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| **Chapter 10 Summary**1. Conservation biology attempts to slow down the rate at which we are destroying and degrading the earth’s biodiversity through the use of rapid response strategies. Hot spots, the most endangered and species-rich ecosystems, receive emergency action to slow down/stop the loss of biodiversity in these systems. Bioinformatics manages, analyzes, and communicates basic biological and ecological information to help sustain biodiversity.2. Forests provide important ecological and economic services, are storehouses of biodiversity, and affect weather and climate throughout the world. Forest resource management varies according to the type of forests. In diverse forests, the age and size of trees are preserved to foster natural regeneration. Government policies will primarily determine the future of forests, including old-growth forests.3. Forests in the United States should be managed so as to retain as much of the forests as possible. Clear-cutting and seed-tree cutting methods of harvesting are scourges on the forest; selective cutting is the most reasonable way to harvest trees.4. Deforestation is one of the most serious ecological problems of this century. The earth’s forests have been reduced by 20–50% and the destruction continues to this day. Deforestation has many harmful environmental effects: reduces ecological services of forests, releases large amounts of carbon dioxide in the air, produces a drier and hotter climate; reduces the control of water movements, and increases soil erosion.5. Tropical deforestation is one of the biggest threats to world economic health and climate. To help sustain tropical forests, nations of the world must unite to discourage deforestation and degradation.6. Problems affecting parks run from little/no protection from their governments or being too small to sustain large animal species, to being too popular and, therefore, overused by people. Some methods for managing parks include: limiting the number of visitors, raising entry fees to provide funds for maintenance and management, managing parks in reference to nearby federal lands, discouraging development around already established parks, and providing more volunteers and better paid employees to maintain the parks.7. Only about 7% of the world’s terrestrial areas are protected from potentially harmful human activities; these areas need to be expanded throughout the world. In order to adequately conserve biodiversity, at least 20% of the earth’s land area should be protected in a global network of reserves.8. Wilderness is an amount of land legally set aside to prevent/minimize harm from human activities. This is land where human beings may visit but not remain. Wilderness areas are important for: (1) their natural beauty, (2) their natural biological diversity, (3) their enhancement of mental and physical health of visitors, and (4) their contributions to biodiversity and to evolutionary possibilities.9. Ecological restoration is the process of repairing damage caused by humans to the biodiversity and dynamics of natural ecosystems.10. Initiatives that would help to sustain the earth’s biodiversity include:– Immediately preserving the world’s biological hot spots– Protecting the remaining old-growth forests – Mapping the world’s terrestrial and aquatic biodiversity– Identifying and taking action for the world’s marine hot spots, just as for the terrestrial hot spots – Protecting and restoring the world’s lakes and river systems– Developing a global conservation strategy that protects the earth’s terrestrial and aquatic ecosystems– Making conservation profitable– Initiating ecological restoration projects worldwide |

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