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TOWARD AN ECOLOGY OF CULTURAL HERITAGE

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Figure 1. Neighbors socialize in front yards, often around a fire. 2012. (Photo by Elizabeth Brabec)

Around the globe, the impacts of climate change are increasing the risk of catastrophic events and the resulting loss of human life and communities. Until now, responses to these events and planning for future occurrences have focused on ecological and social impacts, to the almost total exclusion of the impacts on heritage. Cultural heritage includes archaeological sites, historic buildings, and artifacts, but—more importantly—it also includes the meanings, values, and contemporary social behavior associated with these tangible forms of heritage. Thus, place attachment, sense of place, and associated forms of intangible heritage are major societal factors that must be integrated into climate change adaptation and risk management models. Communities, towns, and governments typically disassociate cultural/historical resources from natural resources in issues of planning and development. A transdisciplinary approach to cultural heritage is necessary in times of risk. There is critical need for this approach, since climate change will result in accelerated changes for human communities—from dislocation to a change in the physical manifestations of place. In this paper, we explore approaches to disaster, adaptation, and resilience through the lens of cultural heritage using two case studies: the Gullah Communities of South Carolina and the diverse communities of Eleuthera, Bahamas.

Introduction

Disasters, both natural and human-induced, will have an increasing effect on the world's population, particularly with the added impacts of climate change.¹ From Hurricanes Katrina's and Sandy's effects on New Orleans and New York, to the eruption of volcanoes in Iceland, the 2010 and 2011 earthquakes in Christchurch, New Zealand, and the human-induced destruction of the reactor meltdown in Japan, recent disasters have had a devastating effect on people, their communities, and their environments. But how people respond to disasters, the rate at which they recover, and the steps they take to mitigate future disasters is substantially influenced by both their culture and their cultural heritage.²

Culture and heritage affects all aspects of society and how individuals define themselves in the world. Heritage, as we define it here, is not merely “what happened in the past”; that is, the term “heritage” does not only mean “history,” as in historical facts, events, and time periods. Heritage is the accretion of attitudes, values, and traditions that define our various cultural worldviews and stem from our cultural heritages, but also manifest in the tangible physical forms of cultural heritage.³ Heritage impacts a wide range of activities and decisions that people make both individually and collectively, such as how people understand and accept scientific knowledge, how they respond to and adopt technology and technological change, and how they are attached to place and to each other.⁴

Around the globe, the effects of climate change are increasing the risk of catastrophic

events and will result in the loss and displacement of communities.⁵ While the direct effects of climate change are beginning to be studied in areas such as building conservation, archaeological resources, World Heritage sites, and the impacts on the World Heritage Convention itself, there is little discussion of the impact to heritage beyond its artifacts, particularly its built structures.⁶ The implications for heritage are multi- and cross-disciplinary and far-reaching. With the escalating change envisioned as a result of climate change and its effects, the World Heritage Convention, based on “relative stability and manageable change,” will have to embrace both a new model of management and fundamental changes in how we view heritage.⁷

Cultural Heritage and Climate Change Adaptation

What is currently missing in the climate change debate is a discussion of the impacts of cultural heritage on rebuilding and resettlement efforts, and an understanding of how human societies will sustain and reinvent themselves in the face of great environmental change. This includes three aspects of cultural heritage: (1) an understanding of place and place-making in the context of a cultural landscape; (2) the intangible heritage of attitudes, values, and practices that govern a culture; and (3) the history of cross-cultural relations in the region, particularly between dominant and minority communities. While cultural landscapes are beginning to be addressed in the climate change debate, they are largely addressed in terms of their character-defining features and the preservation of those features, or in terms of the systems of historical ecology.⁸ Cultural landscapes and their connected intangible heritage of attitudes, values, and traditions affect place-making, place identification, and social adaptation, and are critical to the security and identification that people under the trauma of disasters seek.⁹ The objects of tangible heritage have meaning only because of the intangible values societies place on them, and intangible heritage almost always has an expression in tangible products or contexts.¹⁰

Incorporating an awareness of culture and cultural heritage in the disaster planning and relief process is the key to an effective and successful process, and also to a sustainable and adaptable relationship between humans and their natural environments.¹¹ This means that disaster management must value and incorporate the spectrum of attitudes, values, knowledge, and social and legal practices that are embodied in cultural heritage. There is a critical need for this approach, since climate change will result in accelerated changes for human communities—from the total loss of a landscape or place, to community dislocation, to a change in the physical attributes of a place, including plant and animal life, and in some cases, significant topographical changes.¹²

In addition to physical changes to place, many new approaches to contemporary medicine and sustainable agricultural practices have come out of the intangible heritage-related fields of ethnobotany, traditional medicine, and traditional agriculture.¹³ Unless they are recognized, understood, and protected, these practices and knowledge bases are easily lost, or at a minimum, disregarded. They can be brought to bear on the problems of changing ecosystems and the need for sustainable development practices, healthy ecosystems, and food security in a rapidly changing environment.¹⁴

Many communities will be affected by sea level rise and storm surge due to climate change.¹⁵ However, the most common changes across continents will be changes in water regimes, forests, traditional flora and fauna fundamental to sense of place and traditional practices, and in some cases, topography, due to an increase in catastrophic storm events. Therefore, an important area of investigation in cultural heritage that crosses all of the aspects of resilience, mitigation, and adaptation responses is the development of approaches to communicate the uncertainty of climate change scenarios and the spectrum of potential responses in ways that are acceptable to differing cultural communities. Working within cultural norms will enable, rather than disable, action and will ensure long-term community support.¹⁶ While many around the globe will face the reality of resettlement and the development of new communities, adaptive approaches such as coastal retreat, elevation of structures, living shorelines, and invasive species management must be developed, and the public and the affected municipalities must be supportive in order for these approaches to be successful.¹⁷ This means that the public participation component of the long-term processes must be culturally relevant, and the resulting plans also need to be implemented, tested, and adapted over a timeframe of decades, following the sorts of principles advocated by adaptive management planning.¹⁸

This paper explores cultural and heritage issues for the planning and implementation of resilience strategies, and planning for adaptation to disaster and climate change impacts. The paper uses two case studies developed by the authors in previous research as a context for the discussion: the Gullah communities of South Carolina, located on the Sea Islands of the coastal United States; and the diverse heritage communities of the island of Eleuthera, in the Bahamas (Fig. 2). While these two case studies share commonalities—they are island and coastal communities, they share a plantation slavery heritage, both have conflicts between majority and minority communities, and both have culturally diverse and economically disadvantaged communities—the themes explored in each community differ significantly. In the Gullah community of South Carolina, the issues of planning for coastal growth management are discussed, as well as how an understanding of the cultural landscape of the Gullah and their attitudes about land and community can inform the context and process of planning for climate change and disaster management. In Eleuthera, previous research applied a more conventional heritage tourism-based approach to economic development, illuminating fundamental questions of the sustainability of tourism-based economic development in high-risk areas. These case studies highlight the importance of a deep underlying connection between community resilience, the cultural acceptance of adaptation measures, a strong cultural heritage, and resulting community sustainability and wellness in the broadest sense.

The Gullah Community of South Carolina, USA

The Gullah (also called Geechee) inhabit a region called the “Sea Islands” of South Carolina and Georgia, an area that stretches approximately forty miles inland from the coast of the southeastern United States. As descendants of former slaves brought to the region from the west coast of Africa between 1650 and the Civil War, they developed a unique culture and way of life.¹⁹ Culturally at odds with the dominant white community in the region,



Figure 2. Map of the case study sites of St. Helena Island, South Carolina, and the island of Eleuthera in the Bahamas. (Map Data ©2014 Google, SIO, NOAA, U.S. Navy, NGA, GEBCO, Image Landsat, U.S. Dept. of State Geographer)

the Gullah hold different attitudes and values, particularly those associated with the land, causing considerable friction over questions of growth management. The temperate climate and ocean frontage make the region attractive to vacationers and retirees, many from the north. The resulting new gated developments vie for land with the traditional white and Gullah communities, particularly along the ocean shores. The low-lying Sea Islands are at high risk of catastrophic damage and eventual loss due to storm surge and climate-induced sea level rise, rendering potentially uninhabitable most of the traditional Gullah lands in the region during the coming century.

Natural and Cultural Heritage

Although based in African traditions, the diasporic community of the Gullah (Geechee in the Sea Islands of Georgia) has developed a creolized, distinctive culture in all its myriad

tangible and intangible forms—a distinctive language, traditional foods, arts, religion, music, folktales, social structure, and landscape forms and settlement patterns that are different from (and often at odds with) the dominant culture of the mainland. Social science and anthropological researchers have long focused on the Gullah people, since the culture demonstrates “more African influences in their self-expression, behavior, and beliefs than any other long-established large American population group; they are genetically less mixed with white and Native American than most other African Americans.”²⁰ This is primarily due to the geographic isolation that the Sea Islands afforded the communities, isolation that was not breached until bridges connected the islands to the mainland beginning in the 1950s and 60s. Today, there are still islands in the region, such as Daufuskie, that are accessible only by boat from the mainland.

Ecologically, the Sea Islands are composed of vast areas of saltmarsh and a rich ecosystem of plant and animal life spanning the estuaries, marshes, and low upland. The former plantation slaves created a close relationship with the natural resources of the region, using the native plants for food and medicines, and the plentiful seafood to augment their meager rations.²¹ Slave families were also given a small amount of land to cultivate, a practice not found elsewhere in the American South and one which fostered strong bonds with the land.²² This close connection to the land continues today, and remains the basis for the disparity in cultural values associated with the land and land ownership.

The risk of property loss due to hurricanes is also distinctively different between the dominant white culture and the Gullah communities. Historically, both in plantation slave settlements and in the development of Gullah communities during the post-Civil War period, the Gullah settlements were traditionally located at a distance inland from the waterfront. While the waterfront was significant as a resource for fishing and shellfish harvesting, providing a stable source of subsistence food for the local communities, it was waterfront access points that were important to the communities, not the location of homes with direct access to the water. Given that the waterfront is extremely valuable real estate for vacation and second home developments, this causes a tension in land use and traditional access patterns.

Within the last twenty to thirty years, various researchers have noted that increasing development is threatening the culture and traditional lifeways of the Gullah community.²³ New development patterns, both coastal and inland, impinge on the Gullah proxemic patterns, forcing people to move differently through the landscape. In this context, the additional impending impacts of sea level rise are even more daunting for the communities. However, current modes of community adaptation to development pressure may provide a window into the development of climate change adaptation models and procedures that are appropriate to, and include, the specific norms, values, and traditions of the culture.

Spatial Patterns Critical to the Culture

In order to sustain the Gullah communities and their distinctive culture, it is critical to understand the complex spatial patterns of their communities. Only through this understanding can planners and a culturally mixed political leadership support development and

disaster management decisions that are culturally appropriate. With rampant development taking place along the Carolina coast, Gullah communities and their landscape patterns are being lost by the infringement of contemporary tourism and second home development. Local governments and land use planners are ill-equipped to mitigate these land use changes; since the physical form and landscape pattern of the Gullah communities are poorly understood, they are also undervalued. The same issues of landscape change can provide a process and development parameters for future phases of potential resettlement and/or abandonment of lands under threat of permanent inundation.

For the Gullah of St. Helena Island, access to land ownership came before the Civil War ended.²⁴ Due to the distinctive task system of agriculture in the region, and the slaves' resulting time to manage their own enterprises of growing food or raising livestock or horses, the slaves were able to acquire wealth. The plantations confiscated by the Northern Army in 1861 were resurveyed into ten-acre parcels, and these parcels were sold through auction before the end of the Civil War. Once land became available at auction, the freedmen often banded together to buy their former home plantation lands. As a result, before the end of the Civil War, former slave families from island plantations had acquired a considerable amount of land, a trend that continued during the years following the war. However, during the process of land acquisition, the government repeatedly rescinded land sales, actions that are reflected today in a continuing mistrust of government representatives and actions.

Today, land—meaning the ownership of and availability of a building lot—is the basis of both individual and community stability and resilience. Land has been passed down from generation to generation, often without a will, rendering it a communal family asset. The practice of intergenerational transfer is the antithesis of Western land ownership law, which is based on the identification of a specific owner or very small number of co-owners. While legally problematic, the Gullah's form of land transfer, called "heirs property," fosters the creation of intergenerational communities with strong social ties. The mere presence of family land is seen as a form of social security, and whether the right is exercised or not, family members who leave the region always have a home to come back to in the community.²⁵

Family members join a compound usually through the "gift" of a piece of land from an elder family member. "A dollar, a deed—love and affection" governs the process.²⁶ The resulting pattern is that of dispersed communities of closely related, tightly spaced family compounds (Fig. 3). Given the close family ties that are part of a single compound, a neighborhood forms through the association of several compounds that are home to related extended families. Neighbors socialize in front yards, often around a fire, where intangible heritage in the form of stories, songs, and the Gullah language is perpetuated (Fig. 1). These spaces and the social interactions that they enable strengthen community ties and support a high level of social cohesion and community support.

In the communities, two forms of food security are important to long-term resilience: compound gardens and access to seafood. Gardens are typically cultivated on St. Helena Island as part of the compound spatial structure (Fig. 4). A compound may have one or

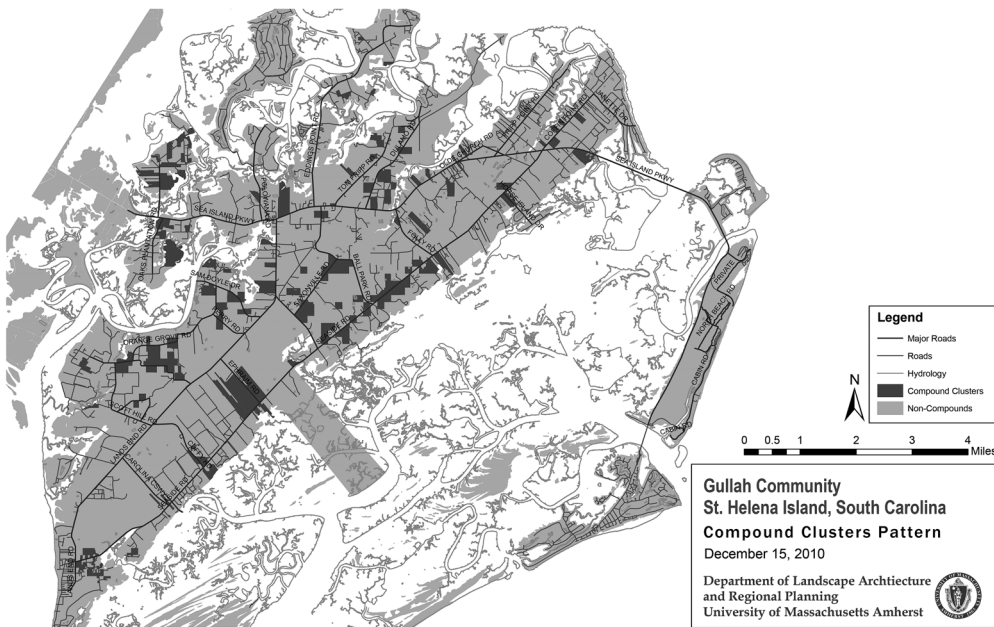


Figure 3. The locations and spatial distribution of family compounds on St. Helena Island as defined by residents in community meetings. 2010. (Photo by Elizabeth Brabec and Chingwen Cheng)

several gardens, cultivated by one or more members of the community, most often an elder.²⁷ Produce from the gardens is shared primarily within the compound, and secondarily through the neighborhood and the broader community on an informal basis. The same dispersal structure is used for seafood, with fish and shellfish often shared within the compounds. Although seafood is more often purchased and sold at local retail outlets than garden produce, a high level of food security is provided by the informal sharing network in both food groups.²⁸

Issues for Communities and Heritage at Risk

While the Gullah community structure and spatial form contribute to a high level of social resilience in their communities, there are a number of factors that put them at risk as future disasters and the long-term stresses of climate change are felt in the community. These stresses are similar to the impacts of external development forces; therefore, an extrapolation of current issues can be brought to bear on potential responses to disaster management and planning.

Visibility

As is often the case with minority communities, the Gullah communities are largely invisible to outsiders. In Gullah, community development is dispersed, and villages with business centers are uncommon. Outsiders rely on the occasional historic marker and heritage museum, such as the one at Penn Center on St. Helena Island, to provide the public description of an unseen heritage. Invisible heritage equates to lack of value, and the



Figure 4. The typical layout of a family compound garden, serving four homes and others in the broader community. The garden is cultivated by one member of the family living in household 1. 2013. (Photo by Elizabeth Brabec and Pedro Soto)

pressures of tourism, retirement, and second-home development are paradoxically forcing the communities to retreat to smaller and smaller land areas. Further analysis of how the Gullah communities adapt to current development pressures, identifying the spatial characteristics that are adaptable and those that lead to a breakdown of the community, provides an avenue for understanding the effects of the stress that land loss (due to sea level rise and other climate-related catastrophic events) will have in the future.

Community Engagement and Political Power

Compounding the issues impeding planning efforts in the area is the continuing distrust of government by the Gullah community, a mistrust born during and in the aftermath of the Civil War. When land was sold to the freedmen between 1862 and 1865, those sales were repeatedly rescinded. This resulted in a loss of trust in government agencies, an

issue that continues to the present day in everyday planning and development concerns. Engagement of the Gullah in the political process, particularly those relating to land use decisions, is key and must include strategies to build trust in governmental efforts. As short- and long-term decisions are made in the period leading up to the slow-onset disaster of sea level rise, and in the increasing frequency of catastrophic disasters, community engagement will improve resilience. Engagement will lead to self-determination rather than imposed solutions, as decisions are made that could run the gamut from structural solutions, to partial or phased retreat, to total abandonment of inundated private property.

Cultural Applicability of Adaptation Options

The study of the detrimental social and cultural impacts of displacement and resettlement has a long history in the native Indian reserves of the past century.²⁹ Similar social and cultural impacts can be expected during any future relocations, if the spatial and proxemic patterns of the Gullah communities are not reflected in the planning of new communities. Traditional Gullah communities and compounds are dispersed throughout the landscape, and while densely spaced within the compound or community, are broadly dispersed between communities. Commercial centers are also dispersed and traditionally do not include homes. Given the dispersed spatial structure of communities, various adaptation options such as shore armoring and dikes will not be economically viable along the hundreds of miles of shoreline of the Sea Islands. Phased retreat, abandonment, and resettlement will be options that must be explored for this region. How these new settlements are planned, their location, size, and density, particularly with the probable reality of smaller land areas, will be key to supporting or detrimentally impacting the social structure of the communities they are meant to serve.

In addition to recognizing the cultural patterns and proxemics required by the culture, the adaptation of current Gullah communities to decreasing land area due to development pressure may provide some insights into potential solutions as well as potentially detrimental outcomes. Continued study of communities such as those on Hilton Head Island, where non-Gullah gated communities have taken up the majority of traditional Gullah community lands, may provide a framework for how to manage broader adaptation options and maintain cultural viability.

Eleuthera, Bahamas

The island of Eleuthera offers another opportunity for the consideration of sustainable heritage techniques, both as a means of conserving the island's environment and cultural identity and as a resource for community-managed economic development. Developing such techniques and processes is especially critical on Eleuthera, given increased threats to the island from overwash due to severe storm events, as well as permanent inundation due to sea level rise.

Tourism is essential to the local economy, as it is in much of the Caribbean. The Bahamas is one of the wealthiest Caribbean countries, with a gross domestic product (GDP) of about 11.4 billion dollars driven largely by an economy heavily dependent on

tourism and offshore banking. Tourism (including tourism-related construction and manufacturing) provides about 60 percent of the GDP, while financial and business services provide 35 percent of the GDP. Economic growth in the country is linked to new resort and marina developments and, together with tourism, employs more than half of the country's labor force. On the other hand, agriculture (2.1 percent) and manufacturing combined create less than ten percent of the GDP and, even with government incentives, are not a growth sector.³⁰ This results in an economy in which the majority of goods, even food, are shipped in from the mainland.

Eleuthera's Natural and Cultural Heritage

Eleuthera is one of the northernmost islands in the Bahamian archipelago, which consists of twenty-nine islands and six hundred sixty-one cays. On a land area of one hundred eighty-seven square miles, the island of Eleuthera (excluding Harbor Island and Spanish Wells) holds approximately eight thousand full-time residents.³¹ Spanning one hundred miles in length and no more than four miles wide at its widest point, the island's geography makes it an appealing resort location but presents a challenge to communication and social cohesion. The island is roughly divided into four regions: the northernmost portion of the island, above the "Glass Bridge," with North Eleuthera airport and the communities of The Bluff and Upper and Lower Bogue; the north-central region, including Governor's Harbor and Palmetto Point, along with Governor's Harbor Airport; the south-central region, including Tarpum Bay and Rock Sound, along with Rock Sound airport; and the southern region of the island, including Deep Creek, Waterford, and Bannerman Town.

The unique natural environment of the island underscores the precarious nature of heritage resources in this and other island environments around the world. The island economy is tied to this natural heritage through tourism focused on the pristine beaches and high water quality surrounding the island. Given that the highest point on the island is two hundred feet (sixty meters) above sea level, and given that nearly every aspect of the island's heritage and current economy is tied to the sea, major sea level rise and the increased risk and frequency of damaging storms places Eleuthera's cultural heritage in a precarious position (Fig. 5).

Hurricanes, along with the attendant storm surges and overwash, are a fact of life on Eleuthera, as well as other islands in the Bahamas. On average, Eleuthera is brushed or hit with a hurricane once every 2.12 years, with direct hits averaging once every 4.18 years, and an average force of sustained winds of one hundred fourteen miles per hour.³² Storm surges in 1992 from Hurricane Andrew, and in 1999 from Hurricane Floyd, were twenty-three and twenty feet, respectively. The impact of this extreme weather, which is only projected to increase during the Atlantic hurricane seasons, is that the majority of standing structures on the island are in significant peril for major storm damage on a regular basis.

The history and heritage of the island's residents lies in the slave trade and the plantation economy of the seventeenth and eighteenth centuries. While the island was inhabited by the Lucayan people when the Europeans arrived, they had all been removed and enslaved by the early sixteenth century.³³ European settlement of Eleuthera occurred in 1648, but it was not until the late 1700s that major plantations were established,

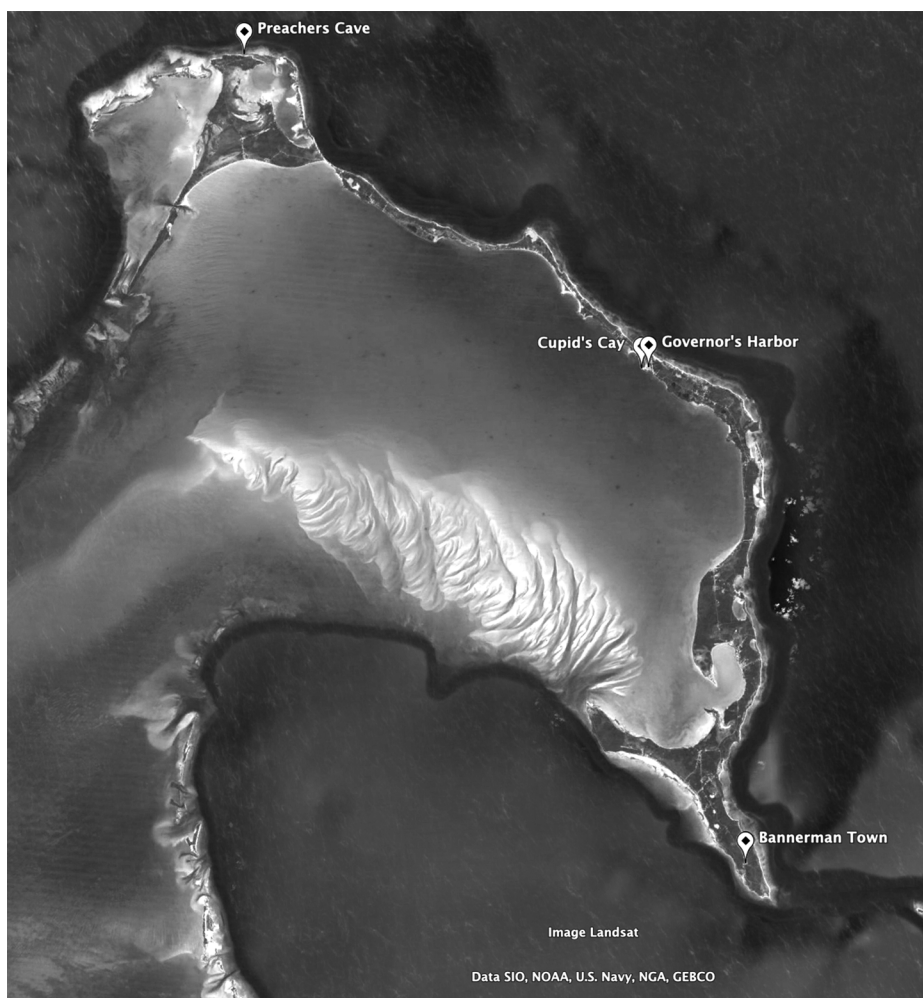


Figure 5. Map of the island of Eleuthera, showing the location of Preacher's Cave in the north, Cupid's Cay at Governor's Harbor in the central portion of the island, and Millars Plantation and Bannerman Town in the southern portion of the island. (Map Data ©2014 Google, SIO, NOAA, U.S. Navy, NGA, GEBCO, Image Landsat)

beginning extensive agricultural production on the island.³⁴ The agricultural dominance in the island's economy lasted until the 1920s, when the development of vacation clubs such as the Rock Sound and Cotton Clubs signaled the beginning of the primacy of tourism in the island economy.³⁵

Issues for Cultural Heritage and Climate Change Resilience and Adaptation Planning

The island is rich in tangible heritage—both built and archaeological—and intangible heritage that is currently poorly understood and largely invisible. Although as yet unrealized, heritage presents the most viable source of community assets for sustained economic development.³⁶ The issues not only for the island, but for all cultural heritage under high



Figure 6. Historically significant standing structure on Cupid's Cay: the first parliament. 2013. (Photo by Elizabeth Brabec)

risk for natural disasters, are of the long-term sustainability of heritage resources for economic development.

High Risk Tangible Heritage

While there are significant numbers and types of historic structures in the main settlements and a wealth of unique vernacular architecture throughout the island, the physical condition of many of these buildings is poor.³⁷ This is a result of both repeated hurricane damage and a lack of investment in the repair and rehabilitation of historic structures. The majority of rebuilding resources in the local community are focused on a survival level of rebuilding, a trend that is likely to continue. As a result, the restoration and maintenance of significant historic structures requires significant outside investment. An expansion of the understanding of the importance of the existing standing structures could engender long-term relationships between residents and interested investors, which would have the opportunity to stabilize the communities' economies and increase their level of resilience.

This approach to heritage resource management, based on contemporary heritage inventory processes, requires a systematic survey of the island to create a thorough inventory of the built and archaeological landscape. Not yet completed, this inventory should be based on both professional historic preservation expertise and community recognition



Figure 7. Historically significant standing structure on Cupid's Cay: early dance hall. 2013. (Photo by Elizabeth Brabec)

of significance. A standing structures analysis completed for the Cupid's Cay section of Governor's Harbor illustrates both the wealth of information available and the interplay between heritage professionals and the community.³⁸ Using community meetings and interviews with local experts and residents, a team of professionals developed a standing structures report for the peninsula of Cupid's Cay. As the location of the initial settlement and the first government buildings for the Bahamas in the late eighteenth century, the peninsula has significant standing structures and remnants of colonial roads (Figs. 6, 7, 8, and 9). These structures tell a story of hurricane onslaught and resilience on the part of the community. In addition, oral histories collected from local community members add a layer of meaning to the physical remnants. For example, understanding the significance of the dance halls and churches in Cupid's Cay expands the relevance of the town and provides a contextual layer of history for visitors. However, as in the South Carolina low country, community resilience is predicated on local decision making, involving residents in the restoration decisions that are made, as well as the types and venues of interpretation for outsiders.

Understanding Traditional Lifeways and Agricultural Systems

The island's history and lifeways, both of the Lucayan and plantation eras, is currently poorly understood. However, knowledge of these periods has the opportunity to provide



Figure 8. Historically significant standing structure on Cupid's Cay: old brick oven and kitchen. 2013.
(Photo by Elizabeth Brabec)

both a rich context for heritage tourism, and also access to traditional knowledge that may support sustainable practices that enhance the island's resilience. For example, archaeological excavations at the site of Preacher's Cave, the first landing site of colonial Europeans, have revealed significant precontact occupation (Lucayan and Taino), and it is highly probable that a systematic archaeological survey of the other sectors of the island would greatly expand awareness (and protection) of other significant native sites. Understanding these sites could offer a far more detailed understanding of the island's pre-European contact inhabitants and their long-term adaptations to Eleuthera's environment.

Similarly, archaeological investigation of the Millar Plantation site, one of the colonial-era plantations on the island, has the potential to reveal a great deal about the agricultural systems on the island. Its reported role as the first port of entry for enslaved Africans bound for the Carolinas offers a unique site for the study of the material culture of this stage of the slave trade; it may be likely to reveal transplanted African cultural traditions and material culture that were subsequently lost through the process of deculturation on the American mainland. The location of this site also offers strong potential for community involvement in the archaeological work and its interpretation to visitors. The nearby abandoned settlement of Bannerman Town could also yield archaeological information on a later period of the island's history, culture, and economy, and could



Figure 9. Historically significant standing structure on Cupid's Cay: a remnant of the old colonial road. 2013. (Photo by Elizabeth Brabec)

likewise provide a focus for historical interpretation and visitation by local and outside groups.

Another significant heritage resource with implications for island resilience and adaptation are the remains of changing agricultural methods on the island over the centuries, and especially in the era of large-scale agriculture in the twentieth century. The conspicuous ruined silos at Hatchet Bay at the south end of the island represent a period of intense food production on the island that is forgotten or unknown to many of the younger generation on the island today. A survey of the physical remains, combined with archival research and oral histories, can help bring this period to wider public awareness and serve as a point of reflection about the extent and character of the economic and social changes that have taken place on Eleuthera over the last century. A broader understanding of this history could also support a resurgence in food production on the island, a move that would drastically increase its self-sufficiency and resilience to both changing climate and economic conditions.

Intangible Heritage

The intangible heritage of Eleuthera, with the exception of its annual Junkanoo tradition, remains largely undocumented and known only to local residents through family traditions and oral transmission of recipes, stories, local knowledge, and skills. With the

increased import of manufactured goods and food products—not to mention the gradual passing of an older generation that directly inherited many of the island’s traditions—Eleuthera’s intangible heritage is in as much danger of disappearing as some of its built and archaeological heritage. The challenge is not only to remember, however, but also to incorporate the past into Eleuthera’s constantly evolving cultural identity. By understanding heritage, the island’s cultural creativity can be a valuable resource for its future; not just as a spectacle or a source of handcraft souvenirs for outside visitors, but as a source of technical knowledge in agriculture, construction, food processing, and community life that will support community resilience.

Communication Challenges

On an island where distance and transportation difficulties hamper communication, the development of viable communication systems is a requirement for community resilience. The creation of a One Eleuthera Web Portal harnessed the communicative power of Internet technology to create a shared resource and a shared communication and decision-making platform.³⁹

Web technology and social media provide a useful platform for the dissemination and understanding of a shared cultural heritage. In 2013, a foundation and Web portal were developed for cross-community collaboration.⁴⁰ As a centralized online information portal, it was developed for the member organizations to engage the organizations’ various “publics” and manage their constituent and development data. The portal provided an intuitive and cohesive interface to present material for public interpretation without having to create multiple websites, and to allow community stakeholders and the “general public” to access content and easily engage with each other, a critical feature for an island that is one hundred miles long.

Conclusions

The acknowledgment of diverse cultures and the tangible and intangible markers of heritage will become increasingly important as society endures greater stresses resulting from climate change. These stresses will drive people to seek safety and security in what they know and the connections to their families, communities, and ancestors. While several authors have recently argued that heritage professionals must work with specialists beyond their fields of expertise to safeguard heritage in the face of climate change, the greater issues will be community-led decision making as society decides which aspects of heritage to protect and which tangible elements to maintain in the aftermath of disasters.⁴¹ These will be the new realities of heritage conservation and management.

Since nearly half the world’s population lives less than sixty miles from a coastline, the effects of both sea level rise and increasing frequency of catastrophic storms on both the tangible and intangible heritage of human societies will be significant.⁴² However, the environmental change and impacts on communities will not be limited to the coastlines. Increasingly, erratic and severe storms will affect the interior, as will desertification, loss of ecosystem viability, flooding, and community displacement. The case studies reviewed

here indicate that some of the biggest challenges facing communities with such comprehensive and lasting disasters and change will be consensus-building and community engagement, necessitating a change in contemporary heritage management, policy, and practice.⁴³

The two case studies outlined here highlight the importance of acknowledging cultural norms and values, stress the importance of community engagement and self-determination, emphasize the critical importance of cross-disciplinary approaches to cultural heritage, and suggest moving away from the traditional heritage focus on built features to encompass all aspects of tangible and intangible heritage. In developing these new approaches, it is key to understand the critical importance of heritage in the strategies for—and acceptance of—disaster management, adaptation, and resilience plans, in order to move toward more inclusive models of sustainable development and social justice in heritage.

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References

1. Augustin Colette, *Case Studies on Climate Change and World Heritage* (Paris: UNESCO World Heritage Centre, 2007).
2. Jigyasu Rohit, "Urban Cultural Heritage for Sustainable Resilience: Case of Patan in Kathmandu Valley, Nepal," in *Urban Risk Management South Asia—Launch of Global Campaign on Making Cities Resilient, 08 to 09 June 2010*, ed. I. Davis (New Delhi: SAARC Disaster Management Center, 2010), 120–30; Vijay Kumar Shrotryia, "Culture, Gross National Happiness and Disasters: Strategies for Preparedness and Management of Disasters in Bhutan," *Journal of Integrated Disaster Risk Management* 3, no. 3 (2013): 170.
3. Elizabeth Chilton and Randall Mason, "NSF White Paper: A Call for a Social Science of the Past," *SBE 2020: Future Research in the Social, Behavioral and Economic Sciences* (2010).
4. Sujata Manandhar, Dietrich Schmidt-Vogt, Vishnu Prasad Pandey, and Futaba Kazama, "Religion, Indigenous Knowledge and Climate Change in a Mountain Region: A Case Study of Thini Village, Mustang, Nepal," in *How the World's Religions Are Responding to Climate Change: Social Scientific Investigations*, ed. Robin Globus Veldman, Andrew Szasz, and Randolph Haluza-DeLay (London and New York: Routledge, 2014); Huimin Gu and Chris Ryan, "Place Attachment, Identity and Community Impacts of Tourism: The Case of a Beijing Hutong," *Tourism Management* 29, no. 4 (August 2008): 637.
5. Yaser Abunnasr, Elisabeth M. Hamin, and Elizabeth Brabec, "Windows of Opportunity: Addressing Climate Uncertainty through Adaptation Plan Implementation," *Journal of Environmental Planning and Management* 58, no. 1 (2015): 135.
6. P. Brimblecombe, C. M. Grossi, and I. Harris, "Climate Change Critical to Cultural Heritage," in *Survival and Sustainability*, ed. Hüseyin Gökçekus, Umut Türker, and James W. LaMoreaux (Berlin: Springer, 2011), 195; Hans Peter Blankholm, "Long-Term Research and Cultural Resource Management Strategies in Light of Climate Change and Human Impact," *Arctic Anthropology* 46, nos. 1–2 (2009): 17; A. J. Howard, K. Challis, J. Holden, M. Kinsey, and D. G. Passmore, "The Impact of Climate Change on Archaeological Resources in Britain: A Catchment Scale Assessment," *Climatic Change* 91, nos. 3–4 (December 1, 2008): 405; Andy J. Howard, "Managing Global Heritage in the

- Face of Future Climate Change: The Importance of Understanding Geological and Geomorphological Processes and Hazards,” *International Journal of Heritage Studies* 19, no. 7 (2013): 632; Henry P. Chapman, “Global Warming: The Implications for Sustainable Archaeological Resource Management,” *Conservation and Management of Archaeological Sites* 5, no. 4 (2003): 241; Colette, *Case Studies*; Greg Terrill, “Climate Change: How Should the World Heritage Convention Respond?,” *International Journal of Heritage Studies* 14, no. 5 (2008): 388.
7. Terrill, “Climate Change,” 388.
 8. Colette, *Case Studies*; W. Vos and H. Meekes, “Trends in European Cultural Landscape Development: Perspectives for a Sustainable Future,” *Climate Change and Spatial Planning* 46, nos. 1–3 (December 15, 1999): 3; Carole L. Crumley, *Historical Ecology: Cultural Knowledge and Changing Landscapes* (Santa Fe, N.M.: School of American Research Press; distributed by the University of Washington Press, 1994).
 9. Mary Carol Hunter, “Managing Sense of Place in Transition: Coping with Climate Change,” *Places* 20, no. 2 (2008): 20; Nancy Rottle and Marina Alberti, “Climate Change and Place,” *Places* 20, no. 2 (2008): 4.
 10. Kumi Kato, “Community, Connection and Conservation: Intangible Cultural Values in Natural Heritage—The Case of Shirakami, Sanchi World Heritage Area,” *International Journal of Heritage Studies* 12, no. 5 (2006): 458.
 11. John A. Baden and Peter L. Baldwin, “How Property Rights Account for Environmental Sustainability,” *Human Ecology Review* 2, no. 1 (Winter/Spring 1995): 22.
 12. Hunter, “Managing Sense of Place in Transition,” 20.
 13. H. David Thurston, *Sustainable Practices for Plant Disease Management in Traditional Farming Systems* (Boulder, Colo.: Westview, 1992); World Health Organization, “Traditional Medicine,” www.who.int/mediacentre/factsheets/fs134/en/ (accessed May 23, 2011).
 14. Kai M. A. Chan, Terre Satterfield, and Joshua Goldstein, “Rethinking Ecosystem Services to Better Address and Navigate Cultural Values,” *Ecological Economics* 74 (February 2012): 8.
 15. S. Y. Wu, R. Najjar, and J. Siewert, “Potential Impacts of Sea-Level Rise on the Mid- and Upper-Atlantic Region of the United States,” *Climatic Change* 95, nos. 1–2 (July 2009): 121.
 16. C. M. Goodess, J. Hall, M. Best, R. Betts, L. Cabantous, P. D. Jones, and C. J. Wallace, “Climate Scenarios and Decision Making under Uncertainty,” *Built Environment* 33, no. 1 (2007): 10; Susanne Moser and Lisa Dilling, eds., *Creating a Climate for Change: Communicating Climate Change and Facilitating Social Change* (Cambridge, UK: Cambridge University Press, 2007).
 17. Timothy Beatley, *Planning for Coastal Resilience: Best Practices for Calamitous Times* (Washington, DC: Island Press, 2009).
 18. C. Jacobson, K. F. D. Hughey, W. J. Allen, S. Rixecker, and R. W. Carter, “Toward More Reflexive Use of Adaptive Management,” *Society and Natural Resources* 22, no. 5 (2009): 484; Abunnasr, Hamin, and Brabec, “Windows of Opportunity,” 135.
 19. Elizabeth Brabec and Cari Goetcheus, “The Interrelationships of Land, Culture, and Heritage: The Gullah Geechee Communities of the Southeastern United States,” in *Conserving Cultural Landscapes: Challenges and New Directions*, ed. Ken Taylor, Archer St. Clair, and Nora Mitchell (New York: Routledge, 2015), 109; Elizabeth Brabec and Sharon Richardson, “A Clash of Cultures: The Landscape of the Sea Island Gullah,” *Landscape Journal* 26, no. 1 (2007): 151.
 20. E.g., Guion Griffis Johnson, *A Social History of the Sea Islands: With Special Reference to St. Helena Island, South Carolina* (Chapel Hill: The University of North Carolina Press, 1930); Edwin D. Hoffman, “From Slavery to Self Reliance: The Record of Achievement of the Freedmen of the Sea Island Region,” *Journal of Negro History* 41, no. 1 (1956): 8; Charles W. Joyner, *Down by the Riverside: A South Carolina Slave Community* (Urbana, Ill.: University of Illinois Press, 1985); Margaret Washington Creel, “A Peculiar People”: *Slave Religion and Community-Culture among the Gullahs* (New York: New York University Press, 1988); Philip D. Morgan, *Slave Counterpoint: Black Culture in the Eighteenth-Century Chesapeake and Lowcountry* (Chapel Hill, N.C.: University of North Carolina Press, 1998); William S. Pollitzer, *The Gullah People and Their African Heritage* (Athens, Ga.: The University of Georgia Press, 1999), xiii.
 21. Brabec and Goetcheus, “The Interrelationships of Land, Culture and Heritage,” 109.

22. Brabec and Richardson, "A Clash of Cultures," 151.
23. Ibid.; Marquetta L. Goodwine, *The Legacy of Ibo Landing: Gullah Roots of African American Culture* (Atlanta: Clarity Press, Inc., 1998); Patricia Jones-Jackson, *When Roots Die: Endangered Traditions on the Sea Islands* (Athens, Ga.: The University of Georgia Press, 1987).
24. Brabec and Richardson, "A Clash of Cultures," 151.
25. Janice F. Dyer and Conner Bailey, "A Place to Call Home: Cultural Understandings of Heir Property among Rural African Americans," *Rural Sociology* 73, no. 3 (September 2008): 317.
26. Elizabeth Brabec, "Our Land: Access to Land," University of Massachusetts-Amherst and the Penn Center (2013), <http://gullahcommunity.org/our-land/access-to-land/> (accessed November 1, 2013).
27. Elizabeth Brabec and Pedro Miguel Soto, "Food Systems on St. Helena Island, South Carolina," unpublished manuscript (Amherst, Mass.: University of Massachusetts-Amherst, 2014); Brabec and Goetheus, "The Interrelationships of Land, Culture and Heritage," 109.
28. Brabec and Soto, "Food Systems on St. Helena Island."
29. J. E. Windsor and J. A. McVey, "Annihilation of Both Place and Sense of Place: The Experience of the Cheslatta T'en Canadian First Nation within the Context of Large-Scale Environmental Projects," *The Geographical Journal* 171, no. 2 (2005): 146; Peter Menzies, "Understanding Aboriginal Intergeneration Trauma from a Social Work Perspective," *The Canadian Journal of Native Studies* 27, no. 2 (2007): 367.
30. "Central America and the Caribbean: The Bahamas," United States Central Intelligence Agency, last modified June 23, 2014, <https://www.cia.gov/library/publications/the-world-factbook/geos/bf.html> (accessed March 4, 2015).
31. Bahamas Department of Statistics, *The 2000 Census of Population and Housing Tables (Eleuthera), Historical Archives, Bahamas Department of Statistics* (Nassau: Bahamas Department of Statistics, 2008).
32. "Eleuthera Island Bahamas Hurricanes," www.hurricanecity.com/city/elutheraisland.htm (accessed March 2015).
33. William F. Keegan, *The People Who Discovered Columbus: The Prehistory of the Bahamas* (Gainesville, Fla.: University Press of Florida, 1992).
34. EDAW, and Bruce Lafleur & Associates, *Eleuthera Master Plan*, The Hotel Corporation of the Bahamas, 2005.
35. Ibid.
36. Elizabeth Chilton, Neil Silberman, and Angela Labrador, *Report of Visit to Eleuthera* (Amherst, Mass.: University of Massachusetts-Amherst Center for Heritage and Society, 2011).
37. Ibid.; "One Eleuthera Foundation," www.oneeleuthera.org (accessed December 13, 2014).
38. Elizabeth Brabec and Elizabeth Chilton, *Standing Structures Report: Cupid's Cay, Governor's Harbor, Eleuthera, Bahamas* (Amherst, Mass.: University of Massachusetts-Amherst: Center for Heritage and Society, 2013).
39. "One Eleuthera Foundation," www.oneeleuthera.org.
40. Angela Labrador, *Entrusting the Commons: Agricultural Land Conservation as a Tool for Cultivating Shared Heritage* (Amherst, Mass.: University of Massachusetts-Amherst, 2012).
41. Blankholm, "Long-Term Research," 17; Colette, *Case Studies*; Stefan Gruber, "The Impact of Climate Change on Cultural Heritage Sites: Environmental Law and Adaptation," *Carbon and Climate Law Review* 2 (2011): 209; Cristina Sabbioni, Peter Brimblecombe, and May Cassar, *The Atlas of Climate Change Impact on European Cultural Heritage: Scientific Analysis and Management Strategies* (London: Anthem Press, 2010).
42. Jon McVey Erlandson, "As the World Warms: Rising Seas, Coastal Archaeology, and the Erosion of Maritime History," *Journal of Coastal Conservation* 16, no. 2 (2010): 137.
43. K. G. Lonsdale, T. E. Downing, R. J. Nicholls, D. Parker, A. T. Vafeidis, R. Dawson, and J. Hall, "Plausible Responses to the Threat of Rapid Sea-Level Rise in the Thames Estuary," *Climatic Change* 91, nos. 1–2 (2008): 145; Jacob Wagner, Micheal Frisch, and Billy Fields, "Building Local Capacity: Planning for Local Culture and Neighborhood Recovery in New Orleans," *Cityscape: A Journal of Policy Development and Research* 10, no. 3 (2008): 39–56.

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