

## Exploring Residents' Roles as Risk Insiders in Tourism Crisis Management

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## Exploring Residents' Roles as Risk Insiders in Tourism Crisis Management

### Introduction

Crisis management plays a critical role for destinations, as unexpected, adverse events can generate devastating effects on areas heavily reliant on tourism (Ritchie, 2004). Effective crisis management measures not only can reduce the negative impacts associated with crises, but also can accelerate the recovery process, and ultimately, contribute to building resilient destinations (Ritchie, 2008; Pennington-Gray, 2018). Managing tourism crises requires a series of integrated activities, including risk reduction, crisis response, and recovery, as well as collaboration among multiple stakeholders such as DMOs and local governments (Carlson & Liburd, 2008; Jiang & Ritchie 2017). Within tourism crisis management research, most studies have focused on visitors and DMOs. As visitors are consistently considered an at-risk population, numerous studies have examined visitors' reactions and self-protective behaviors during crises (Hajibaba, Boztuğ, & Dolnicar, 2016; Cahyanto et al., 2016). Destination Management Organizations (DMO) are another focus of this research stream wherein studies have repeatedly stressed the importance of understanding the role and function of DMOs in tourism crisis management (Carlson & Liburd 2008; Pennington-Gray & Schroeder, 2018). A growing number of studies have also examined the role of travel intermediaries, mainly through topics related to tourism risk and crisis communication as well as visitors' information searching behaviors (e.g., Liu & Pennington-Gray, 2015, 2016; Cahyanto et al., 2016).

Residents have always been an integral part of tourism planning and are critical to a destination's success (Bornhorst, Ritchie, & Sheehan, 2010; Sautter & Leisen, 1999). Recently, there have been academic discussions regarding engaging residents in tourism crisis management (Islam, Ruhanen, & Ritchie, 2018), particularly in the emergency response and destination recovery process (Hajibaba, Karlsson, & Dolnicar, 2017). In the same vein, some destinations have already utilized residents as a valuable resource to help manage tourism crises. For example, in response to the oil spill incident in 2010, Visit Florida, the state tourism marketing agency, established the destination recovery campaign entitled "share a little sunshine," in which Floridians were encouraged to post date-stamped images of beaches and to help end oil spill misperceptions. This strategy has been proven successful as the photos, and residents' insights have been perceived to be truthful, authentic, and compelling (Visit Florida, 2010). Similarly, through peer-to-peer networks, Paris residents hosted and assisted nearly five thousand visitors following a terrorist attack in 2015 (Conde Nest Traveller, 2015). Despite these successful examples, the involvement of residents continues to be a rarity in tourism crisis management studies (Hajibaba et al., 2017).

One major environmental crisis that impacted Florida in 2018 was related to the Red Tide in the Gulf of Mexico coastal areas. The Gulf has annual blooms of the toxin-producing algae, *Karenia brevis*, also known as a Red Tide, named for the muddy red or brown hue in the water that results from *Karenia brevis*. The blooms are harmful to the environment and release toxins that threaten human health. Blooms during the last decade have amplified in frequency and intensity (Gilbert et al., 2005). While the blooms are considered a seasonal occurrence, the 2018 Red Tide has persisted since November 2017, making it the worst Red Tide since 2006. As a result, by October 2018, hundreds of manatees, dozens of dolphins, thousands of fish, and over 300 sea turtles have died or washed along shores in putrid-smelling masses (Resnick, 2018). The worsening impact forced closures to several popular beach destinations in Southwest Florida during high tourism seasons. According to the 2018 Red Tide business damage assessment report, 94 percent of

businesses in Southwest Florida lost business due to Red Tide with 82 percent of them reporting that their estimated business losses exceeded \$500,000 (Florida Division of Emergency Management, 2018). Subsequently, Florida's Governor declared a state of emergency in August 2018 because the state's tourism industry suffered economic losses from the blooms and allocated millions of dollars for cleanup and response (Sims, 2018). By January 2019, while the blooms have subdued, cleanup activities are continuing in several areas.

Allaying potential visitors' concerns over Red Tides requires effective risk and crisis communication strategies, which largely rely on information (Carlsen & Liburd, 2008). The most needed and appropriate information not only can assure visitors, but also can encourage them to visit even during times of crisis (Liu-Lastres, Schroeder, & Pennington-Gray, 2018). Thus, with the Red Tide event in Florida as the context, this study focused on the information exchange between visitors and residents. Specifically, this study tried to answer the following three interrelated research questions:

- Do potential visitors rely on residents for Red Tide information?
- How willing are Florida residents to share Red Tide information with visitors?
- What factors affect residents' willingness to share Red Tide information and their information-sharing behavior?

The findings of this study can provide insights into a new research direction, which focuses on the involvement of residents in tourism crisis management. In addition to the theoretical contribution, this study has implications for a destination's involvement with residents during the risk and crisis communication process. This focus can yield an essential contribution to destination recovery and destination resilience.

## **Literature Review**

### ***Information Search during Crisis***

Vescusi (1995) contended that individuals make choices under the uncertainty of the threat by maximizing the expected utilities of the available options, which is known as utility maximization under threats theory. Under this theory, information search is one strategy that individuals employ to assess the threat and select the best possible option (e.g., evacuate or not). Past studies identified four major elements which affect individual information management during a crisis: 1) prior experience with the threat (e.g., Gladwin & Peacock, 1997; Cahyanto & Pennington-Gray, 2015); 2) individual wealth (e.g., Vescusi, 1995; Burton, 1993); 3) their intrinsic characteristics (e.g., Cahyanto & Pennington-Gray, 2015); and 4) their interaction with society (Dash & Gladwin, 2007). In the event of crises, warnings and alerts come from a variety of sources, such as media outlets, government officials, and friends or relatives. Friends and family are often considered trustworthy, while government agencies and media outlets have been deemed as less credible in the past few years by the public as compared to in the past (West & Orr, 2007). Social interaction assists individuals to better digest the presented information. In the context of visitors, Prideaux, Coghlan, and Falco-Mammone (2007) in their study on Cyclone Larry found that domestic visitors have a higher perception of the credibility of television than international visitors. Recently, Cahyanto and Pennington-Gray (2015) found that even though visitors searched hurricane risk information using sources that have historically been considered credible (e.g., television or the Weather Channel), these sources did not significantly affect the likelihood to evacuate. Instead, evacuation decisions were more likely to be influenced by information received from local tourism offices,

local authorities, hotel staff, and residents, which highlights the critical role of locals as an information source in the event of a crisis.

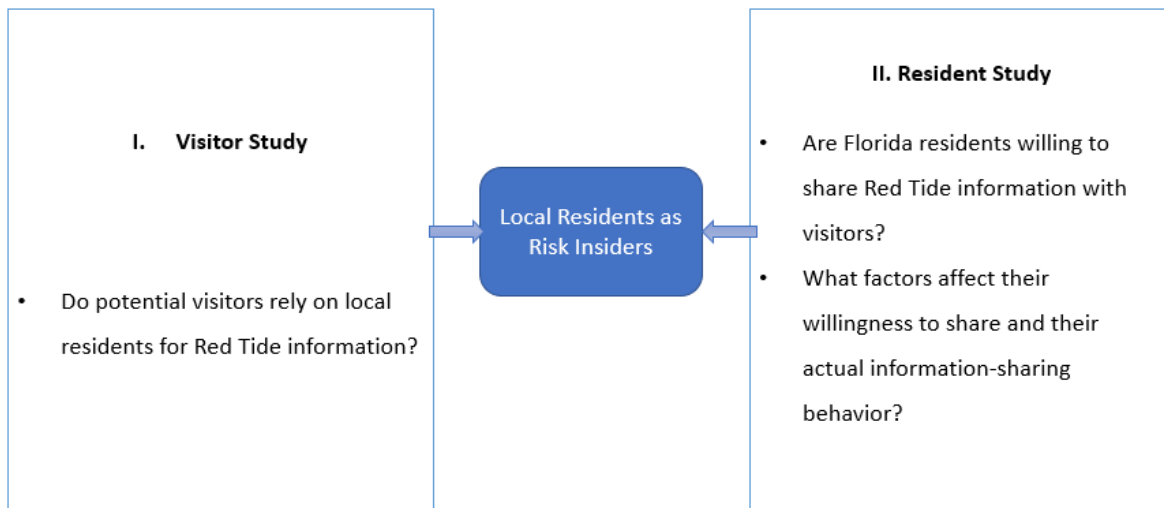
### ***Understanding Local Residents' Prosocial Behavior from A Social Identity Perspective***

Stets and Biga (2003) defined identity as “a set of meanings attached to the self that serves as a standard or reference that guides behavior in situations (p. 401)”. By categorizing oneself into social groups, individuals foster a sense of belonging, generate emotional attachment and practice positive activities representing the group (Dholakia, Bagozzi, & Pearo, 2004). Social identity theories have been used in tourism studies to examine residents' support for tourism development (Nunkoo & Gursoy, 2012) and advocacy for increased tourism (Palmer, Koeing-Lewis, & Jones, 2013). The findings demonstrated the applicability of social identity theory in explaining how individuals embedded in different social settings make decisions and behave (Stets & Biga, 2003). Additionally, studies also showed that residents with a stronger sense of social identity have a higher propensity to share their knowledge with non-locals (e.g., visitors) (Palmer et al., 2013). This study, therefore, chose social identity theory as the guiding theoretical framework to explore residents' risk information-sharing behavior and their willingness to share risk information with visitors. .

### **Methodology**

To achieve the research questions, two surveys were conducted. One examined potential visitors' utilization of residents as information resources, and the other examined residents' willingness to share risk/crisis information and identified the primary drivers of their information-sharing behavior (See Figure 1).

**Figure 1. Research Design**



The visitor sample was collected in late 2018, during the outbreak of the Red Tide event in Florida. An online panel was used to obtain the data. A total of 969 non-Florida residents participated in the survey, all of which were at least 18 years old and planned to visit Florida in the next six months. Participants were asked to identify significant information sources during the Red Tide

outbreak that they would use. They were also asked to indicate their agreement with a series of items related to utilizing residents for risk/crisis information (e.g., If a Red Tide outbreak occurs during my trip, I can count on the residents for information necessary to stay safe) on a scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. Information related to demographic information and travel characteristics (e.g., past travel experience) was also collected.

The resident study sample was recruited in the same period through an online panel. All participants were Florida residents. To measure the social identity construct, six items adapted from Ellemers, Kortekaas, and Ouwerkerk (1999) were used. The scale was reliable (Cronbach  $\alpha$  = .991). Additionally, the participants were also asked to (1) indicate their willingness to share information regarding Red Tides with visitors and (2) whether or not they had shared Red Tide information with others. Lastly, individual information such as demographics and length of residency was also collected to provide a context of the participants.

## Results

As shown in Table 1, the visitor sample comprises 969 responses. Half of the participants (49.5%) were around 25-34 years old. Approximately half of the participants were male (53.5%) and had a bachelor's degree (48.6%). Most of them are married (57.9%) and have children (50.7%). Only a few participants (8.7%) have never been to Florida.

Additionally, the resident sample comprises 461 responses. More than one-third (37.5%) of the respondents were 25-34 years old. Half of them (53.9%) were female and around one-third (33.8%) have a bachelor's degree. Some of them (40.8%) are married, and the majority (60.7%) have no children. Most of the participants (74.2%) have lived in Florida for more than ten years.

**Table 1. Sample Profile**

Variable	Visitor Study N= 969		Resident Study N=461	
	Frequency	Valid %	Frequency	Valid %
<b>Age</b>				
18-24	64	6.6	54	11.8
25-34	480	49.5	171	37.5
35-49	304	31.4	127	27.9
50-64	100	10.3	84	18.4
65 or older	21	2.2	20	4.4
<b>Gender</b>				
Male	518	53.5	210	46.1
Female	451	46.5	246	53.9
<b>Education</b>				
Less than high school degree	1	.1	1	.2
High school graduate	67	6.9	40	8.8
Some college but no degree	148	15.3	120	26.3

Associate degree	94	9.7	76	16.7
Bachelor's degree	471	48.6	154	33.8
Master's degree	146	15.1	51	11.2
Doctoral degree	15	1.5	3	.7
Professional degree	27	2.8	11	2.4
<b>Marital Status</b>				
Married	561	57.9	186	40.8
Widowed	10	1.0	8	1.8
Divorced	51	5.3	52	11.4
Separated	20	2.1	10	2.2
Never Married	327	33.7	200	43.9
<b>Number of Children</b>				
0	478	49.3	277	60.7
1	198	20.4	83	18.2
2	193	19.9	60	13.2
3 or more	100	10.3	36	7.8
<b>Have heard of the Red Tide event in Florida</b>				
Yes	511	52.7	412	90.4
No	458	47.3	44	9.6

The first research question investigated potential visitors' preferences concerning using residents as risk information sources. The participants in the visitor sample were first asked to select their preferred channels to search information if Red Tides occur during their visit to Florida. The most popular choices include the Internet (80.1%), TV/Radio (37.8%), locals (34.3%), friends/family (33.4%), and health agencies (30.9%). Interestingly, only around one-fifth of the respondents (22.5%) chose local tourism offices, which is far below the option of locals. Furthermore, when it comes to accountability, most of the respondents (66.5%) tend to agree or strongly agree with the statement "I can count on the residents for information necessary to stay safe during a Red Tide outbreak ( $M= 3.77$ ,  $SD = .979$ )." Lastly, slightly more than half (52.7%) of the visitor sample had heard of the Red Tide event in Florida.

Due to the importance of residents as information sources, the second research question examined the willingness of residents to share their insights. Most of the participants in the resident sample were willing to share information ( $M= 3.77$ ,  $SD = 1.11$ ). A closer examination reveals that more than half (56.2%) of the resident sample have already done so, whereby four out of ten (43.2) had shared information about Red Tides in Florida to their friends/family members who expressed an interest in visiting Florida. Most residents in the sample (90.4%) have some knowledge about the Red Tide event in Florida.

Given visitors' reliance on residents for Red Tide information, the third research question intends to identify factors that affect residents' willingness to share and their actual information-sharing behavior. Residents' willingness to share information and their actual information-sharing behavior (1=*yes*, 2=*no*) were used as the dependent variables, respectively. The independent variables include (1) demographic information (e.g., age, gender, length of residency, number of children), (2) subjective knowledge, and (3) social identity.

The results of the regression analyses showed that the first model was statistically significant ( $F(12,460) = 14.11$ ,  $p < .01$ ;  $R^2=.28$ ) and was able to explain 28% of the variance in their willingness to share information. Respondents who have more subjective knowledge ( $\beta = .47$ ,  $p$

< .01) and a stronger sense of social identity ( $\beta = .16, p < .01$ ) expressed stronger intentions to share information with visitors.

The results of the logistic regression analyses showed that the second model was statistically significant ( $\chi^2(df = 11, N = 460) = 167.64, p < .01$ ) and was able to explain between 31% (Cox & Snell  $R^2 = .31$ ) to 41% (Nagelkerke  $R^2 = .41$ ) of the variance in the information-sharing behavior. Interestingly, the same constructs such as subjective knowledge ( $B=.40, p < .01$ ) and social identity ( $B=.26, p = .04$ ) were significant predictors of the dependent variable.

**Table 2. Regression Analyses Results**

Variable	Model 1. DV: Willingness to share risk information			Model 2. DV: The probability of information-sharing		
	B	$\beta$	Sig	B	Wald	Sig
<b>AGE</b>					7.98	.09
18-24	.08	.02	.75	-.99	2.16	.15
25-34	.37	.16	.11	-1.00	2.68	.10
35-49	.05	.02	.85	-1.51	5.77	<b>.02*</b>
50-64	.18	.06	.46	-.81	1.60	.21
65 and above						
<b>GENDER</b>						
Male	-.12	-.06	.17	-.33	.232	.16
Female						
<b>LENGTH OF RESIDENCY</b>					1.39	.50
Up to 3 years	.08	.02	.61	.46	1.12	.29
4-10 years	.10	.03	.43	.21	.47	.49
More than 10 years						
<b>NUMBER OF CHILDREN</b>					.05	.98
No children						
1 child	-.06	-.02	.61	-.03	.31	.92
2 or more children	-.28	-.10	<b>.02*</b>	-.08	.05	.93
<b>SUBJECTIVE KNOWLEDGE</b>						
Have heard of Red tide in FL	.13	.04	.42	-2.63	15.04	<b>&lt;.01**</b>
Confidence in in explaining	.18	.47	<b>&lt;.01**</b>	.40	70.64	<b>&lt;.01**</b>
<b>SOCIAL IDENTITY</b>						
Social identity as a FL resident	.19	.16	<b>&lt;.01**</b>	.26	4.21	<b>.04*</b>
Model Statistics	F(12,460) = 14.11, $p < .01$ ; $R^2 = .28$			$\chi^2(12.460) = 167.64, p < .01$ , Cox & Snell $R^2 = .31$ , Nagelkerke $R^2 = .41$ .		

Note: \* $p < .05$ . \*\* $p < .01$

## **Discussion and Conclusion**

Using the Red Tide event as the context, this study explored the role of residents as risk insiders in tourism crisis management. The primary findings of this study confirm that residents could satisfy visitors' information needs regarding emerging or occurring crisis events. This provides support to the new research direction, which involves residents in tourism crisis management studies. Additionally, the findings of this study show that both social identity and subjective knowledge could affect residents' willingness to share information and their actual information-sharing behavior. It is noteworthy that subjective knowledge, which is reflected through respondents' confidence in explaining Red Tides, possessed the strongest predictive power for the two outcome variables. This construct has not been discussed extensively in the past, but complements well with an emerging trend, which stresses the importance of creating a knowledge-based framework in tourism crisis management (Racherla & Hu, 2009).

The findings of this study also provide several practical implications. Firstly, instead of simply relying on DMOs, destinations should take full advantage of residents and involve them in crisis response and destination recovery campaigns. As shown from the findings, visitors tend to rely on residents for information. Thus, residents' insights can modify potential misperceptions and increase visitors' confidence in the destination. Secondly, to increase residents' motivation to share risk information with visitors and to enhance the efficiency of communication, residents need to be properly educated about the issue. As important as it is to establish new destination marketing strategies, efforts should also be devoted to educating residents. Lastly, to encourage residents to share the information and actively advocate for the destination, destinations can enhance residents' sense of identity. In the current context, for example, being a proud Floridian appears to be a strong reason why people would share the information with visitors voluntarily. Thus, linking the information-sharing behavior with the sense of being a proud resident could be a good strategy to involve residents in the information-exchange process.

## **Future Research Directions**

Extending this line of research, future studies can take on multiple aspects. Firstly, the role of residents in tourism crisis management can be explored through different perspectives, ranging from pre-crisis, during the crisis, to post-crisis. Secondly, by focusing on the influence of residents, future studies can examine some other particular markets for destination recovery, such as the VFR market (See Backer & Ritchie, 2017). Lastly, future studies can investigate how technology, such as the smart tourism system and peer-to-peer networks, bridge the gap between residents and visitor. The connection between guests and hosts can enhance the interaction between them and maximize the influences of residents.

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