

# A Case Study of Sustainability in Jackson County, North Carolina

---

By Cynthia S. Deale, Shardae D. Brown, Kristine M. Miller, Emily M. Elders and Carrie Blaskowski

## Introduction

A serious focus on sustainability began to develop after the Brundtland report was created to address concerns related to the environment and development (World Commission on Environment and Development, 1987) and sustainable tourism began to receive more attention in the 1990s with the work of several researchers, as well as a deepening concern for the potential damage to the environment and culture caused by tourism (Stoddard, 2008). Although there is awareness of the necessity to protect and conserve the local environment and heritage of tourism destinations, there are often barriers to the actual practice of sustainability. Six barriers to sustainability have been identified as:

- Economic priority (short term economic focus wins over long term social and environmental concerns)
- Lack of planning (Too much damage was already done and initiatives were not strong enough to apply to already damaged areas)
- Lack of stakeholder involvement
- Lack of integration with regional and national frameworks and policies
- Lack of accountability of politicians (lack of political will)
- Lack of coordination with other government parties (political clash) (Dodds & Butler, 2009).

This case study is a practical application of sustainability resulting in conservation of the physical, natural, and heritage environment, as well as the economic growth of a rural county in Western North Carolina. Jackson County is working to overcome these six barriers by:

- Identifying the need for sustainable practices;
- Creating realistic, cost-effective sustainable practices and showing how they can be implemented;
- Focusing on the importance of partnerships between the local government, the community, and organizations in sustainability efforts;
- Making the necessary short and long term plans to ensure sustainability; and

- Enacting policies and procedures to protect the natural and cultural environment while promoting a healthy economy.

## Teaching Objectives of the Case

The teaching objectives of the case are to:

1. Offer opportunities to understand and thereby explain definitions and applications of sustainability.
2. Provide current information about a variety of sustainability efforts, using a rural country in North Carolina as an example.
3. Demonstrate an understanding of current practices of sustainability by identifying them in the case study and by providing further examples of their own.
4. Stimulate discussion over the definitions of and application of sustainability in a variety of settings.
5. Share definitions and describe applications of sustainability in a variety of settings.
6. Identify themes in sustainability in a variety of hospitality related sectors.
7. Identify themes in sustainability in a variety of hospitality related sectors.

## The Issues in Jackson County

Jackson County is 491 square miles of mountainous land in western North Carolina and home to many natural and historic sites; recently it has seen an increase in tourism both in number of tourists and dollars spent (City-data.com, 2010). Natural sites bordering and within the county, such as the Great Smoky Mountains National Park and the Nantahala National Forest, and heritage sites such as the Cherokee Qualla Boundary draw thousands of visitors annually. Over time the effects of a steadily growing tourism industry began to affect the quality of life for residents and threaten the existence of the natural and cultural environment. Increased traffic brought air pollution and noise, construction degraded the scenery and the quality of the land in the area, and ancient sites such as the Native American hieroglyphs found on Judaculla Rock saw erosion and decay from years of improper protection from the elements.

Policy makers and community members in Jackson County had a common problem: the same natural resources, scenery, and way of life that first brought tourists to the area were being destroyed by growth in the county. So the issue became--what could be done

---

*Cynthia S. Deale, Shardae D. Brown, and Kristine M. Miller are all affiliated with East Carolina University. Emily M. Elders is Recreation Project Manager with Jackson County and Carrie Blaskowski is Former Assistant Director of the Jackson County Green Energy Park.*

---

to balance the economic benefits of business and tourism with the degradation of the physical and cultural environment? How much of an investment, and what timeframe would these efforts take? What partnerships and programs would be necessary to implement changes and would they be supported by the community?

To work toward the solution to the problems faced in Jackson County, sustainable practices have been planned and, in many instances, implemented to maintain the quality of the land and resources, reserving them for future use, and protecting the quality of life and scenery enjoyed by residents. This case study explores the measures taken, and how sustainability has helped reconcile economic gain with preservation in natural and heritage tourism. It also raises several questions about the future of the county and where it can or should go from here.

## A Brief Description of the County

Jackson County has a population of 36,891, an increase of 11.4% from 2000 to 2009 (U.S. Census Bureau, 2010). The geography of the area includes mountains, waterfalls, rivers, and many landmarks, including the Blue Ridge Parkway. The varied landscape offers residents and visitors the opportunity to enjoy many outdoor activities such as viewing waterfalls, hiking, bicycling, fishing, golf, horseback riding, snow skiing, and rafting (Jackson County Travel & Tourism Authority-a, 2010). State and local government organizations are the largest employers in Jackson County (N.C. Employment Security, 2010). The town of Sylva, with a population of approximately 2,435 (U.S. Census Bureau, 2010), is the county seat. Jackson County is also home to Western Carolina University, a state university with over 9,000 students (Western Carolina, 2010).

Despite significant population growth, Jackson County remains heavily wooded—much of its area lies within the Nantahala National Forest. Farms dot the region although Jackson County's farms average 77 acres and are relatively small when compared to those in the eastern part of the state (Agriculture Advisory, n.d.). In an attempt to preserve farming as an occupation and land for farm use, the Jackson County Board of Commissioners established the Voluntary and Enhanced Voluntary Farmland Preservation Program to provide grants to farmers to maintain the farming industry in the county (Agriculture Advisory, n.d.).

Three major attractions bring tourists to the county. Great Smoky Mountains National Park, officially established on June 15, 1934 and encompassing over 800 square miles, shares its southern border with Jackson County (History of the Great, 2010). The county is also home to the southern end of the Blue Ridge Parkway - more than 40 miles of serene, scenic beauty-and the edge of the Qualla Boundary, the home of the Eastern Band of the Cherokee (Jackson County Travel & Tourism Authority-b, 2010) and near the Harrah's Casino Cherokee, which has recently expanded (Bracken, 2010).

The geography, history, and availability of year-round outdoor activities make Jackson County a popular tourist destination. In 2009, tourism expenditures in the County totaled over \$61 million, paying out \$10.8 million in payroll to approximately 600 employees (U.S. Travel Association, 2010). Additionally, over the last few years, second-home development has increased (E. Elders personal communication, January 4, 2010).

## Sustainability Programs, Policies and Events in the County

With sustainability as a rising issue in many communities, including Jackson County, it is important to understand what it is and how it can be achieved. Sustainability has been defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission, 1987). Building on this definition, the Environmental Protection Agency views sustainable development as having two components:

- The policy perspective that considers basic economic, social, and security needs of today and the future without undermining natural resources, the environment, and quality of life.
- The business perspective considers the goal of increasing long-term shareholder and social value, while decreasing use of natural materials and reducing negative environmental impacts (Environmental Protection Agency, 2010).

Jackson County uses aspects of both perspectives in the design of policies and programs to promote sustainability and these are described in the following paragraphs.

Private business owners, community leaders, and members of non-profit organizations take an active role in the protection of crucial resources such as the county's waterways, forests, air, and landmarks. Examples include:

- Fish and Wildlife Associates, Inc., a Whittier, NC based environmental consulting business that specializes in environmental issues regarding development (Fish and Wildlife Associates, Inc., 2010),
- Friends of the Great Smoky Mountains National Park (2010), a non-profit organization whose mission is to protect, bring awareness to, and raise funds to preserve the Smoky Mountains,
- The Jackson County Greenway Advisory Committee comprised of community members who have dedicated their time to work on the committee as part of the County's Greenways Project (Jackson County Recreation/Parks, 2009),
- The Western North Carolina Fly Fishing Trail (2010), the first and only fly fishing trail in the nation, attracting fly fishers from all over the United States,
- The Southern Appalachian Sustainable Building Council (2010), a non-profit organization, promoting green building in rural areas, and advocating for land use planning to preserve farms

and large wilderness areas,

- The Mountain Landscapes Initiative (MLI) (2008), a community-based organization working for the protection of the Jackson County landscape in partnership with six other North Carolina counties,
- “Strategies for Land Conservation in Jackson County”, a report on the negative effects of development on the local environment adopted in 2008 by the Jackson County Board of Commissioners adopted (McMahan, B., Cowan, J., Shelton, W.R., Massie, T.L., & Jones, M.R., 2008),
- The Appalachian Sustainable Agriculture Project (2010), dedicated to helping western North Carolinians “meet neighbors and give your food dollar directly to the person who grew your food”-- Jackson County’s Farmers’ Market features “only locally grown produce, products and crafts. Most of [their] growers use organic practices” (Appalachian Sustainable, 2010),
- The town of Sylva, designated as a Tree City USA by the National Arbor Day Foundation for six years (Ellison, 2010)-  
- Designation as a Tree City requires Sylva to maintain a tree board or department, a tree care ordinance, a community forestry program with an annual budget of at least \$2 per capita, and an Arbor Day observance and proclamation (Arbor Day Foundation, 2010) and as evidence of the county’s commitment to the environment, Jackson County’s commissioners were honored for their conservation efforts by the North Carolina Wildlife Federation in 2008 (Commissioners, 2008),
- Organizations such as AdvantageWest that believe that “as a people, there is an emerging creative class designing a wave of green innovations and a tradition of stewardship of natural resources that leads to green lifestyles and many ‘early adopters’ of new green products and services” (AdvantageWest, 2006).

Additional efforts to integrate sustainability into the county’s future include focuses on infrastructure, energy, and alternative fuel, and initiatives designed and orchestrated by community members. These will be discussed in more detail in the paragraphs that follow.

### ***Infrastructure***

Given the steady growth of Jackson County and the expansion of existing roads, alleviation of traffic problems and repair of current roads are pressing issues for local leaders. Several roads in the county are designated as “over-growth” and many are approaching capacity (Jackson County Transportation, 2009). A survey conducted by the Jackson County Transportation Task Force noted that “the citizens of Jackson County, and those who to commute to work here, take an active interest in the transportation system” (Jackson County Transportation, 2009). The survey also revealed that residents “want to preserve the rural character and natural beauty of the mountains and towns areas” and citizens of Jackson County would like the town of Sylva to be more accessible to bicyclists and pedestrians. In addition, safety,

environmental protection, and increased transportation options were perceived as important (Jackson County Transportation, 2009).

In response to the transportation issues facing the county, concerned citizens joined together to form the Smart Roads Alliance with the goal of developing realistic alternatives and smart solutions to Jackson County’s traffic and transportation issues (Smart Roads-a, n.d.). Since its founding in 2002, the Smart Roads Alliance has developed strategies for improving existing roads, conducted community meetings with national experts on transportation issues, involved Jackson County residents in a community-based decision making process, assisted in the creation of the Transportation Task Force, and encouraged Jackson County Transit to offer daily bus routes and expand public transportation (Smart Roads-b, n.d.).

In December of 2009, the Smart Roads Alliance expressed concerns “over the inclusion of a bypass, called the 107 Connector, in the Jackson County Transportation Task Force’s Comprehensive Transportation Plan (CTP)” (Smart Roads-b, 2009). According to the North Carolina Department of Transportation “The N.C. 107 Connector provides a way to improve traffic bottlenecks, address safety concerns and repair deficient road conditions along N.C. 107 in Jackson County” (N.C. 107, n.d.). However, the Smart Roads Alliance insists that “a new bypass has enormous potential to drastically change our community’s traffic patterns, economy and landscape. A bypass would divert 10,000-12,000 vehicles/day from our commercial districts, use 135 million dollars in taxpayer funds, dislocate approximately 50 residences and consume a ¼ mile swath of private property, 5 miles long, in Jackson County” (Smart Roads-b, 2009).

Due to concern over the environmental impact of the proposed highway bypass, the Smart Roads Alliance has suggested substitutes to road expansion such as alternative transportation options, including rail service. Ideas for expansion provided by the Alliance were offered with hopes of allowing the county to consider embracing forward thinking and environmentally conscience transportation options to take the county into the future (Smart Roads-b, 2009).

### ***Recycling***

In terms of per capita recovery from recycling efforts, Jackson County ranks 17th out of the 100 counties in the state of North Carolina (Southeast Green, 2010). In 2009, the county recycled approximately 1,300 tons of fiber, 550 tons of bottles and cans, and 600 tons of metal, and currently has eight staffed recycling centers and one transfer station (Parker, 2009). Recently, the county negotiated contracts with third-party companies to enhance the county’s ability to conduct recycling, including electronics recycling (Parker, 2009).

Jackson County’s Waste Management leadership team is taking measures to encourage community participation in recycling efforts, including providing local schools with large recycling bins to aid in recycling. During the 2010 school year, Waste Management and county school system leaders held a contest to reward the school that

recycled the most. Additionally, the Waste Management team has a commercial drop off facility and Chad Parker, Solid Waste Director, estimates that 50% of the local business operators recycle (C. Parker personal communication, June 9, 2010).

Jackson County encourages those hosting events in the county to offer composting as a waste management strategy if food is available at the event and also advises event holders to “staff trash cans, recycling bins, and compost collectors with a volunteer and encourage guests to compost food waste and paper waste” (C. Parker personal communication, June 9, 2010).

### ***Water- and Energy-Related Activities***

Jackson County is part of the Little Tennessee River Basin, named for the Little Tennessee River, which flows north into North Carolina from Georgia (Tolley, n.d.; Rivers, 2010). One of the major tributaries of the Little Tennessee River is the Tuckasegee River, which begins in and flows through Jackson County. As one of Jackson County’s largest natural resources (Tuck River Cleanup, 2010) the Tuckasegee is a major tourist attraction. The river is beloved by fly fishers who are drawn to the river for the abundance of trout; it provides “some of the most impressive fly fishing waters in the eastern half of the country” (Tuckasegee River Fishing, 2010). The river is also popular among rafters, paddlers, and outdoor enthusiasts.

Given the critical role that the river plays as a tourist attraction and natural resource, a considerable amount of attention has been given to protecting it. One group dedicated to its preservation is the Watershed Association of the Tuckasegee River (WATR), a grassroots organization working to improve water quality and habitats (Watershed Association, n.d.). The group aids local authorities in monitoring the river, collects samples for water quality analysis, assists other groups in river clean-ups and environmental stewardship activities, and works to educate local citizens about river conservation issues (Watershed Association, n.d.).

Recently “a joint team of Western Carolina University (WCU) and the Watershed Authority of the Tuckasegee River (WATR) worked to create a comprehensive network for water quality measurements in the Tuckasegee River basin” (Howell et al., 2009). The network provided compliance monitoring, observations of the microclimate of the surrounding watershed, scientific data for hydraulics and ecosystem modeling, and offered outreach to the community and schools in the area (Howell et al., 2009).

In addition to the WCU-WATR partnership, Jackson County recently received a grant from the Rivers, Trails, and Conservation Assistance program to allow the county leadership team to move forward with a conservation plan for the river. Pursuing blueway designation for the Tuckasegee is a key component of the project, as is developing and implementing a volunteer stewardship program to maintain and manage new and existing access areas and trails. “Creating policy recommendations for riverfront property development and stream

protection, along with conservation incentives for private landowners, is crucial for ensuring future access remains available” (E. Elders, personal communication, May 24, 2010).

County efforts aimed at cost reduction include planned energy and water audits on county buildings. These are possible through a grant from the State Energy Office, using the services of Waste Reduction Partners of Asheville, North Carolina. The plan was to perform audits on three of the county’s facilities before the end of the summer 2010 (E. Elders, personal communication, May 24, 2010) in hopes that audits will pinpoint focus areas to increase water and energy efficiency.

### ***The Jackson County Green Energy Park***

The Jackson County Green Energy Park (JCGEP) plays a major role in the sustainability efforts taking place in the county. The JCGEP came about when the Dillsboro, North Carolina landfill closed in 1996, with roughly 750,000 tons of trash in place. Concerns over methane migration prompted Jackson County leaders to examine landfill gas (LFG capture). All municipal landfills emit LFG, composed roughly of 50% methane and 50% carbon dioxide and other trace gases. Methane gas is created naturally when organic wastes (food scraps, yard wastes, etc.) decompose and the resulting flammable gas can be burned as a fuel in furnaces, kilns, engines, or boilers. Methane gas is very damaging to the environment, worsening local smog and air quality problems; it has roughly 27 times the environmental impact of carbon dioxide. By burning it in a controlled fashion, an area receives immediate environmental benefits and therefore, the JCGEP helps improve local air quality by preventing methane from escaping into the environment and removing odors caused by leaking LFG. Methane emissions saved are estimated at 222 tons annually, 4,440 tons over the lifetime of the project, or a carbon dioxide (CO<sub>2</sub>) equivalent of 120,000 tons. Annual environmental benefits are estimated to be equivalent to removing 916 vehicles from the road, planting 1,305 acres of forest, preventing the use of 11,104 barrels of oil, and displacing 521,870 gallons of gas. The park also captures “waste” heat from kilns and furnaces to reduce overall gas use and is transforming a trash-covered eyesore into a beautiful public place (C. Blaskowski, personal information, January 6, 2010; Jackson County Green Energy Park, 2010).

In 1999, the Jackson County Board of Commissioners made a commitment to develop a landfill gas project and purchased property and buildings adjacent to the landfill. Gas wells were installed March of 2005 and the energy park project construction began in October of 2005. The mission statement of the park is the following:

The Jackson County Green Energy Park utilizes clean, renewable energy resources to

- encourage economic development,
- provide environmental protection, and
- offer educational opportunities that together will help



lead towards a more sustainable future for western North Carolina (Jackson County Green Energy Park, 2010).

At the time of this writing, the park is operational; however, the final stage of project is still in development and is expected to create 21 to 25 new jobs upon completion, with continued turnover of artisans. While offering increased business opportunities in the county, the park also provides eco-tourism and heritage crafts tourism and increased media coverage, putting Jackson County “on the map” (C. Blaskowski, personal communication, April 24, 2010).

### ***Alternative Fuel Activities***

The Jackson County school district has found a way to save money while contributing to a healthier, safer environment for its school children and citizens via the use of waste vegetable oil. Waste vegetable oil (as well as virgin vegetable oils, or even animal fat) can be converted into biodiesel — a clean-burning, non-toxic, renewable fuel that can be used in any diesel engine (Muth, 2008). “In addition to saving taxpayer dollars by running machines off methane, the biodiesel produced at the site will provide cleaner, affordable fuel for county vehicles and reduce the amount of sulphur dioxide emissions that come from regular diesel engines” (Beadle, 2006).

If the county can collect enough waste vegetable oil, a large portion of the diesel fuel that is currently purchased each year (roughly 80,000 gallons/year) could be offset with biodiesel that the county produces. “This fuel would be used in county buses, vehicles, and heavy equipment only, and would not be available for retail sales” (Muth, 2008).

### ***Organic and Local Food***

Jackson County is home to several initiatives that encourage the use of local food, help to support Jackson County farms, and work to connect farms and schools to give children positive experiences with healthy, local foods (Appalachian-b, 2010). William Shelton of Shelton Family Farms is a pioneer of Community-Supported Agriculture in Jackson County and his goal is to “connect local people with local food” (Shelton, 2010). In 2009, Shelton had nearly 100 participants in the program from four counties. His goal was to have 200 families in 2010 (Jackson County, NC Chamber, 2010). “Several local restaurants are also participating in the Shelton’s co-op program and are using the fresh local food in their menus” (J. Spiro, personal communication, May 24, 2010).

The Jackson County school system has expressed interest in buying local food products and has already purchased some items for use in school menus. Additionally, via a new program implemented by Jim Hill, the Child Nutrition Director for Jackson County, high school students are growing hydroponic vegetables for use in foods offered on the school menu (E. Jackson, personal communication, May 25, 2010). Shelton and Emily Jackson, Appalachian Sustainable Agriculture Project representative, worked with school officials to design the

hydroponic garden (Brantley, 2009).

Public schools are also educating students on how to grow and prepare food through the Farm to School program. The national Farm to School Network works to promote regional community-based food systems and connect children to their agricultural heritage. Among the network’s objectives are improving student nutrition and supporting local farmers, (Farm to school, 2009).

Sylva is home to a community garden that was launched in 2007 (Richardson, 2007). The Community Garden is an organic garden maintained by dedicated volunteer gardeners (Welcome to the Community, n.d.). The gardeners volunteer to maintain their own 15 by 30 foot plot to grow plants of their choice and are asked to donate about two-thirds of their harvest to the Community Table that serves meals to those in need (Richardson, 2007). The volunteers apply non-poisonous pest controls and fertilizer and Western Carolina University’s equestrian team donates manure to help enrich the soil (Brantley, 2010).

The Appalachian Sustainable Agriculture Project (ASAP) works to create and expand local food markets to “preserve the agricultural heritage of the Appalachian region” (Appalachian, 2009). The goal of this group is to provide access to fresh, healthy food and to keep local farmers farming. To this end, the ASAP organizes family farm tours, hosts events featuring local chefs and local foods, publishes local food guides, provides kid-friendly educational events, develops comprehensive research, and develops and supports numerous programs aimed at bringing local food to local tables.

Jackson County is home to two farmers’ markets, one called The Cashier’s Tailgate Market. Items such as organic local vegetables and fruits, fresh baked goods, jellies, local fruit pies, honey, and more may be purchased at the market (Cashiers Tailgate, 2010). Located in downtown Sylva, the Jackson County Farmers’ Market is open from May to October and features only locally grown produce, products & crafts (Jackson County Farmers, 2010).

### ***Sustainable Event Planning***

The Jackson County Chamber of Commerce has taken steps to encourage and mandate aspects of sustainability in regard to events that are held in the county. The County’s Chamber of Commerce homepage contains a link to the Sustainable Event Planning Resource (Jackson County TTA – c, 2009). This guide contains helpful tips for how to host a sustainable event as well as a wealth of information on local businesses and is distributed to individuals preparing to host events in Jackson County. According to Julie Spiro, of the Jackson County Chamber of Commerce, the county mandates recycling and use of environmentally friendly products at all events, and the use of Styrofoam is strictly prohibited (J. Spiro, personal communication, May 24, 2010).

### ***Greening Up the Mountains and Relay for Clean Air***

The town of Sylva is home to the annual Greening Up the Moun-

tains festival. The festival began in 1997 as a celebration of Earth Day. Over the years, the celebration has maintained its roots in environmental protection (Sylva's 10<sup>th</sup>, 2007). For example, during the 2010 festival, "the center block of the festival was devoted to environmental education and other 'green' initiatives, featuring demonstrations and information from community groups such as the Jackson County Greenways Project and the Jackson County Green Energy Park. Officials gave away seedlings of white cedar trees throughout the festival" (2010 Asheville Travel-a, 2010).

The celebration also serves as a celebration and remembrance of the region's rich past, such as a special section featuring 10 heritage craft demonstrations, called the Traditional Heritage Walk hosted by Catch the Spirit of Appalachia (CSA). The demonstrations included caning chairs, quilting, wood carving, canning and preserving, sewing, pottery, cross-stitching, and doll making (Greening Up, 2009).

The Relay for Clean Air is another important conservation-based event held annually by Sylva's Canary Coalition since 2004 as a 100-mile demonstration along the Blue Ridge Parkway between the Great Smoky Mountains National Park and Asheville (2009 Relay, 2009). The course stretches throughout the Great Smoky Mountains National Park where bicyclists, runners, and walkers participate in a cooperative demonstration to draw attention to two of the most visited and polluted national parks (Canary Coalition, n.d.; Relay, 2007).

## **The Future of Sustainability in Jackson County**

Efforts in Jackson County continue to move the county into the direction of establishing sustainability as the standard in the future. The Green Energy Park plans to complete several projects in 2011, including the installment of a rainwater collection system, a wood-fired pottery kiln, and a heat recovery system that will collect lost heat from appliances, turn it to hydro-thermal energy and use it in other areas of the park (C. Blaskowski, personal communication, November 2, 2010). The Solid Waste Board plans to add recycling containers to schools, convert a former transfer station to a recycling facility, and evaluate alternatives for solid waste disposal (Parker, 2009). As part of the Jackson County Planning Office's Smart Growth Plan, in the future "developments should promote sustainable land development patterns" and "environmentally sensitive areas should be identified and preserved while allowing alternatives to development" (Jackson Co., 2006). Current issues that may influence the future include economic, environmental, and social challenges facing the county and the globe and therefore, the potential for an increase in the six barriers to sustainability identified at the beginning of the case study. However, a continued focus on sustainable projects can benefit Jackson County's tourism industry, its residents, its economy, and its numerous natural and cultural resources.

## **Discussion Points and Exercises**

- What are the major sustainability initiatives and projects undertaken in Jackson County?
- Is there any additional information that you would like to have to further understand the sustainability efforts in the county and if so, what is it and why do you want to know more about it?
- Compare and contrast sustainability in Jackson County with that found in other counties in North Carolina, other states, and other countries around the world.
- Select one of the topics concerning sustainability outlined in the case and interview someone in your own community who has knowledge of the topic/issue to find out where he or she believes this topic/issue is at the current time in your community and where it is headed in the future.
- Discuss the major factors that you believe will influence the future of sustainability in Jackson County.
- Discuss the major factors that you believe will influence the future of tourism in Jackson County.
- Develop a strategy for tourism in Jackson County that provides for the growth of tourism and for the further development of sustainability practices.
- Conduct a SWOT analysis (an analysis of strengths, weaknesses, opportunities, and threats) of the sustainability practices and projects in Jackson County.
- What do you see as possible advantages and disadvantages of Jackson County's focus on sustainability and why?
- How could Jackson County further reduce its carbon footprint?
- What kinds of tourism products and services do you feel would be compatible with the sustainability efforts in Jackson County and why?
- What barriers to implementing sustainable practices were overcome in Jackson County that might make their efforts more feasible in other locations or industries?

## **Summary**

This case study summarizes activities and initiatives undertaken in Jackson County, North Carolina toward increasing efforts on behalf of environmental, economic, and social sustainability. The county is described and examples of programs and projects are presented.

## **Definition**

Sustainability has been defined by a variety of people in a variety of ways, all with a common thread of bringing various strands of sustainability together to understand their intimate relationships to each other. Sustainable development was first defined as "eco-development" at the United Nations Environmental Progress Stockholm Conference (Strong, 1973), and for more than two decades has been described 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, p. 43).

The United Nations Educational, Scientific, and Cultural Organization (UNESCO) (2010) has called 2005-2014 the United Nations Decade of Education for Sustainable Development and has stated that UNESCO “seeks to integrate the principles, values, and practices of sustainable development into all aspects of education and learning, in order to address the social, economic, cultural and environmental problems we face in the 21st century.” UNESCO (2010) explains that sustainability involves balancing social, cultural, environmental, and economic issues. Sustainability has been defined in three spheres:

1. Social
2. Environmental
3. Economic (Sustainable measures, 2010).

Or according to others as:

1. People
2. Planet
3. Product (Dhiman, 2008).

Sustainable tourism can be defined according to the United Nations-World Tourism Organization (2004) in the following manner:

“Sustainable tourism development guidelines and management practices are applicable to all forms of tourism in all types of destinations, including mass tourism and the various niche tourism segments. Sustainability principles refer to the environmental, economic, and socio-cultural aspects of tourism development, and a suitable balance must be established between these three dimensions to guarantee its long-term sustainability”.

The Center for Sustainable Tourism (2010) at East Carolina University (ECU) has developed a working definition of sustainable tourism such that,

*“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.*

Additional definitions relating to sustainability and sustainable tourism and hospitality include:

*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).”

Specifically, the *carbon footprint* is the “amount of carbon dioxide (CO<sub>2</sub>) emissions associated with all the activities of a person or other entity (e.g., building, corporation, country, etc.). It includes direct emissions, such as those that result from fossil-fuel combustion in manufacturing, heating, and transportation, as well as emissions required to produce the electricity associated with goods and ser-

vices consumed. In addition, the carbon footprint concept also often includes the emissions of other greenhouse gases, such as methane, nitrous oxide, or chlorofluorocarbons (CFCs). The carbon footprint concept is related to and grew out of the older idea of ecological footprint (Encyclopedia Britannica, 2010).”

*Leadership in Energy and Environmental Design (LEED)* certification is an internationally recognized rating system developed by the U.S. Green Building Council (USGBC) to provide measurable “green” building design construction, operations, and maintenance solutions for commercial and residential structures (USGBC, 2010). It strives to improve performance in energy savings, water efficiency, carbon dioxide emissions reduction, improved air quality, and enhanced stewardship of resources.

*Sustainable agriculture* is defined by the Sustainable Table (2010) as encompassing food production methods that are “healthy, do not harm the environment, respect workers, are humane to animals, provide fair wages to farmers, and support farming communities.” This type of agriculture promotes local, small-scale sustainable farming.

## Related Reading

The Global Sustainable Tourism Council provides an in-depth glossary of terms related to sustainability in tourism. Visit <http://www.gstcouncil.org/resource-center/glossary.html> for the complete list of terms.

The Sustainable Tourism Directory is hosted by Sustainable Travel International (STI) and contains information on sustainable tourism including travel practices and “Sustainable Tourism Development-Advisory Services”. Through their advisory services STI provides information on the benefits of sustainable tourism development, and where to start in the process, as well as information about ecotourism and more. To view the complete directory visit <http://www.sustainabletourism.travel/index.html>.

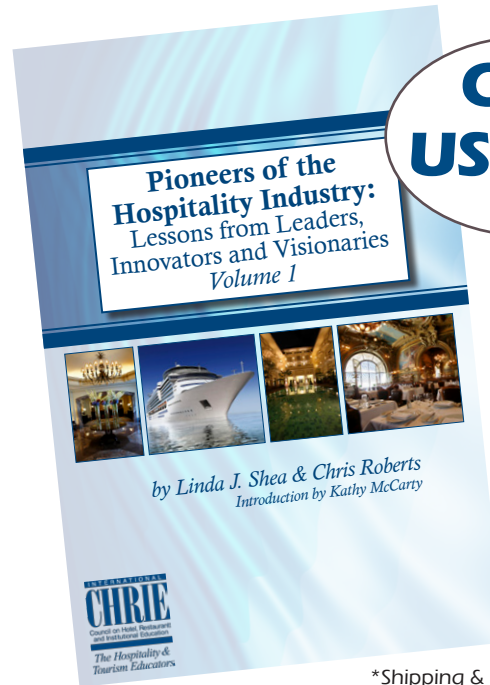
## References

- 2009 Relay for Clean Air set for August 29. (2009). Macon News. Retrieved 15th of June 2010 from [www.maconnews.com/index.php?option=com\\_content&task=view&id=5262&Itemid=145](http://www.maconnews.com/index.php?option=com_content&task=view&id=5262&Itemid=145).
- 2010 Asheville Travel Guide. (2010). *Greening up the mountain festival in Sylva, North Carolina*. (n.d.) Retrieved 1st of October 2010 from [www.romanticasheville.com/sylva\\_greening\\_up\\_mountain.htm](http://www.romanticasheville.com/sylva_greening_up_mountain.htm).
- Advantage West Economic Development Group. (2006). About Us. Retrieved 21st of September 2010 from [www.advantagewest.com/content.cfm/content\\_id/332/section/green](http://www.advantagewest.com/content.cfm/content_id/332/section/green).
- Advantage West Economic Development Group. (2006). Advantage Green. Retrieved 21st of September 2010 from [www.advantagewest.com/content.cfm/content\\_id/332/section/green](http://www.advantagewest.com/content.cfm/content_id/332/section/green).
- Agriculture Advisory Board. (n.d.). Farmland Preservation Project. Retrieved 2nd of November 2010 from [http://planning.jacksonnc.org/Farmland\\_Preservation\\_Ordinance.pdf](http://planning.jacksonnc.org/Farmland_Preservation_Ordinance.pdf).
- Appalachian Sustainable Agriculture Project a. (2010). *Tailgate Markets*. Retrieved 21st of September 2010 from [www.buyappalachian.org/search/tailgate\\_markets](http://www.buyappalachian.org/search/tailgate_markets).

- Appalachian Sustainable Agriculture Project b. (2011). *Growing Minds Farm to School Program*. Retrieved 1st of May 2011 from <http://growing-minds.org/>.
- Arbor Day Foundation. (2010). Tree City USA Standards. Retrieved 23rd of September 2010 from [www.arborday.org/programs/treeCityUSA/standards.cfm](http://www.arborday.org/programs/treeCityUSA/standards.cfm).
- Beadle, M. (2006). Green power: no longer a pipe dream. Smoky Mountain News. Retrieved 8th of June 2010 from [www.smokymountainnews.com/issues/07\\_06/07\\_05\\_06/fr\\_green\\_power.html](http://www.smokymountainnews.com/issues/07_06/07_05_06/fr_green_power.html).
- Bracken, D. (2010). *Harrah's Cherokee Casino and Hotel in North Carolina progressing on \$633 million expansion; adding 532 hotel rooms, 3,000-seat events center, Spa, shops*. Hotel Online. Retrieved 20th of May 2010 from [www.hotel-online.com/News/PR2010\\_1st/Feb10\\_HarrahsExpansion.html](http://www.hotel-online.com/News/PR2010_1st/Feb10_HarrahsExpansion.html).
- Brantley, A. (2010 March 3). *Community garden prepares for growing season*. Sylva Herald and Ruralite. [http://infoweb.newsbank.com/jproxy.lib.ecu.edu/iw-search/we/InfoWeb?p\\_product=NewsBank&p\\_theme=aggregated5&p\\_action=doc&p\\_docid=12E3A3FCA796B848&p\\_docnum=1&p\\_queryname=9](http://infoweb.newsbank.com/jproxy.lib.ecu.edu/iw-search/we/InfoWeb?p_product=NewsBank&p_theme=aggregated5&p_action=doc&p_docid=12E3A3FCA796B848&p_docnum=1&p_queryname=9).
- Brantley, A. (2009 October 8). *SMHS to begin growing own lettuce in school greenhouse*. Sylva Herald and Ruralite. [http://infoweb.newsbank.com/jproxy.lib.ecu.edu/iw-search/we/InfoWeb?p\\_product=NewsBank&p\\_theme=aggregated5&p\\_action=doc&p\\_docid=12B33A0250B75BA0&p\\_docnum=1&p\\_queryname=10](http://infoweb.newsbank.com/jproxy.lib.ecu.edu/iw-search/we/InfoWeb?p_product=NewsBank&p_theme=aggregated5&p_action=doc&p_docid=12B33A0250B75BA0&p_docnum=1&p_queryname=10).
- Canary Coalition. (n.d.). (2008). Relay for Clean Air, Saturday, August 23. Retrieved 1st of October 2010 from [www.canarycoalition.org/News/080518.htm#relay](http://www.canarycoalition.org/News/080518.htm#relay).
- Cashier's Tailgate Market. (2010). Retrieved 8th of June 2010 from <http://buyappalachian.org/listing/cashiers-tailgate-market>.
- City-data.com. (2010). Jackson County, North Carolina. [http://www.city-data.com/county/Jackson\\_County-NC.html](http://www.city-data.com/county/Jackson_County-NC.html).
- Commissioners, Friedman win conservation awards. (2008 March 6). Sylva Herald and Ruralite. Retrieved May 1, 2011 from NewsBank on-line database (America's Newspapers).
- Dodds, R. and Butler, R. (2009). Barriers to implementing Sustainable Tourism Policy in Mass Tourism Destinations. *TOURISMOS: An International Multidisciplinary Journal of Tourism*, 5(1): 35-53.
- Ellison, Q. (2010, April 8). *Downtown spring festival's roots are in earth day*. Sylva Herald and Ruralite. Retrieved 21st of September 2010 from [http://nl.newsbank.com/nl-search/we/Archives?p\\_action=doc&p\\_docid=12EF331E31255450&p\\_docnum=1](http://nl.newsbank.com/nl-search/we/Archives?p_action=doc&p_docid=12EF331E31255450&p_docnum=1).
- Environmental Protection Agency. (2010). *Basic information- sustainability*. Retrieved 21st of September 2010 from [www.epa.gov/sustainability/basicinfo.htm](http://www.epa.gov/sustainability/basicinfo.htm).
- Farm to School Project to be focus of April 8 open house at WCU. (2009). Retrieved 21st of May 2010 from <http://news-prod.wcu.edu/2010/03/farm-to-school-project-to-be-focus-of-april-8-open-house-at-wcu/>.
- Fish and Wildlife Associates, Inc. (2010). Retrieved 11th of October 2010 from [www.fishandwildlifeassociates.com](http://www.fishandwildlifeassociates.com).
- Friends of the Great Smoky Mountains National Park (2010). Retrieved 11th of October 2010 from [www.friendsofthesmokies.org](http://www.friendsofthesmokies.org).
- Greening Up the Mountains festival scheduled. (2009). *The Southern Highland Reader*. Retrieved 12th of June 2010 from [www.thesouthernhighlandreader.com/greening-up-the-mountains-festival-scheduled/](http://www.thesouthernhighlandreader.com/greening-up-the-mountains-festival-scheduled/).
- History of the Great Smoky Mountains National Park. (2010). Retrieved 1st of October 2010 from [www.mysmokymountainvacation.com/history.html](http://www.mysmokymountainvacation.com/history.html).
- Howell, B., Clapp, R., Marston, J., Donaldson, C. & McCoy, B. (2009). *Tuckasegee Watershed Observatory: A Collaborative Environmental Research Tool*. Proceedings of the 2007 National Conference on Environmental Science and Technology Springer New York. Retrieved 6th of June 2010 from [www.springerlink.com/content/w5252j070v4215g4/](http://www.springerlink.com/content/w5252j070v4215g4/).
- Jackson County Farmers' Market. (2010). Retrieved 8th of June 2010 from <http://buyappalachian.org/listing/jackson-county-farmers-market>.
- Jackson County Green Energy Park (2010). Retrieved 11th of October 2010 from [www.jcgep.org](http://www.jcgep.org).
- Jackson County (2006). *Jackson County Land Development Plan*. Retrieved 30 of April 2011 from [http://planning.jacksonnc.org/Jackson\\_County\\_Land\\_Development\\_Plan\\_2006.pdf](http://planning.jacksonnc.org/Jackson_County_Land_Development_Plan_2006.pdf).
- Jackson County, NC Chamber of Commerce. (2010). *Small-town businesses find recipe for success*. Our Town Online Edition. Retrieved 7th of June 2010 from [http://ourtownnc.com/issues/2010/business\\_success.html](http://ourtownnc.com/issues/2010/business_success.html).
- Jackson County Recreation/Parks Department. (2009). Jackson County Greenways Project. Retrieved 21st of September 2010 from <http://rec.jacksonnc.org/html/greenways.html>.
- Jackson County Transportation Task Force and the Comprehensive Transportation Plan (CTP) Updates. (2009). Retrieved 7th of June 2010 from [www.regiona.org/Task\\_Force.htm](http://www.regiona.org/Task_Force.htm).
- Jackson County Travel & Tourism Authority a. (2010). *Visitor Information for the North Carolina Great Smoky Mountains of Jackson County*. Retrieved 30th of September 2010 from [http://mountainlovers.com/content\\_visinfo.asp](http://mountainlovers.com/content_visinfo.asp).
- Jackson County Travel & Tourism Authority b. (2010). *For the Parkway's 75th, explore the route less traveled*. Retrieved 30 of September 2010 from [www.mountainlovers.com/\\_parkway75th.asp](http://www.mountainlovers.com/_parkway75th.asp).
- Jackson County Travel & Tourism Authority c. (2009). *Jackson County Sustainable Event Planning Resource Guide*. Retrieved 26th of October 2010 from [www.mountainlovers.com/pdf/EventPlanningResource09.pdf](http://www.mountainlovers.com/pdf/EventPlanningResource09.pdf).
- McMahan, B., Cowan, J., Shelton, W.R., Massie, T.L. & Jones, M.R. (2008). *Growing with green in our minds: strategies for land conservation in Jackson County*. Retrieved 21st of September 2010 from [http://planning.jacksonnc.org/Strategies\\_for\\_Land\\_Conservation\\_Report--FINAL.pdf](http://planning.jacksonnc.org/Strategies_for_Land_Conservation_Report--FINAL.pdf).
- Mountain Landscapes Initiative. (2008). Frequently Asked Questions. Retrieved 21st of September 2010 from [www.mountainlandscapesnc.org/info/faqs.html#09](http://www.mountainlandscapesnc.org/info/faqs.html#09).
- Muth, T. (2008). *Waste vegetable oil wanted for Jackson County school buses*. Macon County News. Retrieved 23rd of May 2010 from [www.maconnews.com/index.php?Itemid=34&id=2785&option=com\\_content&task=view](http://www.maconnews.com/index.php?Itemid=34&id=2785&option=com_content&task=view).
- National Forests in North Carolina. (2009). Forest Fact Sheet. Retrieved 21st of September 2010 from [www.cs.unca.edu/nfsnc/facts/forest\\_facts\\_09.pdf](http://www.cs.unca.edu/nfsnc/facts/forest_facts_09.pdf).
- National Forests in North Carolina. (2010). *Outdoor recreation opportunities*. Retrieved 21st September 2010 from [www.cs.unca.edu/nfsnc/recreation/recreate.htm](http://www.cs.unca.edu/nfsnc/recreation/recreate.htm).
- National Park Service. (2009). *Auto Touring*. Retrieved 18th of May 2010 from [www.nps.gov/grsm/planyourvisit/autotouring.htm](http://www.nps.gov/grsm/planyourvisit/autotouring.htm).
- North Carolina 107 Connector. (n.d.). North Carolina Department of Transportation. <http://www.ncdot.gov/projects/nc107connector/>.
- N.C. Employment Security Commission (2010). *Top 25 Employers by NC County: Jackson County 4th Quarter 2009*. Retrieved 30 of September 2010 from [https://edis.commerce.state.nc.us/docs/topEmployers/topEmp\\_37099.pdf](https://edis.commerce.state.nc.us/docs/topEmployers/topEmp_37099.pdf).
- Parker, C. (2009 June 1). *Solid waste management plan for Jackson County and the towns of Dillsboro, Forest Hills, Sylva, and Webster*. Retrieved 26th of October 2010 from [http://solidwaste.jacksonnc.org/Jackson\\_SWMP2009-2019\\_final.pdf](http://solidwaste.jacksonnc.org/Jackson_SWMP2009-2019_final.pdf).
- Relay for Clean Air more important than ever, event organizers say*. (2007 Aug 9). Sylva Herald & Ruralite. NewsBank on-line database (America's Newspapers). [Accessed the 1st May 2011].
- Richardson, J. (2007). *Downtown Sylva garden growing community*. Macon News. Retrieved 13th of June 2010 from [www.maconnews.com/index.php?Itemid=87&id=1099&option=com\\_content&task=view](http://www.maconnews.com/index.php?Itemid=87&id=1099&option=com_content&task=view).
- Richardson, J. (2007 December 6). Sylva, LTLT celebrates conservation



# Your Students Will Thank You.



**Only  
US\$45!\***

\*Shipping & Handling: US-\$7.50;  
International - \$20-First Class US Mail  
(alternate shipping method may cost extra)

## For libraries, classrooms, & personal collections—this publication makes an excellent addition!

The Hospitality Pioneer series is a tribute to those dedicated individuals who have shaped the hospitality industry through their colorful lives, their foresight, & their leadership. These luminaries share common characteristics: innovator, visionary, philanthropist, statesman, & entrepreneur. Together, they offer a rich history of the development of the hospitality industry, & the nature & timing of their contributions mirror historical developments in key markets around the world. These profiles offer readers the opportunity to analyze successful leadership & entrepreneurial characteristics, & to evaluate the significance of their contributions.

**To order a copy for your personal  
library or your class, use the online  
form found at  
<http://www.chrie.org/publications/pioneers-of-the-hospitality-industry/index.aspx>.**



- of Pinnacle Park. Macon News. [http://www.maconnews.com/index.php?option=com\\_content&task=view&id=1822&Itemid=34](http://www.maconnews.com/index.php?option=com_content&task=view&id=1822&Itemid=34).
- Rivers, lakes, streams. (2010). Retrieved 6th of June 2010 from [www.wcu.edu/23570.asp](http://www.wcu.edu/23570.asp).
- Shelton Family Farm (2010). About us. Retrieved 25th of May 2010 from [www.sheltonfamilyfarm.com/about.htm](http://www.sheltonfamilyfarm.com/about.htm).
- Smart Roads Alliance a. (n.d.). Retrieved 7th of June 2010 from <http://wnc.us/smartroads/>.
- Smart Roads Alliance b. Latest News. (2009). Retrieved 7th of June 2010 from [Smartroads.blogspot.com/.../smart-roads-alliance-position-statement\\_16](http://Smartroads.blogspot.com/.../smart-roads-alliance-position-statement_16).
- Southeast Green. (2010). *North Carolina recycling data shows positive trends*. Retrieved 3rd of June 2010 from [www.southeastgreen.com/index.php?option=com\\_content&id=1578&view=article&Itemid=107](http://www.southeastgreen.com/index.php?option=com_content&id=1578&view=article&Itemid=107).
- Southern Appalachian Sustainable Building Council. (2010). *About SASBC*. Retrieved 21st of September 2010 from <http://sasbc.org/about-sasbc/>.
- Stoddard, J.E., Evans, M.R. and Dave, D.S. (2008). Sustainable Tourism: The Case of the Blue Ridge Mountains National Heritage Area. *Cornell Hospitality Quarterly*, 49(3), 245-257.
- Sylva's 10th annual Greening Up the Mountains focuses on environment*. (2007). Macon News. Retrieved 12th of June 2010 from [www.maconnews.com/index.php?option=com\\_content&task=view&id=591&Itemid=8520](http://www.maconnews.com/index.php?option=com_content&task=view&id=591&Itemid=8520).
- Tolley, L. (n.d.). (2010). *Little Tennessee River Basin*. Retrieved 6th of June 2010 from [www.eenorthcarolina.org/public/ecoaddress/riverbasins/little%20tenn](http://www.eenorthcarolina.org/public/ecoaddress/riverbasins/little%20tenn).
- Tuckasegee River Fishing Guide Service. (2010). Retrieved 6th of June 2010 from <http://smokymountainflyfishing.net/Tuckasegee%20River%20Fishing%20Guide%20Service.htm>.
- Tuck River cleanup. (2010). Retrieved 13th of September 2010 from [www.wcu.edu/22938.asp](http://www.wcu.edu/22938.asp).
- U.S. Census Bureau. (2010). *Jackson County Quick Facts*. Retrieved 13th of September 2010 from <http://quickfacts.census.gov/qfd/states/37/37099.html>.
- U.S. Travel Association. (2009). *The 2009 Economic Impact of Travel on North Carolina Counties Prepared for the North Carolina Division of Tourism, Film and Sports Development*. Retrieved 13th of September 2010 from [www.nccommerce.com/NR/rdonlyres/BDB1C545-00CD-45CB-9749-80D1B7EEB240/0/2009NCCountyPreliminaryEstimatesPERCENTCHANGE.pdf](http://www.nccommerce.com/NR/rdonlyres/BDB1C545-00CD-45CB-9749-80D1B7EEB240/0/2009NCCountyPreliminaryEstimatesPERCENTCHANGE.pdf).
- Watershed Association of the Tuckasegee River. (n.d.). About WATR. Retrieved 6th of June 2010 from [www.watrn.org/waterweb/aboutWatr.html](http://www.watrn.org/waterweb/aboutWatr.html).
- Welcome to the Community Table. (n.d.) Retrieved 25th of May 2010 from [www.communitytable.org](http://www.communitytable.org).
- Western Carolina University. (2010). About WCU. Retrieved 26th of October 2010 from [www.wcu.edu/10.asp](http://www.wcu.edu/10.asp).
- Western North Carolina Fly Fishing Trail. (2010). Retrieved 10th of November 2010 from <http://flyfishingtrail.com>.
- World Commission on Environment and Development. (1987). *Our Common Future*. Oxford: Oxford University Press: 43.