

Caribbean Studies

ISSN: 0008-6533

iec.ics@upr.edu

Instituto de Estudios del Caribe

Puerto Rico

Holladay, Patrick J.; Powell, Robert B.  
SOCIAL-ECOLOGICAL RESILIENCE AND STAKEHOLDERS: A QUALITATIVE  
INQUIRY INTO COMMUNITY-BASED TOURISM IN THE COMMON WEALTH OF  
DOMINICA

Caribbean Studies, vol. 44, núm. 1-2, enero-diciembre, 2016, pp. 3-28

Instituto de Estudios del Caribe

San Juan, Puerto Rico

Available in: <http://www.redalyc.org/articulo.oa?id=39251287001>

- How to cite
- Complete issue
- More information about this article
- Journal's homepage in redalyc.org

redalyc.org

Scientific Information System

Network of Scientific Journals from Latin America, the Caribbean, Spain and Portugal

Non-profit academic project, developed under the open access initiative

# SOCIAL-ECOLOGICAL RESILIENCE AND STAKEHOLDERS: A QUALITATIVE INQUIRY INTO COMMUNITY-BASED TOURISM IN THE COMMONWEALTH OF DOMINICA

---

*Patrick J. Holladay*  
*Robert B. Powell*

## *ABSTRACT*

The Commonwealth of Dominica has one of the most depressed and volatile economies in the Eastern Caribbean due to perennial hurricane damage, depressed agricultural exports, the global recession, and volatile fuel prices. The European Union attempted to fortify their economy with grants to diversify Dominica's tourism market. Yet, little is known about the conditions required to improve the resilience of community tourism in island nations such as Dominica. To fill this gap, we interviewed 25 decision makers regarding the necessary conditions and characteristics of resilient tourism development in Dominica. Interviews focused on social, institutional, economic and ecological resilience dynamics as the island transitions into a tourism economy. In particular this research examined: sustainable tourism development practices; reactivity of communities to internal and external pressures; the importance of social capacities; institutional (governance) design; economic stability; and ecological security. The data created baseline information from community and individual standpoints that provided guidance to enhance tourism products and the resilience of tourism dependent populations. The findings from this study represent a step forward in applying resilience theory to understand community tourism development.

**Keywords:** social-ecological resilience, sustainable tourism, community development, Dominica, stakeholders

## *RESUMEN*

La Mancomunidad de Dominica posee una de las más abatidas e inestables economías del Caribe Oriental debido a los daños recurrentes ocasionados por los huracanes, una exportación agrícola en crisis, la recesión global, y los continuos precios cambiantes del combustible. La Unión Europea intentó fortalecer la economía de Dominica con subsidios para diversificar su mercado turístico. Aún así, poco se conoce de las condiciones requeridas para mejorar la resiliencia de la

comunidad turística en naciones islas tales como Dominica. Para llenar este vacío, entrevistamos a 25 personas influyentes en la toma de decisiones con respecto a las condiciones necesarias y características del resiliente desarrollo turístico en Dominica. Las entrevistas se basaron en las dinámicas de resiliencia en los aspectos sociales, institucionales, económicos y ecológicos según la isla evoluciona a una economía de turismo. Esta investigación examinó en particular las prácticas de desarrollo turístico sustentable; la reactividad de las comunidades a las presiones internas y externas; la importancia de las capacidades sociales; diseño institucional (gobernanza); estabilidad económica, y seguridad ecológica. Los datos crearon información de base del punto de vista de la comunidad e individual que proveyeron guías para mejorar los productos turísticos y la resiliencia de las poblaciones que dependen del turismo. Los hallazgos de este estudio representan un paso hacia adelante en la aplicación de la teoría de resiliencia para entender el desarrollo de turismo comunitario.

**Palabras clave:** resiliencia socio-ecológica, turismo sustentable, desarrollo comunitario, Dominica, accionistas

#### RÉSUMÉ

La communauté de la Dominique possède une des économies les plus sinistrées et les plus instables de la Caraïbe orientale, résultat de dommages fréquents causés par les intempéries, une exportation de produits agricoles en berne, la crise économique mondiale et les prix sans cesse fluctuants du pétrole. L'Union Européenne a tenté de renflouer l'économie de la Dominique en lui accordant des subventions pour qu'elle diversifie son marché touristique. Pourtant, il est difficile de savoir quels sont les critères exacts permettant d'améliorer le tourisme durable d'une communauté ilienne comme celle de la Dominique. Afin de combler cette lacune, nous avons interrogé 25 personnes prenant part aux processus de décisions concernant les conditions requises et les caractéristiques d'un développement du tourisme durable en Dominique. Les entretiens reposaient sur les dynamiques de résilience tenant compte des aspects sociaux, institutionnels, économiques et écologiques qu'a connu l'île lors de son développement touristique. Ce travail de recherche examine en particulier les pratiques de développement touristique durable ; la réactivité des communautés face aux pressions extérieures et intérieures ; l'importance des structures sociales ; les organes institutionnels et la question de la gouvernance ; la stabilité économique et la sécurité environnementale. Les données recueillies ont servi d'informations de base, au niveau collectif et individuel, et seront fournies aux guides touristiques afin d'améliorer les prestations dans ce secteur, ainsi que la résilience des populations qui dépendent du tourisme. Les résultats de cette étude représentent une avancée dans l'application de la théorie de la résilience en vue de

comprendre le développement d'un tourisme communautaire.

**Mots-clés :** résilience socio-écologique, écotourisme, développement communautaire, la Dominique, acteurs

Received: 26 February 2015 Revision received: 29 March 2016 Accepted: 31 March 2016

## **The challenge of community-based tourism development in Dominica**

**T**he economy of the Commonwealth of Dominica, henceforth Dominica, is the most challenged in the Eastern Caribbean States (US Dept. of State 2010). Dominica's chief agricultural industry, banana exports, was crippled in the 1990s by international competition and the World Trade Organization's decision to curtail the island's preferential trade arrangements in Europe (Payne 2006; Slinger 2002). Large-scale infrastructure damage from Hurricanes Dean and Omar in 2007 and 2008, the global economic downturn and accompanying disorder in international financial markets, loss of tourism earnings, sharp drops in Foreign Direct Investments (FDI) and remittances have all contributed to the deterioration of Dominica's economy (IMF 2008; IMF 2009a). In 2006, the tourism receipts in Dominica hit a high of US\$68.4million, representing 21.6% of GDP (IMF 2009b). By 2009, those same receipts dropped to US\$46.6million, a decline to 12.4% of GDP.

Recognizing this, the European Union attempted to fortify the Dominican economy with two large grants designed to strengthen and diversify Dominica's tourism market, particularly by linking the established agricultural sector with the development of a localized service-based tourism industry. The first program invested 6.5 million Euros and was known as the Ecotourism Development Program (ETDP), which ran from 2003-2006 (TII 2008). Following the ETDP, the Tourism Sector Development Program (TSDP) was financed in the amount of 2.7 million Euros, and began in 2008 and was ongoing at the time of this study in the second and third quarters of 2010 (Europa 2010; GCD 2011).

Despite the influxes of external financial capital from the European Union and their potential value to the island economy and quality of life, little is known about the conditions required to develop community tourism that is both resilient and sustainable in small island nations such as Dominica. Social-ecological resilience (herein 'resilience') is the amount of perturbation or change a system can absorb and recover from (Walker

& Salt 2006, 2012). Sustainability is ‘a set of conditions and trends in any given system that can continue indefinitely’ (Atkisson 201:110). More specifically to this research, sustainability from a resilience theory perspective is ‘the likelihood an existing system of resource use will persist indefinitely without a decline in the resource base or in the social welfare of others’ (Walker & Salt 2006:165).

To critically explore these considerations we conducted interviews with key informants, in both the public and private sectors, who were the chief decision makers for tourism development on the island. Interviews focused specifically on perspectives about the necessary mechanisms for sustainable tourism development coupled with explicit inquiries derived from resilience theory into how social, institutional, economic and ecological resiliencies may or may not be supported as the island transitions from an agricultural-based economy into a service-based tourism economy.

### Study site

Dominica is located in the Lesser Antilles archipelago in the Eastern Caribbean (Figure 1) and is recognized for its largely undisturbed ecological beauty and wealth of natural resources (Christian 1996; Weaver 1993). However, the highly mountainous and volcanic landscape prevents Dominica from marketing the traditional ‘3S’—sand, sea, and sun tourism of other popular Caribbean destinations, but the naturalness of the island make it suitable for ecotourism and other non-mainstream niche tourisms, such as wellness, adventure and agri-tourism (GCD 2006). Despite these assets, the island, which is marketed as the ‘Nature Island of the Caribbean,’ has had little success in drawing stay-over visitation (Weaver 2003).

The island is perennially visited by as many as 500,000 cruise ship tourists who contribute approximately 12% of tourism expenditures. The other 88% of tourism expenditures come from about 25,000 non-Dominican stay-over tourists and around 50,000 Diaspora Dominicans visiting their home country (GCD 2006). In recent years Dominica has only attracted around 0.4% of the total Caribbean tourism market but this draw accounted for around 19% of Gross Domestic Product (GDP), indicative of the poor economy of the island (GCD 2006).



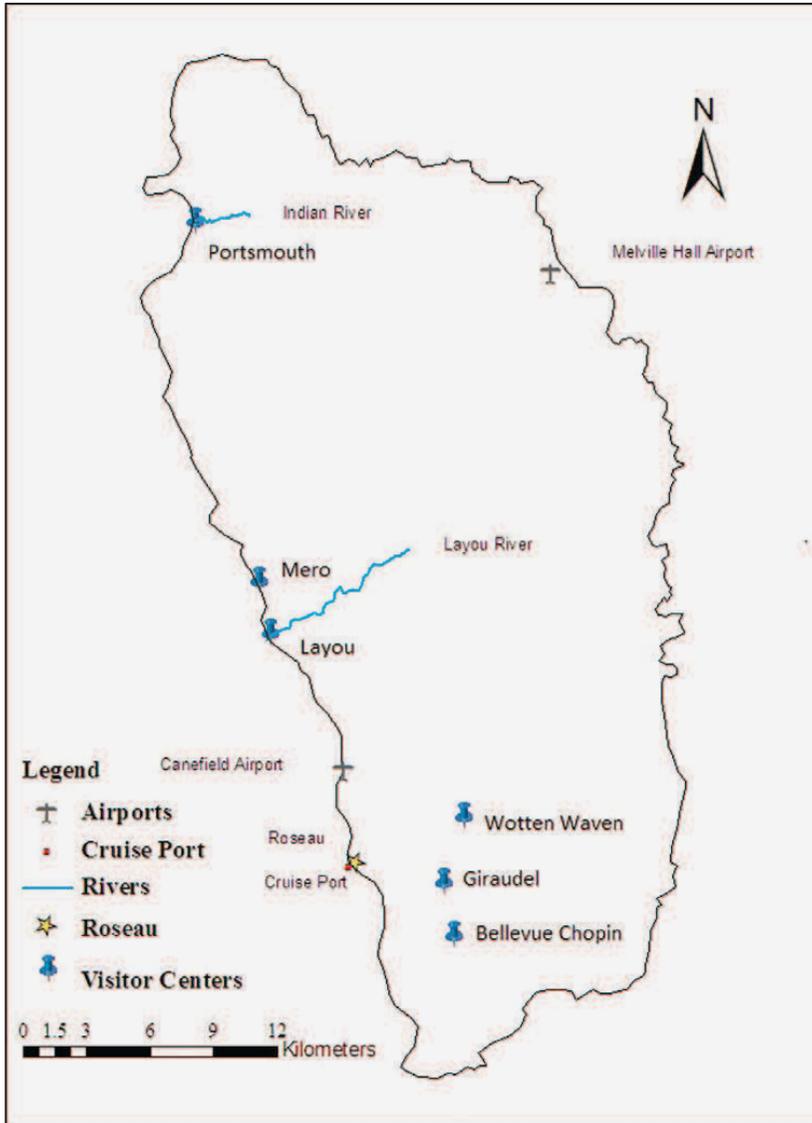
**Figure 1.** Geographic location of the Commonwealth of Dominica. Source: Holladay & Powell, 2013.

### **Recent tourism development in Dominica**

In 2002, the European Union (EU) funded a 6.5 million Euros program called the ‘Ecotourism Development Program’ (ETDP) (TII 2008). The project lasted for three years and funded the development of tourism amenities, facilities, building renovations, community-based projects, and business and leadership training (TII 2008). A major component of the ETDP, as mandated by the EU, was the development of community-based ecotourism projects. In 2006 the EU’s Special Framework of Assistance (SFA) provided an additional 2.7 million Euros to continue the work that was started under the ETDP (Europa 2010; GCD 2011). This new program was called the Tourism Sector Development Program (TSDP). Under the TSDP the community tourism development component was expanded. The aim of the TSDP was to improve the competitiveness of the tourism sector in Dominica through a number of initiatives.

One initiative was technical advisory services focused on building capacities of the two main governmental tourism institutions in Dominica, the Ministry of Tourism & Legal Affairs and the Discover Dominica Authority (DDA), the tourism marketing and promotion branch of the national government. A second initiative of the TSDP focused on destination marketing and provided funds to DDA for marketing Dominica internationally. The third, and a major focus of this research, was the rural tourism component, which invested in developing community-based tourism. At the time of this study there were six communities

participating in the TSDP. These communities were Bellevue Chopin, Giraudel, Wotten Waven, Layou, Mero and Portsmouth (Figure 2). Under the rural tourism development component of the TSDP, each community created an organization called a Tourism Development Committee (TDC). Each community appointed TDC leaders by popular



**Figure 2.** Locations of studied communities in Dominica. Source: Holladay & Powell, 2013.

vote and promoted its own unique tourism commodity, such as natural spas and river, beach and organic farm tours (Holladay & Powell 2013).

The Ministry of Tourism identified three different interventions for the communities: 1) project infrastructure and development, such as the construction of visitor centers, which were used to receive visitors, to dispatch tours, and to promote the community and their tourism products; 2) human resource capacity building and business planning with training in marketing, customer service, project writing, entrepreneurship, business skills, and accounting; and 3) domestic and international marketing via a Community Tourism Portal website ([www.communitytourism.dm](http://www.communitytourism.dm)). Community tour packages were developed by government consultants following site visits and are showcased both on the Community Tourism Portal and through brochures designed and printed with funds from the TSDP.

### **Community-scale resilience and sustainable tourism development**

Projects such as the TSDP often focus on developing a diverse range of tourism products, increasing capacity of local people to participate effectively in the tourism economy, and on promoting these newly developed tourism products. Generally it is assumed that these efforts will increase the economic wellbeing of local people and will enhance the resilience of the rural economy. Community resilience is definitionally ambiguous, nuanced, and contextual in nature but usually focuses on return or recovery time (Gunderson 2009). Attempts have been made on various scales, from community focus groups to national government commissioned projects, to identify dimensions of community resilience (Buikstra *et al.* 2010; Magis 2010). Examples of community resilience cover a number of dimensions (Table 1) including social action, collective resource engagement, and environmental health.

In the context of tourism development, tourism should be thought of as a complex, dynamic and non-linear system (Baggio 2008; Butler 2009; Farrell & Twining-Ward 2005). A perturbation in one element of a tourism system will force changes in other elements (Faulkner & Russell 1997). Tourism systems may be impacted by natural disasters (de Sausmarez 2005; Hein 2013; Rittichainuwat, 2006), anthropogenic crises (Beeton, 2006; Price-Howard & Holladay 2014) and vulnerabilities of commercial tourism enterprises (Biggs 2011; Biggs *et al.* 2012).

From a tourism perspective resilience is defined as the amount of change a system (in this case the tourism system in Dominica) can undergo and retain its same function, structure and feedbacks (Holling 1973, 1996; Walker & Salt 2012). Sustainable development is defined in two parts. Sustainability is the ability to create and maintain adaptive

capability, while development is the process of creating, testing and maintaining opportunity (Holling *et al.* 2002). According to resilience theory and its application to tourism, there are four domains of sustainability (see Holladay & Powell 2013 for a longer description)—social (e.g. social networks), governance (e.g. local control), economic (e.g. prevention of leakage), and ecological (e.g. controlled infrastructure development)—which were the foundations for this investigation into the resilience of community tourism in Dominica. Resilience and sustainability are not synonymous and should not be conflated; resilience has emphasis of the qualities of the system and sustainability on the present and future conditions of the same system (Redman 2011). Both concepts, however, are related to adaptive capacity in the face of change (Buikstra *et al.* 2010; Gallopin 2006; Quinlan *et al.* 2015).

**Table 1**  
**Dimensions of community resilience**

<b>Dimensions</b>	<b>Source</b>
Civic leadership, social organization, economic structure, physical amenities, attractiveness	Harris <i>et al.</i> 2000
Social networks and support, positive outlook, learning, early experience, environment and lifestyle, infrastructure and support services, sense of purpose, diverse and innovative economy, embracing differences, beliefs, leadership	Buikstra <i>et al.</i> 2010
Community resources, active agents, collective action, strategic action, equity, impact, resource engagement, resource development	Magis 2010
Social networks, trust, institutional flexibility, local control, power sharing, prevention of economic leakage, controlled infrastructure development	Holladay & Powell 2013

Research has begun to investigate resilience of rural community tourism (Holladay & Powell 2013; Ruiz-Ballesteros 2011; Strickland-Munro *et al.* 2010), as well as other dimensions of resilience such as strategies for tourism crisis management (Ritchie 2004), frameworks for tourism disaster mitigation (Faulkner 2001), post-disaster recovery (Cochrane 2010; Price-Howard & Holladay 2014; Ritchie *et al.* 2014), and weaknesses of forecasting crises and disasters impacting the tourism industry (Prideaux *et al.* 2003). Lew *et al.* (2016) investigated resilience and sustainability in rural Taiwan tourism communities. They found that communities that adopt resilience policies—which may help pull rural communities into positions of enhanced resilience (Slight *et al.* 2015)—and have successful sustainability initiatives are better off than communities that focus on either resilience or sustainability and not both concurrently.

## Methods

To investigate the resilience of community level sustainable tourism development in Dominica, semi-structured interviews with key stakeholders in the public and private sectors were conducted from March to July 2010. A nine-question interview script was used wherein the questions were specifically designed by the researchers to capture not only perspectives pertaining to sustainable community tourism development and feedbacks but the perceptions of underlying social, institutional, economic, and ecological domains that were theoretically hypothesized to support resilience (Table 2).

**Table 2**  
**Semi-structured interview questions**

	<b>Public and private sector perspectives</b>	<b>Domain</b>
1.	What do you feel a community should have in place to help with sustainable tourism development?	Sustainability
2.	If something, positive or negative, happened in the community how quickly do you think people in the community would know about it/react to it? Or would they? Why or why not?	Feedbacks
3.	What would make your/the community/communities produce steady economic benefits and allow for flexibility in a potentially changing tourism market?	Economic
4.	Do you believe your/the community/communities have communication/dialogue, sharing, and learning about the tourism industry?	Social
5.	a. Who are the decision makers for community tourism development? Are there partnerships, lines of communication, and policies in place for community tourism development?	Governance
	b. Do you think organizations that are making decisions encourage openness and learning? Are these organizations able to change the way they make decisions easily?	Governance
6.	What would make your/the community/communities to able maintain their naturalness yet still able to develop tourism?	Ecological

Participants in this study were selected from eight public and private institutions involved with tourism development in Dominica. In total there were 25 interviewees that came from the Dominican Ministry of Tourism and Legal Affairs, the Dominica Hotel & Tourism Association and from the six individual community's Tourism Development Committees (Table 3)

Key informants who participated consisted of two respondents from the Ministry of Tourism & Legal Affairs, three members of the Dominica

**Table 3**  
**Description of sampled organizations**

Organization	Mission of organization
Ministry of Tourism & Legal Affairs	To provide an enabling environment to facilitate the development and expansion of economic activities in tourism, industry and enterprise development; in a manner consistent with sustainable development goals, so as to contribute to national economic growth; to create social and cultural opportunities and career paths for the young people; to protect the national resources and scenic features of the country; and to nurture community involvement in tourism (GCD, 2010).
Dominica Hotel & Tourism Association (DHTA)	The DHTA's mission is to promote tourism and related services as a critical sector in Dominica's economic development and to work closely with all stakeholders to create and sustain an enabling environment that will support Members' efforts to improve the standards of their products and the quality of their services (DHTA, 2010).
Tourism Development Committees	To establish and maintain links between tourism and the agricultural and rural sectors and increase Dominica's presence in the market place through increased marketing and promotions (CTD, 2011).

Hotel and Tourism Association and 20 members from the six Tourism Development Committees (Table 4). Each individual organization was contacted directly via both email and telephone call and following an introduction to the scope of this research was invited to participate in an interview. Interviews with members of the Tourism Development Committees included from one to seven members depending on how many attended the meeting.

The interviews were face-to-face, and occurred at the interviewees' office, place of business, or home to foster a naturalistic setting in which the respondent would feel comfortable (Babbie 2008). All interviews were recorded following permission from the interviewee(s). The interviews were later transcribed and then imported into the NVivo software program to facilitate reading and interpretation of data. Data were analyzed through a process that first used content analysis to identify themes following procedures outlined by Braun and Clark (2006) among others. These were then used as a framework for more in-depth analysis.

When building the themes for this research, reliability and validity of the qualitative analysis was ensured in order to overcome any potential bias and reactivity (Maxwell 2005). Golafshain (2003:604) stated, 'reliability and validity are conceptualized as trustworthiness, rigor and quality in qualitative paradigm.' Validity was ensured by comparison (Richards & Morse 2007; Maxwell 2005). Comparisons among respondent answers were made to evaluate "what's" and "how's" (Holstein & Gubrium 2005; Stake 2005), which help with understanding causality

**Table 4**  
**Interviewees by organization**

Organization	<i>N</i>	% of sample
Ministry of Tourism & Legal Affairs	2	8
Dominica Hotel & Tourism Association	3	12
Layout Improvement Committee	1	4
Portsmouth Community Tourism Association	1	4
Wotten Waven Development Committee, Inc.	2	8
Mero Enhancement Committee	4	16
Bellevue Chopin Organic Farmers Group	5	20
Giraudel-Eggleston Flower Growers Group, Inc.	7	28
Total	25	100

(Maxwell 2005). Reliability was ensured by appropriate rigor in the review of literature, the development of the interview script and the coding process (Richards & Morse 2007). As the researchers investigated the interview content they narrowed and broadened the amount of detail and discourse, even though each interview followed the same interview script. This was an iterative process that established reliability in the findings.

## Results

During the interviews with key informants some specific perspectives on tourism development, resilience and sustainability were expressed. In particular the research explored six primary questions, or interrogatory dimensions, that centered on the following concepts: 1) sustainable tourism development, 2) reactivity of communities to internal and external pressures, 3) social capacities, 4) institutional (governance) design, 5) economic stability, and 6) ecological security. Each of these six dimensions was framed by specific interview questions (Table 2). Qualitative analysis of each question provided the framework for presenting results. So from each question, themes were developed by the researchers and will be explained in further detail (Table 5).

Results are reported here using a variety of direct quotes from the respondents. The quotes used here do not systematically follow one key informant's comments to the next key informant's remarks. Instead, the quotes are arranged in a manner that illustrates the agreement or the divergent opinions of the key informants. Also, not each theme will be discussed due to limitations on space in this document. The top themes in terms of frequency of mention across all interviewees will compose the bulk of the reported results.

**Table 5**  
**Summary of questions from interviews, emergent themes**  
**and theme definitions**

Question	Themes	Definition
Sustainable tourism development	1. Financial assistance	Local level access to outside funding
	2. Tourism extension	A national governmental agency for local information delivery
	3. Community awareness	Educational programs for locals on the benefits of tourism
	4. Training	Ongoing education in the mechanics of tourism
	5. Infrastructure	Local tourism related improvements
	6. Standards	Set guidelines for tourism quality
	7. Local involvement	Participation from community members
	8. Image branding	Marketing authentic Dominica
	9. Licensing	Permits for tourism employment
Reactivity of community	1. Feedbacks	Responsiveness among community members to disturbances/crises
Economic sustainability	1. Diversity	Variety and range of economic opportunities
	2. Indirect benefits	Non-monetary economy
	3. Adaptability	Learning and adaptive capacities
	4. Government support	Central Government assistance
Knowledge sharing and learning	1. Knowledge sharing	An exchange of known information
	2. Learning	Accumulation of knowledge
	3. Equity	Equal opportunity in shared resources
Governance and institutional design	1. Decision makers	Recognition of specific entities in charge of local tourism development
	2. Vertical fragmentation	Poor or disorganized connections among scales of government
	3. Meetings among stakeholders	Formalized gatherings of public and private sector parties
	4. Self-organization	Local organizing behavior supported by legislation, funding, and learning

Question	Themes	Definition
Ecological security	1. Naturalness	A minimum of human influences on the landscape
	2. Infrastructure development	Human influence on the landscape through built environments
	3. Education	Local education programs on the importance of environmental stewardship
	4. Foreign competition	Minimization of foreign development
	5. Carrying capacity	Limits to visitation numbers

### Sustainable tourism development

The first question posed during the interview asked specifically what the community(ies) needed to have in place to support sustainable community tourism development. Interviewees suggested that start-up and maintenance costs were important particularly to support the development of small-scale infrastructure to meet the national tourism standards such as comfortable, safe walking paths and conditions that were conducive to handicapped accessibility. One respondent said, *'Yes, we are desperately in need of financial assistance as of yesterday. We need just a few dollars to make gardens like hers, and hers, and hers accessible. For a few paths, a few steps, a couple of hundred dollars for a garden!'* Overall, the impression was that these costs were generally low but still prohibitive because of the low incomes of the community members. For example, *'First of all, you need at least two to three years before you can actually see profit or start to break even and that kind of thing. So you continually need support for at least the first two to three years. So that is what is important for the sustainability of tourism in the communities.'*

Interviewees also suggested that direct business planning assistance and capacity building were both necessary to support sustainable tourism development. Dominicans have a tradition of information exchange from the national to the local level, and vice versa, through government extension offices. For example, *'They actually have to come out to the villages and actually talk to people and say look, these are the key points and this is the difference we think it will make to you and this is what we think you need to do to fit in with it and what do you think about that. Is that realistic, can it be done? And, actually engage people. Most society in Dominica is still very much dependent on face-to-face engagement.'* The need for a tourism extension officer that would come to the communities directly to provide assistance was expressed. One respondent said, *'Our culture grew up with an extension service and an extension officer. He's the main person who's supposed to bring information to the farmer'*

*and gather information on needs. There is no such mechanism in tourism. No tourism extension.'*

Related to that was a desire for more public outreach about the importance of tourism via radio and television through the Ministry of Tourism and Discover Dominica Authority (DDA). For example, *'But DDA's public awareness program, they are doing that. Having meetings and public awareness campaigns telling people on the radio and television the benefits of tourism and so on. The community groups could do more but because they are very young in the business, I guess with time that will come. But as of right now DDA is picking up the slack in regards to that and going to the communities and telling them about tourism and that.'* However, there seemed to be a breakdown between the aim of the Ministry of Tourism and DDA campaign for public understanding of tourism and its perceived local benefits. One respondent said, *'Even when the radio programs are on tourism, I listen to a lot, I don't know who else listens but they're not listener friendly in terms of usable information. If you're a gardener and you're listening to the radio programs on tourism you can't figure out is this for me.'* This response was indicative of the local opinion that the level of education about the tourism industry needed to fully comprehend the messages of the DDA radio and television broadcasts was above that of most local Dominicans.

### **Reactivity of community**

The second theme related to how quickly positive or negative information travelled through a community. This was a specific query designed to elucidate the strength of feedbacks among individuals and communities. Feedbacks, especially through social networks, are of vital importance as resilience is specifically predicated upon the ability to react and adapt to surprise and change in a system (Folke *et al.* 2005). One respondent said, *'We can have an overflow of the river, which can just happen sudden, ok. The community would be alert of that very quickly in that we have certain fishermen who anytime you see those kind of activities, the tradition is to blow the conch shell. So whenever you hear that sound you know something is imminent.'* There was 100% agreement among all respondents that information travels with great speed (by cell phone and word of mouth) and is always reacted to in a very timely manner. For example, *'We have a small population. We have cells [phones], even before cells we are walking and pass the news, now with cells you call and say 'did you see what happened.' In a flash, it goes around. Boom.'*

## **Social capacities**

The third theme was that of social capacities, which includes variables such as knowledge-sharing and learning. Within communities these types of actions are bridge-building mechanisms among individuals and groups that strengthen trust and norms of reciprocity. However interviewees suggested that when someone learned something of importance in Dominica, they often kept that information for themselves as an instrument of advantage over others. One respondent said, *'People are not generally generous with what they know. They don't want anybody to get ahead of them. They want whatever they do know, they want to hold it because it puts them up.'* Without trust, thought of as a community level component of social resilience, there is an erosion of feelings of cohesiveness within a community because of the loss of interpersonal relationships. Community tourism development in Dominica will rely upon community members assisting each other in learning about their tourism products and the benefits to be gained. The central government has adopted a "train the trainers" style of disseminating tourism related information and must include efforts to develop a culture of knowledge sharing. A response that supported this need was, *'Because persons don't go around and tell others and whatnot. Let's imagine that we were to have a training for them and tell them what the necessary requirements, what would enable them to have a better customer relationship and persons would keep it for themselves, you know, as a market strategy that only they should know and they don't go about telling others.'* Further, protocols and monitoring should be included to make sure that this information flow occurs and continues. This need is expressed in the following interviewee response, *'There's a lot of information available on tourism. There are books and reports that could fill this little building. But that's all they are, just books and reports. The dissemination of information is very informal and accidental.'*

## **Institutional design**

The fourth theme focused on governance at both the local and national level. Dominica has a highly centralized government that may make it difficult for the TDCs to make adjustments in the face of fluctuating tourism markets. When asked about the tourism decision-makers one respondent said, *'It's the politicians. It's the government more than the community. It's basically the government. They'll come up with the ideas and they'll come see us.'* Because of the top-down decision making process associated with the parliamentary government in Dominica, lines of communication are slow and reactivity is mired in red-tape. Contrary to the current Dominican political and institutional design respondents

suggested that more joint decision making between local and national entities, i.e. the public and private sectors or the Ministry of Tourism and the TDCs is needed. This type of governance structure allows for adaptation in the face of change and community capacity building because locals, who are closest to the resources, have power to respond quickly.

Related to that lack of local control and power sharing in decision making was a frustration among many members of the TDCs about the location of meetings to discuss tourism development. For example, *'Don't invite us [to Roseau], come here [villages] because of the nature of our work. We are farmers. Ok, you invite me to a meeting tomorrow. I say, ok, yes I come. But when I go home there is a message waiting for me saying 'I would like a wreath or two wreaths [of flowers]' or something. Am I going to leave my daily bread to go tomorrow to go to a meeting? So, that's our problem.'* Up to this point, meetings regarding community tourism development occurred in Roseau, the capitol of Dominica and the seat of the central government. The TDCs had strong dissatisfaction with having to travel for meetings, particularly because they were typically low-income wage earners and were participating in tourism development on a volunteer basis. One respondent said, *'They have all the meetings in Roseau. And you have somebody here who doesn't have the money but he will have to pay about 15 or 20 dollars to go to Roseau and back. Now, what's the point of going? I haven't got the money anyway.'* Locals believed that since government employees were earning a wage and that their jobs were specifically focused on Dominican tourism development that the government tourism officials should engage the communities locally at times convenient for TDC members. Another respondent said, *'I've tried to get some of the meetings decentralized. They say yes and then after one meeting they are back to square one.'*

### **Economic stability**

The fifth theme elucidated a widespread understanding of the importance of economic diversity. There was a strong sentiment to be cautious about tourism as a single economic resource because of the volatility of the tourism industry. For example, *'Fishing has been a major part of economic development for this community and I think some more investment should be done in the fishing industry.'* Indeed many of the interviewees made clear that their dependence upon tourism would be second to the more traditional agrarian lifestyles. One respondent said, *'I'm concerned about the problems we may have down the road if we diversify from agriculture into tourism. I firmly believe the two can work as partners together. There are so many little things, you can look around, that we have. You see, God gave Dominica everything that we need it's just a*

*matter of finding a means and ways to use it. It's a matter of developing what we have, our farms, a small spring around our homes to make it attractive. I have a strong concern about moving away from agriculture, which that is what's happening here, into tourism. It is only one line, one way and you are stuck.'* Both public and private sector key informants were well aware of the necessity of having a range of opportunities to access available revenue streams. They felt that with locally controlled development and with the assistance of the central government they would also be able to retain some of income from external operators such as the cruise ship industry. One respondent said, *'It's not just because this vendor is selling straw hats and she sells 10 straw hats and all the vendors hear that, they shouldn't go and buy straw hats. Because the clientele that came today came for straw hats. The next clientele you gonna get for the next month they may never get interested in straw hats.'*

### **Ecological security**

The last theme related directly to the maintenance of naturalness and the innate Dominican tendency towards the stewardship of their natural resources. One respondent said, *'We promote Dominica as the nature island so most of the communities understand that. The need to keep the environment clean they understand not to pollute and not to cut down the trees and so on. So most of our development is integral to that you see.'* Subsistence living for generations had engendered an abiding respect for the environment among most of the people on the island. For example, *'The key is working with the environment, that's one thing about us. Working with your environment, not destroying it, conserving it so it is sustainable you know, for the future and for who's coming after us.'* They understood deeply the need for controlled infrastructure development and limits to growth, which has great implications for tourism. For example, *'So, what we are trying to do is encourage locals to develop something at a standard, a guest house, a restaurant, the spas...let's do it but let's do it at a standard that can continue bring persons, maintain tourism, but keeping our natural resources.'* As well as the following response, *'Because of the type of tourism that we are trying to do. It is not something that we want to do like clear more land, put up more houses, it's what we have and what we have on a daily basis. No more big apartment building or big hotels, it's what we do every day we going to sell.'*

### **Discussion**

The themes resulting from the analyses of interviews with officials from public and private sector institutions identified development

mechanisms necessary to promote resilient and sustainable community tourism in Dominica. In order to have tourism development that ‘meets the needs of the present without compromising the ability of future generations to meet their own needs’ (WCED 1987) a number of variables must be considered. The data here have created baseline information across the studied communities in Dominica that provides guidance from both a collective and individual community standpoint in developing mechanisms to enhance both the tourism commodities and the resilience of these tourism dependent populations.

First, from a pure tourism standpoint there was a strong interest in financial and human capacity building mechanisms at the community level. Lack of start-up finances and human capital are recognized as barriers to successful community-based tourism initiatives (Moscardo & Murphy 2014; Tolkach & King 2015). Both the TDCs and the Ministry of Tourism recognized that some influx of money must be available, particularly in the beginning of the community projects, to help bolster the initiatives and promote local support. Positive economic growth through increased revenue streams and locally controlled development tend to increase resiliency (Bennett *et al.* 2009; Hassanali 2013; Tallis *et al.* 2008). The Ministry is reliant upon infrastructure development and some training of community members to help enliven the rural component of the TSDP at the local level. While some influx of finances may be beneficial it may also be that the reluctance or inability of the central government to pass on financial grants to the communities may force the communities to be self-reliant and bypass some of the pitfalls of grant dependency (Clark *et al.* 2007; Ryser & Halseth 2010). Other responses by interviewees related to tourism extension, awareness, and public outreach. There seemed to be a disconnect between the central government and the communities about the benefits of tourism and how the locals should engage with the tourism industry.

Second, the communities themselves should not only have the capacity to become part of the tourism economy in Dominica but should be able to absorb changes that are often seen within this highly volatile industry. This is a foundation for general resilience thinking (Walker & Salt 2006, 2012). General resilience relates to a general capacity of a system to adapt and recover after disturbance and is highly dependent on feedback mechanisms (Walker & Salt 2006, 2012). The results of this study yielded two different examples of feedbacks in Dominica, one positive and one negative. First, the speed at which information was communicated among individuals and groups in the communities was advantageous to resilience. The respondents indicated that both positive and negative information and responses to emergencies were engaged and moved upon quickly in Dominica. This is particularly important in

the face of natural disaster (Gunderson 2009; Twigg 2009). However, in the case of Dominica's highly centralized government (GCD 2010) the feedbacks become weak because of the length of time it takes for local information to reach national levels and vice versa (Walker & Salt 2006). This leads to vertical fragmentation, disjointed or disconnected communication across scales of leadership (Adger *et al.* 2005; Powell *et al.* 2009) which erodes resilience.

Other themes related to the loss of resilience at the community level related to social capacities and institutional design. The fact that there was a widespread cultural reluctance to share knowledge was indicative of weakened social resilience. Social resilience stems from trust (Adger 2003), learning (Olsson 2003), and equity (Marshall 2007) all of which are enhanced by the exchange of knowledge among members of a community. Much of the community tourism development in Dominica, because of the previously mentioned vertical fragmentation, is reliant upon community members assisting each other during the development and maintenance of their tourism products. But without intercommunity trust and information sharing, effective tourism development may not occur in the Dominican context. Reflecting back to the training that was offered to the members of the TDCs it is imperative that the leadership of the TDCs are mindful of the dissemination of all tourism and development information through their communities and networks of communities.

Yet, even if this strengthening of social resilience were to take place the communities still have may find it difficult to enhance local institutional resilience and decision making. The central government in Dominica employs top-down decision making tactics. To strengthen community resilience, however, locals need the ability to engage in self-organization strategies and collaborative learning (Carpenter *et al.* 2001). The long feedback loops between local and national decision makers strain community resilience in that the TDCs do not have any joint power with the national government or community control of local resources, both vital to enhancing resilience (Berkes 2009; Garrod 2003).

On the other hand, the perspectives of the interviewees to economic and ecological security suggested stronger resiliencies in these domains. There was widespread belief in the maintenance of economic diversity—a component of resilience (Adger 2000)—particularly with the continued use of natural resources for not only tourism but for traditional means of subsistence living and market commodity development both through agriculture and fishing. One of the keys to economic resilience (coupled with ecological concerns) is the maintenance of ecologically sustainable livelihoods that are non-consumptive (Stickland-Munro & Allison 2010; Plummer & Armitage 2007; Plummer & Fennell 2009).

There was also a 100% belief among all interviewees in the environmental stewardship of the land and water around them. They all felt that a diligent control over growth and human activities in general and directly attributable to tourism development was important. Controlled tourism infrastructure development (Boers & Cottrell 2007; Diugwu *et al.* 2015; Imikan & Ekpo 2012) will effectively contribute to ecological resilience. These hallmarks for ecological resilience promote awareness of non-destructive and minimal anthropogenic impacts on the landscape (Christensen *et al.* 1996; Folke 2006; Gunderson 2000).

In Dominica the community tourism development strategy is a young one. The perspectives captured in this research should help to shape how the industry moves forward. This baseline data has identified conditions and characteristics of the Dominican tourism system, which will affect sustainability.

## Conclusion

The findings from this study represent a step forward in the analyses of community tourism development via resilience theory. This study focused on the voices of Dominican tourism leaders. As the key informants and stakeholders their opinions hold strength in shaping the direction that community-based tourism is further developed on the island. The sustainability of Dominica's community tourism may be enhanced through bolstering several areas of resilience. First, locals participating in community-based tourism need to have the power to build on the initial investments that came from the TSDP. From a resilience perspective this means that locals need the power to be self-reliant and self-organized. This requires a shift in the current top-down governance that stems from the Dominican national government. Further, locals need additional training to improve their understanding of the tourism industry and improve human capital. One step further is also an educational endeavor to overcome a local cultural reluctance to participate in knowledge sharing and learning. Without these there may be some negative implications for the success for those Dominican rural residents that are part of the community-based tourism industry.

Positively, interviewees in this study did supply indicators of economic and ecological resilience. Both economic diversity and ecological stewardship were highlighted. Reflecting across all responses, data indicate for the sustainability and resiliency of Dominican community-based tourism there must be greater local control, more shared knowledge, multiple economic revenue streams and a continued adherence to the traditions of respect for natural resources.

However, the data are highly case specific to Dominica. The data

here were presented as a connection between resilience thinking and perceptions of public and private community tourism decision making stakeholders. Moving forward, research should continue to monitor and evaluate not only the financial and human dimensions of community tourism in Dominica but also the ecological ones. The four domains of resilience, social, institutional, economic, and ecological should be scrutinized to better understand how the intersection of resilience thinking enhances the sustainability of community tourism in this island nation.

### References

- Adger, W.N. 2003. "Social Capital, Collective Action, and Adaptation to Climate Change." *Economic Geography* 79(4):387-404.
- , T.P. Hughes, C. Folke, S.P. Carpenter, and J. Rockstrom. 2005. "Social-Ecological Resilience to Coastal Disasters." *Science* 309:1036-1039.
- Atkisson, A. 2011. *The Sustainability Transformation: How to Accelerate Positive Change in Challenging Times*. Washington, DC: Earthscan.
- Babbie, E.A. 2008. *The Basics of Social Research*. Thomson Learning, Inc. USA.
- Baggio, R. 2008. "Symptoms of Complexity in a Tourism System." *Tourism Analysis* 13:1-20.
- Bennett, E.M., G.D. Peterson, and L.J. Gordon. 2009. "Understanding Relationships among Multiple Ecosystem Services." *Ecology Letters* 12(12):1394-1404.
- Beeton, S. 2006. *Community Development through Tourism*. Collingwood: Landlinks Press.
- Biggs, D. 2011. "Understanding Resilience in a Vulnerable Industry: The Case of Reef Tourism in Australia." *Ecology and Society* 16(1):30. [online] <<http://www.ecologyandsociety.org/vol16/iss1/art30/>>.
- Biggs, D., C.M. Hall, and N. Stoeckl. 2012. "The Resilience of Formal and Informal Tourism Enterprises to Disasters: Reef Tourism in Phuket, Thailand." *Journal of Sustainable Tourism* 20(5):645-665.
- Berkes, F. 2009. "Revising the Commons Paradigm." *Journal of Natural Resources Policy Research* 1(3):261-264.
- Braun, V., and V. Clarke. 2006. "Using Thematic Analysis in Psychology." *Qualitative Research in Psychology* 3(2):77-101.
- Buikstra, E., H. Ross, C.A. King, P.G. Baker, D. Hegney, K. McLachlan *et al.* 2010. "The Components of Resilience: Perceptions of an Australian Rural Community." *Journal of Community Psychology* 38(8):975-991.
- Butler, R. 2009. "Tourism in the Future: Cycles, Waves or Wheels?" *Futures* 41(6):346-352.
- Carpenter, S., B. Walker, J.M. Anderies, and N. Abel. 2001. "From Metaphor to Measurement: Resilience of What to What?" *Ecosystems* 4:765-781.

- Christensen, N.L., A. M. Bartuska, J.H. Brown, S. Carpenter, C. D'Antonio, R. Francis *et al.* 1996. "The Report of the Ecological Society of America Committee on the Scientific Basis for Ecosystem Management." *Ecological Applications* 6(2):665-691.
- Christian, C.S. 1996. "Outdoor Recreation and Nature Tourism Related Environmental Impacts in a Tropical Island Setting: Commonwealth of Dominica." Ph.D. dissertation, Parks, Recreation & Tourism Management, Clemson University.
- Clark, D., R. Southern, and J. Beer. 2007. "Rural Governance, Community Empowerment and the New Institutionalism: A Case Study of the Isle of Wight." *Journal of Rural Studies* 23(2):254-266.
- Cochrane, J. 2010. "The Sphere of Tourism Resilience." *Tourism Recreation Research* 35(2):173-86.
- de Sausmarez, N. 2005. "The Indian Ocean Tsunami." *Tourism and Hospitality Planning & Development* 2(1):55-59.
- Diugwu, I.A., M. Mohammed, and D.L. Baba. 2015. "Towards Effective Infrastructure Development in Nigeria: Theoretical Considerations from a Project Management Perspective." *American Journal of Industrial and Business Management* 5(4):172-180.
- Europa. 2010. "Assistance for Traditional ACP Suppliers of Bananas." Retrieved February 1, 2015 <[http://europa.eu/legislation\\_summaries/development/african\\_caribbean\\_pacific\\_states/r12105\\_en.htm](http://europa.eu/legislation_summaries/development/african_caribbean_pacific_states/r12105_en.htm)>.
- Farrell, B., and L. Twining-Ward. 2005. "Seven Steps towards Sustainability: Tourism in the Context of New Knowledge." *Journal of Sustainable Tourism* 13:109-122.
- Faulkner, W. 2001. "Towards a Framework for Tourism Disaster Management." *Tourism Management* 22:135-147.
- , and R. Russell. 1997. "Chaos and Complexity in Tourism: In Search of a New Perspective." *Pacific Tourism Review* 1:93-102.
- Folke, C. 2006. "Resilience: The Emergence of a Perspective for Social-Ecological Analyses." *Global Environmental Change* 16:253-267.
- , T. Hahn, P. Olsson, and J. Norberg. 2005. "Adaptive Governance of Social-Ecological Systems." *Annual Review of Environmental Resources* 30:441-473.
- Gallopín, G.C. 2006. "Linkages between Vulnerability, Resilience, and Adaptive Capacity." *Global Environmental Change* 16:293-303.
- Garrod, B. 2003. "Local Participation in the Planning and Management of Ecotourism: A Revised Model Approach." *Journal of Ecotourism* 2(1):33-53.
- Golafshani, N. 2003. "Understanding Reliability and Validity in Qualitative Research." *The Qualitative Report* 8(4):597-606.
- Government of the Commonwealth of Dominica. 2006. *Tourism Master Plan 2005 – 2015*. Retrieved February 1, 2015 <[www.caribbeanelections.com/2FeDocs/2Fstrategy/2Fdm\\_strategy/2Fdm\\_tourism\\_master\\_](http://www.caribbeanelections.com/2FeDocs/2Fstrategy/2Fdm_strategy/2Fdm_tourism_master_)

- plan.pdf>.
- . 2010. *Dominica's Local Government System: Empowering People of Local Development Management*. Retrieved February 1, 2015 <<http://socialservices.gov.dm/index.php/publications/13-publications/31-dominica-s-local-government-system>>.
- . 2011. *Community Tourism Project: Introduction, Background and Rational*. Retrieved February 1, 2015 <<http://tourism.gov.dm/projects/community-tourism-project>>.
- Gunderson, L. 2000. "Ecological Resilience - In Theory and Application." *Annu. Rev. Ecol. Evol. Syst* 31:425-439.
- . 2009. *Comparing Ecological and Human Community Resilience: CARRI Research Report 5*. Oak Ridge: CARRI.
- Harris, C., W. McLaughlin, G. Brown, and D.R. Becker. 2000. *Rural Communities in the Inland Northwest: An Assessment of Small Rural Communities in the Interior and Upper Columbia River Basins*. Portland: USDA Forest Service, Pacific Northwest Research Station, and USDI Bureau of Land Management.
- Hassanali, K. 2013. "Towards Sustainable Tourism: The Need to Integrate Conservation and Development Using the Buccoo Reef Marine Park, Tobago, West Indies." *Natural Resources Forum* 37(2):90-102.
- Hein, S. G. 2013. "Localized Revenue Implications of Severe Tornado Outbreaks on the Lodging Industry." *The Journal of Hospitality Financial Management* 21(1):4-16.
- Holladay, P.J., and R.B. Powell. 2013. "Resident Perceptions of Social-Ecological Resilience and the Sustainability of Community-Based Tourism Development in the Commonwealth of Dominica." *Journal of Sustainable Tourism* 21(8):1188-1211.
- Holling, C.S. 1973. "Resilience and Stability of Ecological Systems." *Annual Review of Ecology and Systematics* 4:1-23.
- . 1996. *Engineering resilience versus ecological resilience*. Pp 31-43 in *Engineering within ecological constraints*. Washington, DC: National Academy Press.
- , S.R. Carpenter, W.A. Brock, and L.A. Gunderson. 2002. "Discoveries for Sustainable Futures." Pp. 395-418 in *Panarchy: Understanding Transformations in Human and Natural Systems*. Washington, DC: Island Press.
- Holstein, J.A., and J.F. Gubrium. 2005. "Interpretive Practice and Social Action." Pp. 173-202 in *The Sage Handbook of Qualitative Research*, 3rd ed. Thousand Oaks: Sage.
- Imikan, A.M., and K.J. Ekpo. 2012. "Infrastructure and Tourism Development in Nigeria: A Case Study of Rivers State." *International Journal of Economic Development Research and Investment* 3(2):53-60.
- International Monetary Fund. 2008. February 5. "IMF Executive Board Approves US\$3.3. Million in Emergency Assistance for Dominica." [Press

- release]. Retrieved February 1, 2015 <<http://www.imf.org/external/np/sec/pr/2008/pr0819.htm>>.
- Lew, A.A., P.T. Ng, C.C. Ni, and T.C. Wu. 2016. "Community Sustainability and Resilience: Similarities, Differences and Indicators." *Tourism Geographies* 18(1):18-27.
- Magis, K. 2010. "Community Resilience: An Indicator of Social Sustainability." *Society & Natural Resources* 23(5):401-416.
- Marshall, N.A. 2007. "Can Policy Perception Influence Social Resilience to Policy Change?" *Fisheries Research* 86:216-227.
- Maxwell, J.A. 2005. *Qualitative Research Design: An Expanded Sourcebook*, 2nd edition. Thousand Oaks: Sage.
- Moscardo, G., and L. Murphy. 2014. "There is No Such Thing as Sustainable Tourism: Re-conceptualizing Tourism as a Tool for Sustainability." *Sustainability* 6(5):538-2561.
- Olsson, P. 2003. "Building Capacity for Resilience in Social-Ecological Systems." Ph.D. dissertation, Department of Systems Ecology, Stockholm University.
- Payne, A. 2006. "The End of Green Gold? Comparative Development Options and Strategies in the Eastern Caribbean Banana Producing Islands." *Studies in Comparative International Development* 41(3):25-46.
- Plummer, R., and D. Armitage. 2007. "A Resilience-Based Framework for Evaluating Adaptive Co-Management: Linking Ecology, Economics and Society in a Complex World." *Ecological Economics* 61(1):62-74.
- Plummer, R., and D.A. Fennell. 2009. "Managing Protected Areas for Sustainable Tourism: Prospects for Adaptive Co-Management." *Journal of Sustainable Tourism* 17(2):149-168.
- Powell, R.B., A. Cuschni, and P. Peiris. 2009. "Overcoming Governance and Institutional Barriers to Integrated Coastal Zone, Marine Protected Area, and Tourism Management in Sri Lanka." *Coastal Management* 37(6):633-655.
- Price-Howard, K., and P.J. Holladay. 2014. "Resorts, Resilience and Retention after the BP Oil Spill Disaster of 2010." *Journal of Tourism Insights* 5(1):Article 2.
- Prideaux, B., E. Laws, and W. Faulkner. 2003. "Events in Indonesia: Exploring the Limits to Formal Tourism Trends Forecasting Methods in Complex Crisis Situations." *Tourism Management* 24:475-487.
- Quinlan, A.E., M. Berbés-Blázquez, L.J. Haider, and G.D. Peterson. 2015. "Measuring and Assessing Resilience: Broadening Understanding through Multiple Disciplinary Perspectives." *Journal of Applied Ecology*. doi: 10.1111/1365-2664.12550.
- Redman, C.L. 2011. "Urban Sustainability and Resilience. Resilience, Innovation, and Sustainability: Navigating the Complexities of Global Change." Paper presented at the Second International Science and Policy Conference. Tempe, AZ.
- Richards, L., and J.M. Morse. 2007. "User's Guide to Qualitative Methods." 2nd

- edition. Thousand Oaks: Sage.
- Ritchie, B.W. 2004. "Chaos, Crises and Disasters: A Strategic Approach to Crisis Management in the Tourism Industry." *Tourism Management* 25:669-683.
- , J.C. Crofts, and A. Zehrer. 2014. "Understanding the Effects of a Tourism Crisis: The Impact of the BP Oil Spill on Regional Lodging Demand." *Journal of Travel Research* 53(1):12-25.
- Rittichainuwat, B. N. 2006. "Tsunami Recovery: A Case Study of Thailand's Tourism." *Cornell Hotel and Restaurant Administration Quarterly* 47(4):390-404.
- Ruiz-Ballesteros, E. 2011. "Social-Ecological Resilience and Community Based Tourism: An Approach from Agua Blanca, Ecuador." *Tourism Management* 32:655-666.
- Ryser, L., and G. Halseth. 2010. "Rural Economic Development: A Review of the Literature from Industrialized Economies." *Geography Compass* 4(6):510-531.
- Slight, P., M. Adams, and K. Sherren. 2015. "Policy Support for Rural Economic Development based on Holling's Ecological Concept of Panarchy." *International Journal of Sustainable Development and World Ecology* 23(1):1-14.
- Slinger, V. 2002. "Ecotourism in a Small Caribbean Island: Lessons Learned for Economic Development and Nature Preservation." Ph.D. dissertation, Geography, University of Florida.
- Stake, R.E. 2005. "Qualitative Case Studies." Pp. 443-465 in *The Sage Handbook of Qualitative Research*. 3rd ed. Thousand Oaks: Sage.
- Strickland-Munro, J.K., H.E. Allison, and S.A. Moore. 2010. "Using Resilience Concepts to Investigate the Impacts of Protected Area Tourism on Communities." *Annals of Tourism Research* 37(2):499-519.
- Tallis, H., P. Kareiva, M. Marvier, and A. Chang. 2008. "An Ecosystem Services Framework to Support both Practical Conservation and Economic Development." *Proceedings of the National Academy of Sciences* 105(28): 9457-9464.
- Tolkach, D., and B. King. 2015. "Strengthening Community-Based Tourism in a New Resource-Based Island Nation: Why and How?" *Tourism Management* 48:386-398.
- Tourism Intelligence International. 2008. "Recent project: ecotourism in Dominica." Retrieved 1 February 2015. <<http://www.tourism-intelligence.com/article.php?id=53>>.
- Twigg, J. 2009. "Characteristics of a Disaster-Resilient Community: A Guidance Note Version 2." Retrieved February 1, 2015 <<http://community.eldis.org/.59e907ee/Characteristics2EDITION.pdf>>.
- United States Department of State. 2010. *Background Note: Dominica*. <<http://www.state.gov/r/pa/ei/bgn/2295.htm>>.
- Walker, B., and D. Salt .2006. *Resilience Thinking: Sustaining Ecosystems and People in a Changing World*. Washington, DC: Island Press.
- . 2012. *Resilience Practice: Building Capacity to Absorb Disturbance and*

*Maintain Function*. Washington, DC: Island Press.

Weaver, D.B. 1993. "Ecotourism in the Small Island Caribbean." *GeoJournal* 31:457-465.

———. 2003. "Managing Ecotourism in the Island Microstate: The Case of Dominica." Pp. 151-163 in *Ecotourism: Management and Assessment*. London: Thomson.

World Commission on Environment and Development. 1987. *Our Common Future*. New York: Oxford University Press.