

**CH 56 Reading Guide: Conservation Biology and Global Change  
10ed**

1. Ecologists are particularly concerned about the impact of human activities on **which** four processes of the biosphere?

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2. **Define Conservation Biology?**

3. Ecologists organize biodiversity on three levels. In the following table, **explain** the impact of decreasing diversity in each division

| Level of Biodiversity | Impact |
|-----------------------|--------|
| Genetic diversity     |        |
| Species diversity     |        |
| Ecosystem diversity   |        |

4. **Explain** the difference between *endangered species* and *threatened species*.

5. Use this table to **organize your thoughts** on how the following four threats affect biodiversity.

| Threats to Biodiversity | How it Reduces Biodiversity |
|-------------------------|-----------------------------|
| Habitat Loss            |                             |
| Introduced species      |                             |
| Overharvesting          |                             |
| Global Change           |                             |

6. List **five** *introduced species* that present a serious threat to their new communities. **Explain** the damage done by each introduced species. Include two introduced species that are a threat in your own region of the country. **Indicate these with an asterisk(\*)**.

| Introduced species | Damage |
|--------------------|--------|
| 1.                 |        |
| 2.                 |        |
| 3.                 |        |
| 4.                 |        |
| 5.                 |        |

7. **What** do conservation biologists who adopt the *small-population approach* study?
8. **What** is an *extinction vortex*? **Explain** what drives an extinction vortex.  
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9. **Why** is the total number of individuals in a small population not a good measure of its reproductive potential?
10. On **what type** of population does the *declining-population* model focus?
11. **What** is the emphasis for study in the declining-population model?
12. Scientists drilled nest holes for red-cockaded woodpeckers in an attempt to increase their population levels. **How** is this action a response to the declining-population model?
13. **Describe** how the increase in cowbirds is related to forest fragmentation.

14. **What** are the potential positive and negative effects of *movement corridors*?

**Positive:**

**Negative:**

15. **Explain** the concept behind a zoned reserve.

16. **How** has agriculture affected nitrogen cycling? **What** are some negative consequences of nutrient enrichment?

**How:**

**What:**

17. **Explain** the process of biological magnification. **Discuss** at least one example.

18. **What** is meant by the *greenhouse effect*? **What** would life on Earth be like without this effect?

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19. **What** is contributing to the great increase in atmospheric CO<sub>2</sub>? **What** are the potential effects of this increase?

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20. **How** is atmospheric ozone depleted? **What** are projected effects of this depletion?

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21. **Explain** the concept behind the phrase *sustainable development*.

