

Botkin and Keller Chapter 7: Study Questions & Key Terms

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1. What is meant by the term the *tragedy of the commons*?

Which of the following are the result of this tragedy?

The tragedy of the commons is a concept that states that one's self-desires will ultimately cause them to deplete the resources offered to them instead of using the resource sustainably.

- (a) The fate of the California Condor
- (b) The fate of the gray whale
- (c) The high price of walnut wood used in furniture

2. What is meant by risk-benefit analysis?

-Risk-benefit analysis is a comparison between the risk of a present action and outcomes, and the benefit/value of the action.

3. Cherry and walnut are valuable woods used to make fine furniture. Basing your decision on the information in the following table, which would you invest in?

(Hint: Refer to the discussion of whales in this chapter.)

- (a) A cherry plantation
- (b) A walnut plantation
- (c) A mixed stand of both species
- (d) An unmanaged woodland where you see some cherry and walnut growing

Species	Longevity	Maximum Size	Maximum Value
<i>Walnut</i>	400 years	1 m	\$15,000/tree
<i>Cherry</i>	100 years	1 m	\$10,000/tree

4. Bird flu is spread in part by migrating wild birds. How would you put a value on (a) the continued existence of one species of these wild birds; (b) domestic chickens important for food but also a major source of the disease; (c) control of the disease for human health?

What relative value would you place on each (that is, which is most important and which least)? To what extent would an economic analysis enter into your valuation?

-A) A value on wild birds would be placed depending on its role in the ecosystem and its distinct traits; B) Chickens would be evaluated on the amount of people that depend on chicken for food, and how much one is willing to pay for a chicken; and C) How much money must be invested into care for an affected individual multiplied by population. I would place human

health as the most valuable, and the existence of wild birds as the least. An economic analysis would factor the risks of the disease if left unattended, and the benefits of these decisions.

5. Which of the following are intangible resources?

Which are tangible?

(a) The view of Mount Wilson in California: **Intangible**

(b) A road to the top of Mount Wilson: **Tangible**

(c) Porpoises in the ocean: **Tangible**

(d) Tuna in the ocean: **Tangible**

(e) Clean air: **Intangible**

6. What kind of future value is implied by the statement “Extinction is forever”? Discuss how we might approach providing an economic analysis for extinction.

-“Extinction is forever” implies that the future holds no value, so immediate action or wealth would be most preferable. We may approach an economic analysis for extinction by analyzing what kind of factors will contribute to extinction (such as pollution, overexploitation, and population growth) and by determining the needs of the population as of now.

Key Terms

Commons: Land (or another resource) owned publicly, with public access for private uses.

Indirect Cost: Costs and benefits that don’t show up in the price tag.

Public-Service Functions: Natural ecosystem actions that maintain factors such as filtration.

Direct Costs: Costs borne by the producer in obtaining, processing, and distributing a product.

Intangible Factor: A factor you cannot touch directly, but one you can value.

Risk-Benefit Analysis: A comparison between the risks of a venture and consequences, and the benefits of the outcome

Environmental Economics: The study of sustainable use of resources and economy stability in conjunction with the environment.

Natural Capital: The ecological systems that provide public-service functions.

Tangible Factor: A factor you can touch, buy, and sell.

Externality: Same as indirect costs; costs and benefits that don’t show up on the price tag.

Policy Instruments: The means to implement a society’s policies, such as persuasion and moral suasion.