**APES Chapter 10: Sustaining Terrestrial Biodiversity: Forests, Rangelands, Parks**

**Note Taking Focus Questions**

**Directions:** Use the Cornell Method of note taking as you answer the questions below. Your notes must be **hand written** to receive credit for them. Within your notes, use the title for each subsection of notes which is *in italics and underlined.*

**Section 10-1**

*Types of Forest Ecosystems*

1. How much of the earth’s surface do forests occupy?

2. Old Growth Forests: Define what they are, why they are important, and what % of the world’s forest they are.

3. Second Growth Forests: Define what they are and how they are formed.

4. Tree Plantation: List the 2 other names, define what they are, and the downsides to this type of forest.

*Ecosystem Services Provided by Forests*

1. Use the figure 10-4 to list the ecosystem services provided by forests. Read the section on these services for some additional services.

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*Methods Used to Harvest Trees*

1. Discuss why building roads to harvest trees have many harmful effects.

2. What is the difference between selective cutting, clear cutting, and strip cutting? Try to think of a reason or two that each management technique would be used. Use figure 10-8 to list some advantages and disadvantages of clear cutting.

*Threats to Forest Ecosystems*

1. What are surface fires, and what parts of the forest do they impact?

2. What are some benefits of surface fires?

3. What are crown fires, and what parts of the forest do they impact?

*Deforestation*

1. Define deforestation.

2. Use figure 10-11 to list how deforestation degrades natural capital.

*Tropical Forests Are Disappearing*

1. What percentage of the earth’s land area do tropical forests cover?

2. Describe how the loss of tropical forests impacts climate change, forest fires, topsoil, biodiversity.

3. What is an ecological tipping point, and what type of ecosystem replaces a tropical rainforest when it goes beyond that tipping point?

*Causes of Tropical Deforestation*

1. List and explain the various reasons for tropical deforestation.

**Section 10-2**

*How should we manage and sustain forests?*

*Improve the Management of Forest Fires*

1. What are the benefits and drawbacks to the Smokey the Bear educational campaign?

2. List the 4 strategies/approaches proposed by ecologists to reduce fire related harm.

3. Use figure 10-15 on p. 227 to list *More Sustainable Foresting Practices.*

4. List 4 ways to *Reduce the demand for harvested trees.*

*Help to Manage the fuelwood crisis in LDCs by:*

1. Read over the case study on Deforestation and the Fuelwood Crisis. Discuss the various methods mentioned in the case study to deal with fuelwood issues.

*Methods to Reduce Tropical Deforestation*

1. What is a debt for nature swap? Conservation concession?

2. Read the rest of the section and look at figure 10-19 and list how both governments and individuals can reduce tropical deforestation.

**Section 10-3**

*How should we manage and sustain grasslands?*

1. Define the two types of grasslands: rangeland vs. pastures.

*Ecosystem Services Provided by Grasslands.*

2. How do grasses grow, and why is moderate grazing helpful for grasslands?

3. Define overgrazing, and discuss the impacts that it has on the grasslands.

*Managing Rangelands More Sustainably*

1. Read the section on rangeland management and explain the methods discussed within the section.

**Section 10-4**

*National Park System*

1. How many parks are there in how many countries?

2. What are some of the threats that national parks are facing both internationally and in the U.S.? (Read the case study “Stresses on U.S. Public Parks”.)

*Protecting Parks and Reserves*

1. What percentage of the earth’s surface was protected as of 2012? What percentage do conservation biologists feel should be fully protected?

2. Explain the buffer zone concept.

3. Explain what a habitat corridor is.

4. What is a wilderness area, and why are they important?

5. What problems are U.S. wilderness areas facing?

**Section 10-5**

*Ecosystem Approach to Sustaining Ecosystems*

1. What are the 5 points to follow as part of the ecosystem approach?

2. What is a biodiversity hotspot, and how many are there?

3. Define ecological restoration, and list some examples of things that would be considered ecological restoration.