

CHAPTER 2	Thought Lab 2.3: Too Much of a Good Thing Answer Key	BLM 2.3.3A
ANSWER KEY		

Answers to Analysis Questions

1. Increasing UVR inhibits photosynthesis, and thus decreases productivity.
2. Direct effects of increasing UVR are as follows: kills fish and some amphibians, causes developmental damage in amphibians, decreases amphibians' ability to fight off disease, and causes skin deterioration and eye problems (cataracts) in humans.
3. Indirect effects of increasing UVR are as follows: changes in behaviour (fish swim to deeper, darker water; shadeseeeking and nocturnal behaviour); selection for darker pigmentation; humans wear sunscreen and protective clothing; selection for efficient DNA repair processes; increased survival of fish and amphibians in water where dissolved material acts as shield.
4. A typical suggestion would be to counteract increased UVR by actively enforcing a worldwide ban on CFCs and HCFCs. To ensure that worldwide ban on CFCs and HCFCs is a wise approach, scientific studies should be completed to see how these chemicals impact the stability of the ozone layer and UVR levels. Countries could also be consulted to determine if they would be willing to enforce this ban and to determine the economic cost of this ban.