

*Environmental Sustainability Rewards and Challenges: The Case of Chimney Rock***Summary of the Case**

This case study provides background information about a scenic, natural attraction, called Chimney Rock State Park, and describes its efforts to promote and apply environmentally sustainable practices at the park. A description of the park's history reemphasizes why sustainability is so important to its operation. In addition, challenges that still face the park are introduced.

Teaching and Learning Objectives

Below are the teaching and learning objectives for this case.

- 1. General Teaching Objective:** Provide students with an opportunity to gain an understanding of environmentally sound practices related to sustainability at a natural, scenic attraction.
- 2. Learning Objective:** Students will be able to explain and demonstrate an understanding of environmental sustainability practices for hospitality and tourism sites.
- 3. General Teaching Objective:** Provide students with current information about effective environmental sustainability practices and challenges facing the management of Chimney Rock, a popular, natural, scenic attraction.

Learning Objective: Students will be able to describe the current practices in place and problems facing the management of the attraction and suggest possible solutions.

The case achieves this objective by:

- Providing information about the park's sustainability plans and practices;
- Presenting information concerning some of the challenges that the management team needs to address in the future.

- 4. General Teaching Objective:** Encourage student discussion regarding environmental sustainability practices and challenges associated with implementing them in a popular, natural, tourism attraction.

Learning Objective: Students will be able to thoughtfully assess environmental sustainability practices and challenges associated with implementing them at a popular, natural, tourism attraction.

- 5. Graduate Teaching Objective:** Provide students with an opportunity to engage in critical thinking by investigating environmentally sound practices related to sustainability at other attractions.

Graduate Learning Objective: Students will be able to analyze, compare, and contrast sustainability practices and issues in other natural attractions with those at Chimney Rock.

- 6. Graduate Teaching Objective:** Provide students with an opportunity to engage in the development of their own case

studies related to environmental sustainability and tourism.

- 7. Graduate Learning Objective:** Students will be able to synthesize their own case related to environmental sustainability and tourism.

Suitability for Use

This case is suitable for use by instructors and students in undergraduate and graduate courses related to tourism and hospitality management. It would be meaningful in settings where the instructors want to provide students with opportunities to expand their knowledge of sustainability, as it relates to environmentally sound management practices for tourism and hospitality operations and attractions.

Sources and Methods of Collecting Information for the Case

Information for this case was collected via observations, personal communication with management staff members at the park, and reading website materials, books, and articles related to the topics presented in the case study.

Teaching Approach and Suggested Sequence of Timeframe

Instructors may use this case in various ways. These involve using the case as:

- an individual assignment
- a group assignment
- a combination of an individual and a group activity
- a class discussion

Questions to Generate Interest

- What is sustainability?
- What is sustainable tourism?
- What is meant by the triple bottom line approach to sustainability (people, planet, profit)?
- What other forms of tourism fall under the umbrella of ecotourism?
- What are some of the positive impacts of the current sustainability practices at Chimney Rock?

Definitions**Carbon footprint**

The carbon footprint is defined as "the negative impact that something (as a person or business) has on the environment; specifically: the amount of carbon emitted by something during a given period" (Merriam-Webster Dictionary, 2010).

Invasive species

According to the United States Department of Agriculture (2016), an “invasive species” is defined as a species that is: “1) non-native (or alien) to the ecosystem under consideration and; 2) whose introduction causes or is likely to cause economic or environmental harm or harm to human health. Invasive species can be plants, animals, and other organisms (e.g., microbes). Human actions are the primary means of invasive species introductions.”

LED lighting

According to the United States Department of Energy (2017), “The light-emitting diode (LED) is one of today’s most energy-efficient and rapidly-developing lighting technologies. Quality LED light bulbs last longer, are more durable, and offer comparable or better light quality than other types of lighting.”

Sustainable development

Sustainable development was originally termed “eco-development” at the United Nations Environmental Progress Stockholm Conference (Strong, 1973) and has been defined for several decades as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development, 1987).

Stakeholder concept. The stakeholder concept was first addressed in the business realm to focus on the relationships between all those who have an interest in a business or organization (Freeman, 1984). A stakeholder can be defined as any person or group that is affected by a business or organization (Freeman, 1984). In sustainable tourism, stakeholders can be the present visitors, future visitors, present host community, and future host community (Byrd, 2007).

Sustainable tourism

Tourism that meets the needs of the present without compromising the ability of future generations to meet their own needs (Lawson & Weaver, 2002). According to East Carolina University’s former Center for Sustainable Tourism (2010), “sustainable tourism contributes to a balanced and healthy economy by generating tourism-related jobs, revenues, and taxes while protecting and enhancing the destination’s social, cultural, historical, natural, and built resources for the enjoyment and well-being of both residents and visitors.”

Triple bottom line of sustainability

This term refers to the sustainability principles related to people (socio-cultural aspects), planet (environment) and profit (economy) (Elkington, 1994). In tourism development and management, and a suitable balance must be established between these three dimensions to guarantee its long-term sustainability.

Answers to Discussion Questions

1. *What are the major sustainability initiatives and projects taking place at Chimney Rock?*

 - Recycling
 - Eradication of invasive species.
 - The use of local foods
 - A “green” purchasing initiative. Both the Old Rock Café and the delicatessen located at the top of the mountain have stopped using individually- packaged condiments for customers that dine in those establishments
 - The use of recycled food containers
 - Use of LED lighting and CFL bulbs
 - A lighting and heating conservation project
 - Elimination of pests (e.g., Woolly Agedid) and the use of native species and organic landscaping practices
 - Reduction of carbon emissions to reduce the carbon footprint
 - Educational programs
 - A monthly newsletter to inform people
 - Use of Green Seal soaps and cleaners
 - Use of rain barrels
2. *What are the major challenges to sustainability practices at Chimney Rock?*

Sustainability challenges at Chimney Rock include access to facilities, parking limitations, capacity issues, invasive species, awareness, and current lack of involvement by some stakeholders, are all challenges to be overcome.
3. *Who are the stakeholders with regard to sustainability efforts at the park and how can they work together?*

The stakeholders include the Chimney Rock Management staff, park visitors, area residents, state park staff, North Carolina residents, and perhaps others. Answers will vary about how these groups can work together, but the discussion regarding this question might emphasize communication and sharing ideas for best practices and visions for the future of the park.
4. *Is there any additional information that you would like to have to better understand the sustainability activities at the park and if so, what further information would be helpful and why?*

Answers will vary. Additional useful information might include more statistics about recent visitor numbers and an understanding of seasonal use patterns in all areas of the park, including human-made facilities such as the restaurant and gift shop, as well as trails and other natural areas.
5. *What additional steps could Chimney Rock take to increase recycling practices in the park?*

Answers will vary. Perhaps further education about recycling and even Chimney Rock clean-up activities that might involve

visitors in the process of cleaning up and engaging in recycling efforts on behalf of the park.

6. *What have other attractions undertaken to alleviate traffic problems and what kinds of additional steps could Chimney Rock take to decrease traffic issues in the park?*

Answers will vary. The United States National Park Service deals with this issue on an ongoing basis. Parks such as Mesa Verde in Colorado already apply congestion pricing and other parks consider timed entries (Hanson, 2016).

7. *What suggestions do you have for Chimney Rock in terms of furthering its environmental education efforts? For example, what types of programs do you think would be useful and for whom and how could these be presented/delivered to various groups?*

Answers will vary. Further programs regarding various sustainability topics could be beneficial. Possible ideas include programs and initiatives on a broad array of environmental topics including conservation and best practices for sustainable management, in addition to further environmental education programs about wildlife and native plant species.

8. *What additional steps could Chimney Rock take to increase sustainability practices with regard to the three spheres of sustainability (people, planet, profit) in the park?*

Answers will vary. Suggestions might include further environmental efforts that could entail increased involvement of visitors, enhanced educational efforts, additional community involvement, and cost-benefit analysis of environmental sustainability activities.

9. *How and why are sustainable practices relevant for the hospitality and tourism industry?*

Answers will vary. For example, recycling has become increasingly important in tourism and hospitality enterprises to reduce waste, enhance the visitor experience, and reduce costs. As noted, these efforts toward environmental sustainability provide visitors with authentic examples of green practices in action and travel decisions are now often centered on green practices. Market research indicates that customers increasingly desire or demand "green" products and services and therefore, "going green" is an intelligent and necessary business strategy (Chafe, 2005). Projects underway at the park show by example how visitors can put sustainable practices to work on a daily basis.

10. *How do the sustainability practices compare to those of other parks and natural attractions?*

This is a question that may be best for advanced classes. Answers will vary.

11. *Is sustainable tourism really possible? Why or why not?*

This is a question that may be best for advanced classes. Some might argue that sustainable tourism is an achievable goal and others may say that it is an impossible journey. Others may view it as a way of travelling. Answers will vary.

Suggested Class Activities and Projects

A suggestion for use of the case in a course would be to first use the general questions listed above to generate interest in the topic of sustainability. Next, the students could read the case and answer the discussion questions individually, on the content presented, and then return to class another day and discuss the answers to those items in a second class discussion. After the case has been discussed, students could be assigned to complete individual or group projects that focus on one or more of the following:

- Compare and contrast environmental sustainability in Chimney Rock with that found at other natural tourist attractions.
- Select one of the issues related to environmental sustainability described in the case and interview someone in the tourism and/or hospitality industry with knowledge of the issue to find out his or her views regarding the issue and thoughts about the future of the issue.
- Create a training or educational program to help inform employees and/or visitors about sustainability as it relates to hospitality and tourism.
- Using the case and the master plan for the park as resources, and other resources as needed, provide a thoughtful analysis of the opportunities and constraints for park development and the implementation and continuance of environmental sustainability practices in the park.
- Expand on the sustainability focus to include not only environmental, but also socio-cultural, and economic sustainability principles as they relate to the park and then have the students develop plans for the further incorporation of the triple bottom line sustainability principles into the practices of the park.
- Develop and write a case study of one's own (suggested for graduate students).

Suggestions for Additional Reading Material

- Edgell Sr, D. L. (2016). *Managing sustainable tourism: a legacy for the future*. New York: Routledge.
- Mowforth, M., & Munt, I. (2016). *Tourism and sustainability: Development, globalization, and new tourism in the third world* (4th Ed.). New York: Routledge.
- N.C. Department of Environment and Natural Resources Division of Parks and Recreation (2011). *Master Plan Chimney Rock State Park, May 2011*. Retrieved from <https://www.ncparks.gov/sites/default/files/ncparks/37/mp-chro-1.pdf>
- Weaver, D. (2006). *Sustainable tourism: Theory and practice*. Oxford, UK: Butterworth-Heinemann.

References

- Center for Sustainable Tourism (2010). East Carolina University. Retrieved from <http://www.ecu.edu/sustainabletourism/>
- Chafe, Z. (2005). Consumer demand and operator support for socially and environmentally responsible tourism. The International Ecotourism Society. Retrieved from <http://efti.hhp.ufl.edu/wp-content%5Cuploads/Consumer-Demand-for-Responsible-Tourism-2005.pdf>
- Elkington, J. B. (1994). Towards the sustainable corporation: Win-win-win business strategies for sustainable development. *California Management Review*, 36(2), 90-100.
- Freeman, R. E. (1984). *Strategic management: The stakeholder approach*. Boston, MA; Pittman.
- Hanson, A. (2016). Park Service considers visitor caps, expects record crowds. AP News, Associated Press. Retrieved from <http://bigstory.ap.org/article/5699a488f8db446aaaa6f9c035754970/park-service-considers-visitor-caps-expects-record-crowds>
- Lawton, L. & Weaver, D. (2002) *Tourism Management*. Milton, Queensland, Australia: John Wiley & Sons, Australia.
- Merriam-Webster Dictionary (2010). Carbon footprint. Retrieved from <http://www.merriam-webster.com/netdict/carbon%20footprint>
- Strong, M.F. (Ed.) (1973). *Who Speaks for Earth?* NY: Norton.
- United States Department of Agriculture (2016). National Native Species Information Center. What is an invasive species? Retrieved from <https://www.invasivespeciesinfo.gov/whatis.shtml>
- United States Department of energy (2017). LED lighting. Retrieved from <https://www.energy.gov/energysaver/led-lighting>
- World Commission on Environment and Development. (1987). *Our Common Future*. Oxford: Oxford University Press, page 43.