Terms to know:

IPCC report	Global circulation models	Climate envelope model	mitigation
adaptation	"resistance, resilience and transformation" as adaptation responses		

II. Questions:

1. There is a tendency to think that climate change is such a big issue that we can't do anything about it. Why is action now, even with the knowledge that there will still be change, so important? Explain and give a number of examples from throughout the entire chapter.
2. What is the difference between weather and climate?
3. The graph shown on Fig. 18.4 is particularly important. Explain what this means with respect to testing alternative models. If you were (or are) a climate change "denier" how would deal with these results (in an honest manner) – is there any way that the results are not a clear-cut as they seem?
4. Why is it important to develop a wide range of models for predicting the future – such as a range of different GCMs? How are models improved?
5. Climate envelope models share some of the characteristics or notions of a hutchinsonian niche. Explain why that it the case and (and explain Hutchinson's niche concept (you may need to look it up) and CEMs. Why is the interaction between habitat fragmentation and climate change particularly troubling to conservation of biological diversity?
6. Explain carbon cap and trade. Why has the US not passed carbon cap and trade? – you will probably need to get on line and read up on this.
7. Using the resistance, resilience, and transformation concepts, discuss and evaluate strategies for preserving biodiversity in the face of large scale climate change.
8. Look at all of the discussion questions at the end of the chapter (including take the time to visit the climate choice website). An educated person should be able to discuss all of these questions intelligently.