

Resource mobilization and power redistribution: The role of local governments in shaping residents' pro-environmental behavior in rural tourism destinations

Abstract

This research investigates residents' pro-environmental behavior from the unique perspective of government-resident interactions. Guided by social movement theory, how local governments regulate residents' waste-sorting behavior in Chinese rural tourism destinations is assessed. This longitudinal study (lasting from 2016-2022) uses participant observation, in-depth interviews (n = 25), and secondary data as the key research techniques. The dual roles of local governments (i.e., resource mobilization and power redistribution) jointly shape residents' pro-environmental behavior in the waste-sorting campaign. Resource mobilization enhances knowledge of waste-sorting and raises individuals' environmental consciousness. Power redistribution within groups activates social networks in rural communities and changes groups' social capital to influence residents' collective behavior. Results are discussed in relation to how the organizational-level resource mobilization and power redistribution influence the individual-level environmental psychological and sociological factors in shaping residents' waste-sorting behavior. Practical recommendations are also offered for sustainable tourism management from a social interaction perspective.

Keywords

Residents' pro-environmental behavior, local governments, rural tourism destinations, social movement theory, resource mobilization, power redistribution.

Introduction

Environmental sustainability in destinations depends heavily on stakeholders' behavioral patterns (Confente & Scarpi, 2021; Wu et al., 2022b). The (intentional or unintentional) environmentally irresponsible activities of some stakeholders can harm the natural environment of destinations, thus requiring urgent behavioral changes (MacInnes et al., 2022). Pro-environmental behavior (PEB), which refers to activities that aim to minimize the negative impacts on the environment, is crucial to environmental sustainability (Ramkissoon et al., 2013). The importance of PEB has been acknowledged in sustainable tourism research, with the majority of PEB research focusing on the behavior of tourists (Loureiro et al., 2021; Qiu et al., 2022). However, residents who live within destinations exert a profound and lasting influence on the environment (Safshekan et al., 2020). In addition to their direct influences on the environment, residents' visible PEB can significantly improve destination image (Bilynets et al., 2023), shape visitors' on-site green behavior (Wang et al., 2018), and increase visitors' green consumption (Hu et al., 2021). Thus, it is critical for research to examine how to foster residents' PEB.

Literature on residents' specific PEBs (e.g., waste sorting) is limited for tourism settings (Filimonau & Delysia, 2019; Wu et al., 2021). Although residents' waste-sorting behavior has attracted significant academic interest in environmental studies (e.g., Wang et al., 2020; Xia et al., 2021), relatively little attention has been paid to it in tourism destinations (Hu et al., 2018; Qian & Schneider, 2016; Radwan et al., 2012). Yet, waste management can be even more complicated, considering the intensive interaction among different stakeholders in tourism destinations (Agyeiwaah, 2020; Tsai et al., 2021). Particularly, the role of governments and

destination management organizations (DMOs) has been frequently highlighted when offering practical implications for sustainable destination management (e.g., Han et al., 2018; Li & Wu, 2019). This raises the question of how local governments are involved in shaping residents' PEB in tourism destinations.

Previous literature on PEB, rooted in environmental psychology, has investigated how cognitive, emotional, and normative variables affect people's PEB, predominately measured through self-reported surveys (Kormos & Gifford, 2014; Steg & Vlek, 2009). These studies are important in focusing on individual attitudes in shaping PEB. Some other insightful studies highlighted the role of social interactions in shaping residents' and tourists' PEB (Li & Wu, 2019; Liu et al., 2014). The limited studies in this research stream have examined how host-guest interactions and interactions among residents influence the green activities of local people (Liu et al., 2014; Wang et al., 2018; Xu & Hu, 2021). However, the impact of local governments in regulating residents' PEB has largely been ignored. The current research, therefore, seeks to understand the process of shaping a specific type of residents' PEB (i.e., waste-sorting behavior) through the perspective of social interactions between governments and local residents.

Owing to the expanding economy, rural tourism has been developing quickly in China. Many villages, especially those within moderate distance from big cities, are taking the tourism business as one of their primary livelihoods in the form of running B&Bs, operating restaurants, and selling local specialties (Wu et al., 2022a). With the boom and influx of tourists, these village destinations are under great pressure to manage waste. Some local governments thus initiated waste-sorting campaigns to mitigate environmental problems, but such campaigns were novel to villagers. This research takes two rural tourism destinations (i.e., Shuikou village

and Guzhu village) in Eastern China as the study contexts. Based on years of participant observation, in-depth interviews, and secondary data, the research examined how local governments interact with residents in shaping their PEB (the waste-sorting behavior).

Literature review

Three bodies of literature provide a synthesis of existing knowledge on the topic of residents' pro-environmental behavior (PEB). First, factors affecting residents' PEB are reviewed to contextualize the research. Second, the efforts of local governments to regulate residents' waste-sorting behavior are identified. Third, social movement theory is adopted to construct a theoretical framework for analysis and discussion.

Factors that affect destination resident PEB

Some studies have examined the driving factors for residents' PEB (Liu et al., 2022; Su et al., 2018). These factors can be classified into two categories: environmental psychological determinants and sociological variables (Kollmuss & Agyeman, 2002). Environmental psychologists view residents' PEB as personal decision-making triggered by individuals' cognitive, affective, and normative determinants (Steg & Vlek, 2009), such as environmental attitudes (Eusébio et al., 2018), environmental knowledge (Wang et al., 2018), economic benefits (Liu et al., 2014), psychological ownership (Wang et al., 2022, 2023; Zhang & Xu, 2019), place attachment (Ramkissoon et al., 2013), and personal norms (Wang et al., 2020). These determinants are incorporated into established theoretical models, such as planned behavior, norm activation, place attachment, and motivational theories (Steg & Vlek, 2009).

Environmental sociologists believe that PEB is constructed and embedded in social

interactions (Wang et al., 2018). They argue that residents do not behave greenly in a social vacuum (McGehee et al., 2014). The well-theorized frameworks to predict PEB overlook the variables of social capital that regulate residents' unconscious responses to community eco-friendly change processes (Liu et al., 2014). The variables identified in this category include community participation (Cheng et al., 2019; Safshekan et al., 2020), community support (Orgaz-Agüera et al., 2020), community reputation (Su et al., 2018), host-tourist interaction (Liu et al., 2014), and community empowerment (Xu & Hu, 2021). Prior studies also indicated the intertwined relationship between community social capital and residents' environmental support. For example, Lee (2013) found that community attachment and involvement are effective predictors of perceived benefits that further influence support for sustainable tourism development. Orgaz-Agüera et al (2020) found that environmental attitudes positively and significantly influence community attachment, and impact residents' PEB.

These previous studies are insightful in understanding residents' PEB in tourism destinations. However, the influence of local governments in shaping residents' PEB has rarely been studied. Considering the critical role of local governments in sustainable development (Bramwell & Lane, 2011; Wang et al., 2018), it is essential to gain a deeper understanding of how local governments shape residents' PEB.

Government and resident waste-sorting behavior

The role of government in shaping household waste-sorting behavior is recognized (Thyberg & Tonjes, 2016). Governments design waste management regulations, build waste management systems, define waste-sorting standards, and conduct mass communication and

education (Chan, 1998). Government-related initiatives, including subsidies, incentives, penalties, public education, and recycling infrastructure, are instrumental in increasing residents' sorting behavior rates (Lu & Yuan, 2010; Tsai et al., 2021). For example, Lu and Yuan (2010) interviewed practitioners, scholars, and government officials, suggesting that the Chinese government's regulation plays a decisive role in affecting urban waste management. Udawatta et al. (2015) argued that legislation can be used as a tool to increase the willingness of construction waste management participation in Australia. All these studies indicate that government regulatory measures are effective tools for shaping residents' waste-sorting behavior (i.e., a specific type of resident PEB).

Most resident waste management work is conducted with ordinary households in urban areas, where the population is dense. When it is intertwined with tourism, only a few studies have investigated how tourism enterprise owners participate in waste management programs initiated by local governments. Specifically, Radwan et al. (2012) compared how green and non-green small hotels in Wales were involved in the solid waste management practices proposed by the Welsh Assembly Government. Pirani and Arafat (2014) reviewed the literature on solid waste management in the hospitality industry and identified three antecedents: governmental support, legislative pressures, and social factors. Agyeiwaah (2020) indicated that small enterprise hosts in Ghana were more concerned about the economic benefits and socio-cultural acceptability of waste-sorting behavior. These studies highlight the role of local governments in regulating hosts' waste management practices yet without explaining how local governments influence residents' waste-sorting behavior. In-depth studies on how local governments shape residents' waste-sorting behavior are thus needed.

Social movement theory: Linking governments and residents

Social movement theory explains under which conditions the collective actions of participants can be changed by movement organizations (Della Porta et al., 2009). The theory has emerged over decades and is useful in explaining how collective actions at different levels (e.g., from global to local levels, from real to the virtual environment) are initiated, operated, and maintained (Della Porta et al, 2009; O’Neil & Ackland, 2019). In tourism research, scholars have adopted the theory to understand tourists’ pro-social collective behavior (McGehee, 2002, 2012) and rural/regional tourism development (Kousis, 2000; McGehee et al., 2014; Navarro-Jurado et al., 2019). Earlier studies in tourism and other areas indicated that social movement theory can provide a powerful lens to analyze how organizations perform as catalysts for social change in various areas (e.g., rural revitalization, pro-environmental behavior, and rights campaigns) (McGehee, 2012; Wang & Woods, 2013).

Social movements can be analyzed at the individual and organizational levels. At the individual level, consciousness-raising and self-efficacy are the two most important psychological factors (Muller, 1992). At the organization level, the theory focuses on how and through what networks the social movement organization can gain political, cultural, economic, and human resources. In particular, resource mobilization and political process are the two basic conditions for successful social movements at the organizational level (Della Porta et al., 2009).

Resource mobilization emphasizes that the resources perceived by participants are necessary for engagement in social movements (McGehee, 2012). Since social movements aim to deliver collective goods, few participants will “on their own” bear the costs of working to

obtain them (McCarthy & Zald, 1977). At an individual level, the willingness to join a social movement depends on the participant's perceived resource benefits and costs (Klandermans, 1984; Navarro-Jurado et al., 2019). In environmental protection, promoting collective PEB requires governments to understand potential participant resource values and costs, and mobilize the necessary resources to increase incentives and reduce costs of participation (Benford & Snow, 2000; McGehee et al., 2014). Through resource mobilization, governments can impact residents' PEB by influencing environmental psychological factors.

Political process emphasizes the role of political opportunity structure in the growth of social movements (Tarrow, 1998). Social movements operate within social structures where three social groups (i.e., supporters, opponents, and neutrals) are involved. These social groups directly impact the success or failure of a social movement. At the group level, political opportunities can shift power relations among participants in social networks (McGehee, 2012). To restructure political opportunities, power redistribution through empowerment and regulation can help social groups develop suitable participation identity and reduce resistance to social campaigns (McGehee et al., 2015). On one hand, the empowerment of environmental movement supporters can increase the sense of efficacy to participate in green campaigns. The increased self-efficacy of supporters gains a meaningful voice and spurs their efforts (McGehee et al., 2015). The division of neutral elites may create openings for new supportive coalitions and offer practical wisdom in the decision-making process of green movement organizations. On the other hand, disciplining and regulating the opponents can increase the success likelihood of social movements for environmental protection (McGehee et al., 2014). Through a political process, governments can influence residents' PEB by affecting community social capital.

Similar to other collective behavior that brings inconvenience and even costs to individuals (Li & Wu, 2019), waste-sorting campaigns at the household level are considered social movements to change collective PEB. Chinese governments officially launched these campaigns to attain sustainable development goals. Changing residents' waste-sorting activities, as a social campaign, is not easy and straightforward. Instead, local governments in China implement various strategies to educate and regulate residents to obey the new rules and regulations, update their social norms, and build personal trust. This research adopts social movement theory to systematically understand how local governments mobilize various resources and networks to motivate and attain the desired collective behavior.

A synthesis: Research questions

Resident and government roles in promoting destination sustainability have been emphasized (Bramwell & Lane, 2011; Wang et al., 2018; Wang & Xu, 2014). However, very few studies have combined them together to assess the role of local governments in shaping residents' PEB in tourism settings. This investigation addressed this research gap by turning the spotlight on the social interaction between governments and residents. Drawing on social movement theory, the following research questions were addressed: (1) How do local governments mobilize various local resources to shape residents' waste-sorting behavior? and (2) How do local governments redistribute power among local groups to guide residents' waste-sorting behavior?

Methodology

Research context

The research contexts were Shuikou Village and Guzhu Village in Shuikou Town, Changxing County, northern Zhejiang Province, China. Shuikou Village covers an area of 11.75 square kilometers (Shuikou Village, 2022). It is well-known for rural-style restaurants, which serve local Chinese food at a reasonable price. In 2020, there were 38 restaurants, and all were locally owned. Guzhu Village, located next to Shuikou village, is popular with senior tourists from the Yangtze River Delta (e.g., Shanghai, Hangzhou, Nanjing, Suzhou, Wuxi), owing to its scenic views, tea culture, cool weather in summer, and hospitable residents. Over half of the households (485/953) run Bed and Breakfast (B&B) services, offering more than 20,000 beds and 22,000 dining seats (Guzhu Village, 2021). The rest of the villagers in Guzhu are also involved in tourism, in the form of operating specialty stores or working as cleaners, cooks, and drivers. In 2022, though heavily affected by COVID-19, Guzhu and Shuikou Villages still received nearly four million visitors from nearby cities (Huang & Zhou, 2023). Due to the large number of visitors, the amount of garbage is substantial, which places huge pressure on classification, collection, transportation, and disposal systems.

The province where the two villages are located has been leading household waste management in China. It released the first provincial standard for rural resident waste classification in China in 2018, titled “Specification for Source Separation and Treatment of Rural Domestic Solid Waste” (DB33/T 2091-2018). Since early 2000, local governments have been working on waste management, for instance, by providing public waste recycling bins in

every village. At that time, villagers threw waste without classification into the garbage bins. In 2016, Changxing County government began to require residents to sort their waste into residual waste and household food waste. In 2018, when the provincial standard was issued, household waste was classified into four types, i.e., hazardous waste (red refuse bin), recyclable waste (blue refuse bin), household food waste (green refuse bin), and other waste (black refuse bin). During the COVID-19 pandemic, two new liter cans were put in each B&B and food markets, one for COVID-affected face masks and the other for ordinary face masks. These face mask wastes were then collected and treated adequately to avoid negative impacts on the community environment and human health.

In addition to setting waste-sorting rules and providing facilities, the Changxing County government adopted green GDP to evaluate the performance of local government officials, directly linked to their career promotion. As a result, local governments are taking resident waste-sorting behavior seriously. They are making every effort to provide proper facilities and enhance residents' awareness, participation, and accurate classification.

Research method

As a response to the call for more critical, sequential, and reflective methods that prioritize destination residents' pro-environmental motivations and activities in daily life (Bilynets et al., 2023; Wang et al., 2018), qualitative methods were used to explore how local governments regulate residents' waste-sorting behavior. Considering the diversity and complexity of Chinese local governments and rural tourism communities (Wang et al., 2018), these qualitative methods produce a deeper understanding of the experience of non-Western rural residents and how their

waste-sorting activities are shaped by local governments. Participant observation, semi-structured interviews, and secondary data analysis were used as the key research methods.

The research team was familiar with the study sites and the broader rural tourism development in China. Many of the first author's family and relatives live in Shuikou and Guzhu village, and they are involved in rural tourism businesses. Also, the first author worked as a local governmental official from 2011 to 2016. He had been involved in a number of rural environmental movements and rural tourism development projects. The dual identity of being a local resident and a government official allowed the first author to engulf himself in the "field" to observe government officials and local residents' behavior, as well as their interactions. The second and fourth researchers are interested in rural tourism research and have been familiar with the villages through more than ten field trips since 2016. The researchers were reflective about their personalities during the data collection and analysis. Special attention was paid to the respondents' emic voices, through building a relaxing atmosphere, encouraging free talk, active listening and probing questions. When interpreting the data, the differences among different respondents were valued.

Data collection

Observations of government officials' and residents' behavior were conducted by the first author over several years. As a local, he spent considerable weekends and holidays in the villages, which enabled him to observe how the government educates and regulates residents' waste-sorting behavior. He also had deep discussions with his family members living in the villages and small chats with villagers and government officials he encountered. Over 100 field

notes and photographs were taken. Participant observation was valuable as it helped the research team to better understand the social movement in the villages, and it guided the interviews and secondary data analysis.

The first and the fourth authors carried out in-depth interviews to understand how local governments shape resident waste-sorting behavior in the waste classification movement. Local residents with different social-economic backgrounds (e.g., local business owners, school teachers, and cleaners, n = 16) and Changxing governmental officials from relevant government departments (e.g., Shuikou township Government, Chanxing Agricultural and Rural Affairs, Chanxing Tourism Bureau, n = 9) were interviewed in August 2016, April 2018, June 2021, and July 2022 (see Appendix 1 for their detailed profile). Convenience and snowball sampling techniques were adopted to recruit the respondents. The participants were interviewed individually; they responded to open-ended questions in relation to their roles in social movements and daily green activities aimed at discovering governing strategies of resource mobilization and political process. The topics discussed with residents included attitudes toward the waste-sorting movement, perceptions of the four waste classifications, and the motivations for waste-sorting. Topics discussed with the governmental officials were the strategies employed to enhance household waste-sorting awareness, participation, and accurate sorting. Information saturation was reached on the 15th interview with residents and the 8th interview with government officials. The interviews lasted from 20 to 76 minutes, depending on the information richness the interviewees shared. Nearly one-third of the in-depth interviews (8/25) were not recorded, because some respondents felt uncomfortable being recorded. For these unrecorded interviews, field notes were taken during and immediately following the

interviews. The recorded interviews were transcribed for further analysis.

In addition to the participant observations and in-depth interviews, secondary data, including nine related government documents and ten relevant news items, were used to validate the research. The government documents contain local policies, government work reports, government performance evaluations, and regulations published by Changxing County Government. These secondary data were used to triangulate the multiple standpoints on the fragmented phenomenon that respondents claimed. For example, government officials (I-1 and I-2) observed that local governments cooperated with local schools to conduct waste-sorting education. Their comments were confirmed by the public news (D-22) and governmental work reports (D-33).

Data analysis

The material (including transcribed interviews, field notes from participant observations, and secondary data) was manually coded. Both inductive and deductive thematic analysis were used during the process of data analysis (Strauss, 1987; Wu et al., 2022). Sorting data, generating initial codes, and defining themes were the key steps. During the deductive coding, preconceived sensitizing concepts (e.g., organizations, tangible resources, intangible resources, empowering and regulations) from the social movement theory guided the coding (Gilgun, 2019). The inductive approach was applied to reveal specific attributes under each sensitizing concept. To enhance the trustworthiness and validity of the analysis, two Chinese authors coded the data independently. Discussions among all the authors were conducted to examine and refine themes until reaching full agreement.

Results

With the guidance of social movement theory and the support of rich data, this research examined how local governments regulate residents' pro-environmental behavior (PEB) in rural tourism destinations. The first results describe how local governments mobilize local resources to shape residents' waste-sorting behavior. This primarily involves resource mobilization, an incentive approach accompanied by monitoring and sanctioning. The strategies of resource mobilization, including environmental education, digital process management, public evaluation measures, and economic stimulus packages, enhance the individual's consciousness of waste-sorting behavior in rural communities. The second set of results is about how local governments redistribute power among local groups to guide residents' waste-sorting behavior. This concerns the political process, which relies on power redistribution among stakeholders to strengthen perceptions of waste-sorting legitimacy. A number of stakeholders, such as village committees, women's associations, local schools, and tourism industry associations, are involved in the waste-sorting movement. The strategies of power redistribution, including regulating nucleus communities (village committees) and empowering marginal communities (women's associations, local schools, and tourism industry associations), activate social networks in rural communities and utilize stakeholders' social capital to shape residents' PEB. Figure 1 summarizes the major strategies local governments adopted in the waste-sorting social movement. Detailed findings are presented in the following subsections.

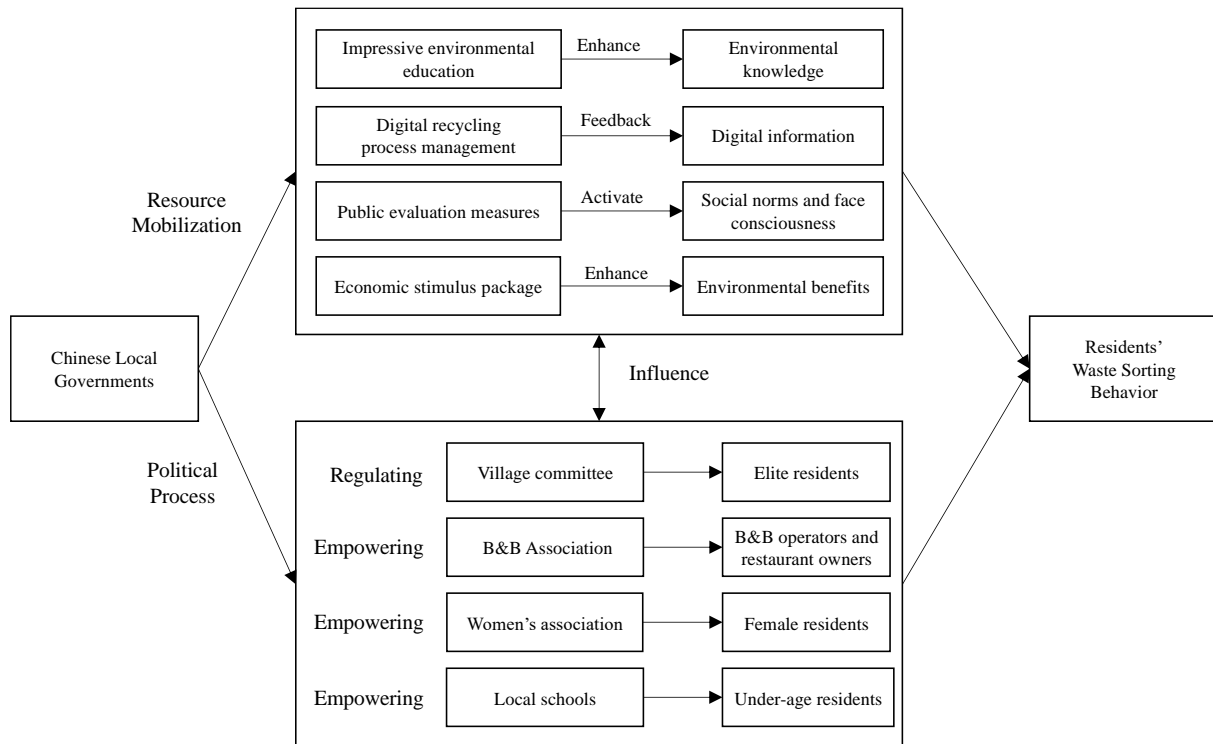


Figure 1. Local governments strategies for shaping residents' pro-environmental behavior

What resources mobilize resident waste-sorting behavior?

(1) Environmental education. Environmental education is an organized effort to teach residents about why waste classification is needed and how it is carried out. Essentially, it is about enhancing environmental awareness and knowledge, which are powerful in predicting individuals' PEB (Pothitou et al., 2017; Steg & Vlek, 2009). Local governments emphasized the importance of waste classification in many corners of the village's public areas (see examples in Figure 2, D-1). A local villager indicated, *"The outer walls of my house were painted with pictures and slogans of environmental protection. Local government also set eye-catching billboards about waste-sorting knowledge at the bus station and by the roadside. Videos about how to classify the waste are also played in public areas, where many villagers gather for leisure at night"* (I-18). Considering that a large number of the villagers are senior

and lowly-educated, the classification knowledge presented in the traditional textual style is very complicated. Thus, how to make waste-sorting knowledge more approachable is the core of environmental education. Local governments have extensive communications with villagers. They encourage villagers to innovate the styles of environmental education to enhance the effectiveness of the campaign. The consciousness-raising and relevant knowledge was thus innovatively incorporated into local humorous talk-shows, which are comic dialogues drawn from residents' real-life accidents and incidents. A local government official stated, *“Owing to the combination of humor, the waste-sorting knowledge in local talk-show travels well in rural communities. This style of education, using local wisdom, should be applauded. It offers insights for much community work.”* (I-7, D-2). Also, the government actively adopts villagers' suggestions to improve the effectiveness of policy implementation. For example, *“We used to collect household waste in the evening time. Some B&B hosts suggested we collect the household food waste at night when they end business of the day. We took their advice and changed the waste collection time to meet small businesses' needs.”*(I-2).



Environment education slogans in public areas

Local talk-shows to enhance environmental knowledge

Figure 2: Examples of environmental education in the villages

Source: Photos of the first author

(2) *Digital recycling process management.* Technology has greatly affected waste management at the study sites. In Shuikou and Guzhu villages, as well as other villages in Changxing County, a digital recycling process management system has been adopted to discipline residents' behavior (see images in Figure 3). The digital system provides systematic solutions to the fragmentation of sustainable solid waste recycling since 2019 (I-2, D-12). A local government official indicated, “*We offer every household free garbage cans, which are printed with QR code. Every time the cleaner collects the waste, they will scan the QR code. They further photograph and weigh the waste. Radio Frequency Identification (RFID) technology is used in dustcart to identify, track, and collect real-time waste logistics data. The data can be transmitted in real-time to enable the local governments' remote monitoring and control.*” (D-11). Digital technology standardizes the process of waste sorting collection, transportation, and treatment (D-9). It facilitates data exchange among local governments, village committees, garbage collectors, and residents (D-10, Figure 3). With the empowerment of technology, the garbage collector can encourage residents to do the right thing. For example, the first author wrote in one of his field notes: *The garbage collector approached a B&B to collect the food waste at 19:30 when the owner finished serving dinners. Before scanning the QR code of the garbage bin, he informed the villager of his improper waste sorting and gave him the opportunity to make up. The B&B owner appreciated his reminder and offered him a cigarette to express thanks.* This kind of interaction is common in the village, as most Chinese rural villages are in essence an acquaintance society (Wu et al., 2022). The effectiveness of digital technology is also highly linked with the public evaluation systems used in the villages, as reported below.



Waste-sorting monitoring system in Changxing County



QR code in garbage bins



Garbage collectors using RFID technology

Figure 3: Digital recycling process management at the county and village level

Source: Photos of Changxing Agricultural and Rural Affairs, edited by the first author, used with permission

(3) Public evaluation measures. Public evaluation measures are taken to guide rural residents' waste-sorting behavior. Waste classification performance is openly presented on a bulletin board (see Figure 4) and compared with other neighborhoods in the village. "Every household's waste sorting scores are recorded by the smart supervision platform of waste management in the collection tricycle, which can automatically complete scanning, weighing and photographing." (I-15, D-4). These daily waste-sorting scores are further converted into three grades (e.g., excellent, good, and bad). The results are then presented on the evaluation

bulletin board, which is posted monthly in public areas of rural communities (D-5). These results are visible to many villagers, as they gather in these public areas for daily leisure, chatting, and exercise. Through the public evaluation measures, stakeholders (governmental officials, neighbors, and tourists) are fully aware of how residents are behaving in the waste-sorting campaign. For those who do well, a mobile red banner is given to hang on the entrance of their yard in the coming month, which makes them proud among neighbors. Those who do not perform well in waste-sorting are not punished economically. However, being rated with a crying face is something bringing shame among their neighbors.



Figure 4: Monthly evaluation of waste-sorting performance in Shuikou Village (on a household basis), presented in the village’s waste-sorting bulletin board

Source: Photo of the first author

This kind of evaluation may be criticized in some societies as it discloses private information. It is however especially useful in rural China's acquaintance societies where many villagers live in the same place from birth to death and are familiar with each other (Fei et al, 1992). They pay special attention to how their neighbors and relatives see them. That is, social norms are often powerful in predicting collective behavior (Li & Wu, 2019). In addition, the Chinese rural society is a typical vertical society, where social comparison is common, and people tend to benchmark with the familiar ones to judge their own positions and well-being (Triandis, 1995). I-25, a village leader indicated that adopting a public evaluation system is useful, owing to villagers' social reputation concerns and social comparisons. He often told villagers, "*It harms when compared with our rich relatives or powerful neighbors. But we can do a better job in terms of proper waste sorting. Don't lose your family face because of laziness*" (I-25).

(4) Economic stimulus packages. Considering the rational side of many pro-environmental behaviors (Li et al., 2021; Steg & Vlek, 2009), local governments offer economic stimulus packages to enhance the perceived benefits from conducting waste-sorting behavior. First, the local government opens a waste-sorting store in each village, where villagers can exchange recyclable waste for daily necessities (e.g., rice, wheat flour, salt, dishwashing liquid, and washing powder) (I-25, D-6, Figure 5). Many rural villagers, especially the senior ones, are frugal (Yi et al., 2020). They are used to collecting recyclable items (e.g., plastic bottles, newspapers, and various cardboard boxes) in their yard and sell them to garbage collectors who drive vehicles and offer door-to-door service. Although recyclable waste bins are offered, villagers maintain their traditional customs of collecting and selling recyclable

waste. In this case, “we established waste-sorting stores in villages, setting the price of recycling waste. Residents cannot get cash income. They, however, can use the income to exchange daily necessities in the store. It brings convenience to residents and is thus welcomed.” (I-2).



Figure 5: Waste-sorting store in villages, where villagers can exchange some necessities

Source: Photos of the first author

In addition to the daily operated waste-sorting store, the local government offers annual bonuses and green loans to those who behave well in waste-sorting. For example, I-11 revealed that “the local government held a specific meeting about waste-sorting movement last December. Our family was publicly awarded for our outstanding performance of waste-sorting.” Further, green businesses (e.g., B&Bs and restaurants) are qualified to apply for green loans to expand their eco-friendly business. “We appreciate the green loans offered by local banks, supported by the local government. These green loans are low-interest, which greatly relieve our financial burden.” (I-6, D-7).

The above-mentioned ways of resource mobilization are effective in shaping residents’ waste-sorting behavior. In addition, local governments have good knowledge of the networks and social capital in villages. Through power redistribution, they work together with various

movement organizations in the village, and successfully shape residents' waste-sorting behavior. This type of work is reported in the following section.

How do political processes influence resident waste-sorting?

(1) *Regulating village committee.* The village committee is a villagers' self-governing autonomous organization. Committee members are not state officials. They are directly voted in by villagers, most of whom have business success, social reputation, and altruism in serving the community (Kan, 2016). They delegate rural grass-roots political power to promote local community self-management and self-education (Zhao, 2023). They are often involved in many community-level pro-social affairs (e.g., helping disadvantaged groups, seeking external development resources, and improving local infrastructure) and are pioneers in various social campaigns (e.g., waste-sorting in this case) (Xu & Yao, 2015). I-3, the deputy chief of the town, indicated, "*Village committee members have a strong demonstration effect among the villagers, who tend to follow the elites' behavior. The 'key minority' can pull the 'great majority' along with waste-sorting campaign.*" This sentiment was echoed by the dean of Shuikou Village Committee. He commented, "*Many of the villagers were not willing to properly sort the waste at the beginning of the campaign, as it requires extra effort and time. After joining several workshops organized by the town and county government, I was aware of the project's meaning to our sustainable futures. I thus persuaded our committee members to be role models in sorting waste. We also distributed waste sorting notices to every family at night. We mobilized the ones who had higher environmental awareness in the community. Together with the incentives and social punishment, we are doing a good job now.*" (I-25).

In addition to the village committee's impacts on residents' behavior, they know how to appropriately manage people's behavior and serve as a bridge between local governments and rural communities (Zhao, 2023). I-8, the official who is in charge of the tourism development affairs in the town, observed, *"Village committee members are very familiar with the community. Most of them run B&Bs or restaurants. They can always find an acceptable solution that balances the needs of township government and residents."* A local B&B owner added, *"When the pandemic (COVID-19) is relatively well-controlled, we would like to run the business. Our committee communicated with the government, and introduced a new bin for face mask waste for every B&B. They also taught us how to dispose of them correctly. In this way, we decreased the risk of pandemic spreading. With the business opening, we also got some income. We appreciate our committee members' work"* (I-16, D-15).

Further, consistent with the green GDP assessment in the county, the local governments assess the village committee and member waste-sorting performance. This external assessment pushes individuals to discipline their private and public behavior, which is common in China's governance (Wang et al., 2018). The official in charge of rural tourism development in the town indicated, *"At the town level, the waste-sorting evaluation bulletin board lists each village's performance. If they perform badly in waste-sorting, the public exposure in acquaintance society can bring shame on committee members and villagers, and negatively affect their public image. If they do well, they will also be publicly awarded, which can bring them pride and efficacy"* (I-8, Figure 5).

(2) Empowering B&B association. Yi et al. (2020) highlighted the role of village tourism associations in China, which link their networks with the external key stakeholders, including

the government at various levels and service organizations in the supply chain. In Guzhu, where the majority of villagers are involved in rural tourism businesses, local elites formed a B&B association in 2005, covering most of the B&B operators and restaurant owners. The initial purpose of the association is to “*avoid vicious price competition, form service standards of catering and accommodation, and reduce tourism environmental pollution.*” (I-8, I-16). In the years of development, additional functions were added. With the support from local governments, they offer free training to all members on customer service, online marketing, property decoration and aesthetics, and folk culture and traditional skills. They also organize study tours to other rural tourism areas in the low tourism season to broaden villagers’ horizons and consequently enhance local businesses’ completeness. Also, similar to the village committee, the B&B association is another bridge between local governments and B&B hosts, with a specific focus on the sustainable development of rural tourism. They follow the local government’s policy in business operations and discipline members’ behavior. An example of this is how they mobilize their members to be environmentally friendly and properly sort waste. The deputy director of Changxing Tourism Bureau stated, “*It is not easy to control the waste-sorting behavior of tourists. The B&B association does a good job to guide the B&B owners to shape tourist green behavior. They organized small-scale seminars, discussed tourist behavior characteristics, and identified strategies to make tourists behave greenly.*” (I-3). Similarly, the vice president of the association suggested, “*we understand B&B owners’ behavior and the challenges they face. In the waste-sorting campaign launched by the government, we show great empathy towards our members. We not only educated B&B hosts, but also patiently checked their waste before being scanned by the waste collector.*” (I-17). A local resident said,

“the association voices our pursuits for governmental support. For example, they informed the government about our need for larger size trash cans owing to the amount of kitchen waste. Very soon, we got 120-liter trash cans, instead of 25-liter trash cans for non-business involved residents. Their work is valued by us” (I-22).

It is worth noting that the smooth management of the B&B association is closely related to government empowerment. As indicated earlier, a business that performs well in environmental issues can apply for a low-interest green loan from local state-owned banks. To be qualified, the residents need to get a certificate from the local B&B association, which confirms their good performance. The president of the association observed, *“this type of right makes our daily management much easier, as most B&B owners may need our certificate. Future, what we are doing is good for the collective benefits.”*

(3) Empowering women’s association. Women’s role in rural tourism development has been highlighted in several previous studies (Ling et al., 2013; Nordbø, 2022). This research indicates that female residents play an essential role in waste-sorting activities in rural tourism communities because many in-home jobs are done primarily by women, ranging from washing vegetables, cleaning houses, clearing dinner tables, and sorting garbage. In addition to their individual work, women in the study sites are also organized through women’s association, a self-organization at the village level. The primary aims of women’s associations in Chinese villages are to unite women, protect women and children’s rights, represent women to participate in the village’s administration, and educate women for a better well-being (Su et al., 2020).

The women association empowers women through uniting them to be a significant voice in the public. Take the waste-sorting campaign for an example, *“The women association often gathers elder female villagers to talk about their opinions of waste-sorting and share experience of waste management. The women association also leads us to conduct on-site inspections of dustbins. Volunteers point out the mistakes of waste classification”* (I-23, D-17).

With support from the women’s association at the town and county level, the village’s women association plays a significant role in enhancing women’s civil status and conditions. For example, they provide skill training to raise female aesthetic consciousness, which generates a positive spillover effect on household waste management. A town-level official indicated, *“In the waste-sorting campaign, we found that those with the beautiful courtyard were more likely to behave greenly. Thus, the women association carried out training activities (e.g., flower cultivation and arrangement, potted landscape, and good etiquette) to motivate rural women to decorate beautiful courtyards.”* (I-7, D-19). A woman who runs a B&B agreed on the positive effects of the training organized by the women’s association. *“I participated in a number of workshops on decorating beautiful courtyards. I learned how to turn trash into treasure. For example, the beautiful wall over there is decorated using abandoned tyers and local plants from the surrounding hills. Many visitors praised our unique yards, and official news media reported our achievement in beautifying the village. Living in such a beautiful environment, I feel it is our responsibility to be environmentally friendly”* (I-23).

(4) Empowering local schools. Besides the self-organizations in the villages, local schools are also involved in waste-sorting campaigns. In a recent study on recycling in Chinese families, Deng et al (2022) found that children, though aged 7-8, can exert great intergenerational

influences, especially when they are committed to the work. The Chinese culture considers children and their growth as the center of the family. They can be powerful agents to transmit environmental information to their families, which enhances family members' waste-sorting knowledge and normative beliefs. Being aware of this power, local governments (e.g., Shuikou Township Government, Changxing Agricultural and Rural Affairs) worked with schools and *"jointly organized a series of waste-sorting activities (e.g., waste-sorting lectures, game-based courses)." (D-22)*. Innovative activities include inspiring children to know the potential value of waste. For example, a school teacher reported in the local news, *"Waste can be turned into resources. I teach children how to make decorations from recycled materials. These decorations are exhibited in the classroom and campus"* (D-24). As a result, most children understand the importance of waste-sorting activities and can also properly sort all waste. In addition, *"children are required to do drawing work together with their family members and monitor their family's waste-sorting behavior."* (I-13). In summary, school children in the study sites are promising agents to promote household waste-sorting behavior.

Conclusions and discussion

This research reflects on emerging tourism research topics, i.e., the growing global concern of environmental management in developing countries and increasing awareness of the active influence of local governments in regulating residents' pro-environmental behavioral change (Filimonau & Delysia, 2019; Han et al., 2018). Few studies have explored how local governments interact with residents and change their pro-environmental behavior (PEB). To better understand this issue, social movement theory was adopted as the theoretical foundation; it is powerful in explaining how movement organizations initiate, operate, and maintain

collective actions (Della Porta et al, 2009; McGehee, 2012). Given the exploratory nature of this study, a combination of multiple qualitative methods (e.g., participant observations, semi-structured interviews, and secondary data) were the key research techniques as they are appropriate for analyzing dynamic and sequential social interactions (Wang et al., 2018; Wu et al., 2022).

The findings indicate that local governments in rural tourism destinations shape residents' waste-sorting behavior through resource mobilization and political processes. Resource mobilization includes the use of environmental education, digital recycling process, public evaluation measures, and economic stimulus packages while political processes incorporate the use of regulating village committees, and empowering women's associations, B&B associations, and local schools. These two strategies (i.e., resource mobilization and political processes) that local governments use at the organizational level work to influence individual-level psychological and sociological factors in shaping residents' waste-sorting behavior.

The waste-sorting movement, as a new phenomenon in villages, encountered behavioral friction from local residents. Local governments implemented different initiatives to promote residents' uptake of waste-sorting behavior. Environmental education was used to raise residents' environmental consciousness and knowledge, both of which are important in enhancing PEB (Poithou et al., 2016). Considering that the Chinese culture views the growth of children as the central priority of the family (Deng et al., 2022), children in local schools were mobilized as powerful agents to educate family members about waste-sorting knowledge. Although financial incentives are debated regarding their value in environmental campaigns (Bolderdijk et al., 2013; Steg et al., 2014), they can be effective in encouraging PEB (Steinhorst

& Klöckner, 2018) in certain situations, especially for elder villagers who are frugal and for business operators who need money for running tourism enterprises. Therefore, local governments mobilized residents' resources by offering economic stimulus packages (e.g., a waste-sorting store for exchanging daily necessities and green loans/bonuses).

Apart from the use of traditional approaches (i.e., education and finance), local governments also used context-based strategies to prime environmental psychological factors in regulating residents' waste-sorting efforts. Most Chinese rural villages are in essence an acquaintance society (Wu et al., 2022) where villagers are familiar with each other (Fei et al., 1992). Thus, strategies targeting interpersonal and/or intergroup relationships were applied by local governments to regulate residents' PEB. For example, the use of a digital recycling process management system, with residents' waste classification performance on the bulletin board presented in the public areas of rural communities, are a means to tap the power of descriptive norms in shaping residents' waste-sorting behavior (Fornara et al., 2011). Injunctive social norms are also powerful in eliciting collective behavior (Li & Wu, 2019; White et al., 2009). Local governments empowered village elites in committees and associations to be role models in performing waste-sorting behavior and leveraged their normative power in eliciting behavioral compliance from other residents. Notably, these local elites were usually the in-group members of residents; therefore, local governments redistributed power to empower local elites as in-group messengers (Fielding et al., 2020) for mobilizing waste-sorting campaigns. In addition, in Chinese culture, face consciousness plays a crucial role in influencing social interactions (Wu et al., 2023). Local governments empowered the village committees and associations to perform actions under the power of face gain and face loss. For instance,

residents who did well in the waste-sorting campaign would be given a mobile red banner to hang on the entrance of their yards, elevating their pride among neighbors; however, for those who did not perform well in waste-sorting, being rated with a crying face was a face loss among their neighbors. In short, local governments leveraged interpersonal relationships and appealed to residents' self-identity and social identity (through using descriptive and injunctive social norms and in-group messenger) in seeking residents' engagement in waste-sorting behavior.

The political process enables the activation of power redistribution among key stakeholders in communities, including regulating core groups of rural communities and empowering marginal groups of rural societies. In the process of political empowerment, local governments also leverage individual environmental sociological factors in regulating residents' waste-sorting behavior. Community-based approaches are critical to the success of social movements for environmental protection (Chakrabarti et al., 2009; Dhokhikah et al., 2015). Local governments in the study sites used different means of power redistribution to encourage residents to innovate environmental education styles. As a result of residents' active participation (e.g., local humorous talk-shows), waste-sorting knowledge and awareness were quickly communicated among villagers. Because of proactive community participation, residents tended to take ownership of and thus responsibility (Wang et al., 2022; Zhang & Xu, 2019) for the waste-sorting campaign. Also, the village committees, tourism associations, and local schools were empowered to unite residents to have voices in the public sphere, paving a community empowerment (Mongkolnchaiarunya, 2005) for the success of the waste-sorting movement. In addition, since residents were deeply embedded in the village social networks (McGehee et al., 2014), local governments' strategy of power redistribution changed residents'

social capital to influence waste-sorting behavior.

Theoretical contributions, practical implications, and limitations

Theoretical contributions

Benchmarking with prior studies largely focusing on tourists' pro-environmental behavior (PEB), this research focuses on residents' PEB, given that they play a critical role in contributing to destination environmental protection (Su et al., 2018). In general, this research makes important theoretical contributions to the literature via three main aspects.

First, this research investigates residents' PEB from the unique perspective of government-resident interactions. Previous literature demonstrates that tourist-tourist interaction (Wu et al., 2023) and host-tourist interaction (Hu et al., 2021; Wang et al., 2018) have significant influences in shaping stakeholders' PEB. However, the impact of government-resident interaction and the power embedded in social influence have been neglected. This research delved into the question of how local governments regulate residents' PEB in rural tourism destinations. The findings suggest that residents' PEB is constructed through social interactions. That is, residents' PEB is not only triggered by environmental psychological factors (Zhang & Xu, 2019) but also learned from social networks and regulated by powerful stakeholders (McGehee et al., 2014; Wang et al., 2018). These insights break new ground by showing that local governments are influential promoters of residents' PEB. The power embedded in government-resident interaction thus provides new ways to accelerate residents' uptake of PEB (Nunkoo & Ramkissoon, 2012).

Second, this research contributes to the development of social movement theory

concerning tourism-related local behavior. The results indicated that social movement theory can be utilized in waste-sorting campaigns to change residents' PEB. Through the lens of social movement theory, the local governments integrate dual roles (i.e., resource mobilization and power redistribution) to raise individual environmental consciousness and enhance community social capital (see Figure 6). The findings demonstrate that establishing an interpretative frame of stakeholders' shared meanings and residents' social understandings is extremely important in government-resident interaction (McGehee, 2002; McGehee et al., 2014) because successful social movements need to raise potential participants' awareness of the cause of collective PEB and co-define acceptable green strategies to address the problems. In addition, the longitudinal study (from 2016-2022) revealed the change process of the social movement (McAlevey, 2016), from the initial knowledge/awareness-based advocacy of waste-sorting behavior to the mobilizing and organizing of residents' desired waste-sorting behavior through local governments' resource mobilization and power redistribution.

Third, this research provides new and essential insights into the organization-level and individual-level influences (and their interplay) of local governments in regulating residents' PEB. At the individual level, the findings indicate that participants' environmental consciousness, such as environmental knowledge (Lee & Jan, 2019) and perceived benefits (Negash et al., 2021), can be raised by resource mobilization in social movements (Chi et al., 2021). The process consists of mobilizing tangible and intangible resources brought by local governments and destination communities in waste-sorting campaigns. Apart from tangible resources (e.g., economic stimulus, green infrastructure) (McGehee et al., 2015), it was found that intangible resources (e.g., digital information, social comparison) can be mobilized to

effectively promote residents' PEB. Digital information within e-governance may provide new opportunities for future studies of stakeholders' PEB. Destination digitalization with data-driven insights can facilitate predictive analytics, tracking and monitoring of stakeholders' PEB.

At the organizational level, local governments can utilize the existing organizations through political processes to co-define appropriate strategies and co-produce acceptable solutions. Compared with previous destination residents' PEB studies mostly focusing on triggering individual's environmental social-psychological factors, the results argue that community organizations in social networks are also important co-promoters to shape collective PEB. Especially, Chinese rural community groups (e.g., village committees, women's associations, local schools, and B&B associations) can be empowered by local governments to integrate their social capital to jointly enhance residents' PEB. These findings align with previous studies suggesting that community social capital (e.g., community support, participation, and empowerment) can influence residents' PEB (Cheng et al., 2019; Orgaz-Agüera et al., 2020; Xu & Hu, 2021), but shed new light on different social capital owners' impacts. These insights challenge the underlying assumption of residents' PEB literature that destination community groups share the same social capital for green behavior (Su et al., 2018). Instead, destination community groups are not homogenous in terms of their power and position in social networks (McGehee et al., 2015). These hierarchy groups can be empowered to leverage different social capital and exert various influences on residents' PEB.

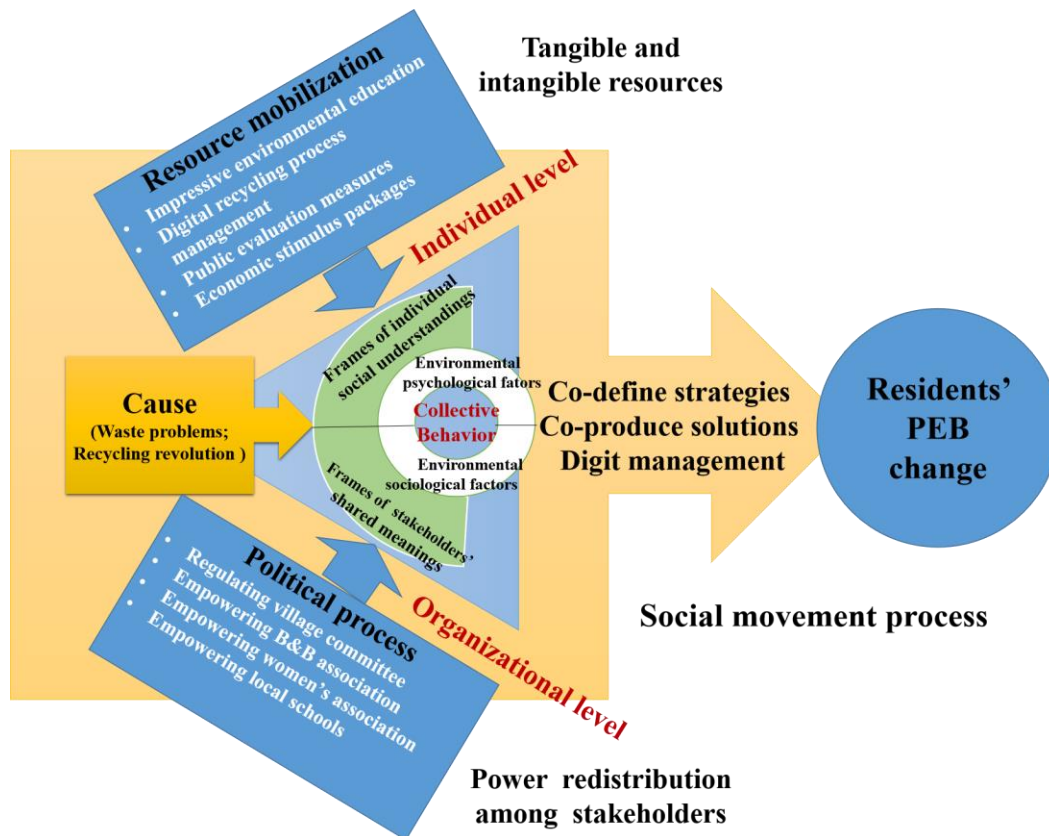


Figure 6: Resource mobilization and political process of local governments in social movement

Practical implications

This research has several implications for sustainable tourism management. Local governments in destinations can be successful promoters in shaping residents' PEB. Conditions for successful promotion lie in resource mobilization for appropriate environmental psychological responses from residents. DMOs should work with policy-makers to identify the key factors in the temporal dynamics of green social movements and to control such factors by using the carrot-and-stick approach. For example, new environmental knowledge is critical in the early stage when residents have no idea about waste-sorting activities. In such cases, the provision of quality environmental education, including visible bulletin boards, facilities of landscape, and local talk-shows, can greatly enhance knowledge about waste sorting.

Power redistribution can influence groups' social capital and boost feelings of self-efficacy to engage in pro-environmental behavioral change. Nucleus groups have the dual identities of community "leaders" and government "agents". Their lack of willingness to participate in green campaigns may lead to failure. Thus, regulating nucleus groups, with community recognition and economic incentives, can win elites' support for green campaigns and their social capital for promoting residents' PEB. Governments should not rely on nucleus groups alone to promote green behavior; more efforts should be made to empower marginal groups to be involved in social change. Marginal community groups in destinations have many social identities and interpersonal relationships. Empowerment of marginal groups, such as through "female resident volunteer activities" and "under-age resident environmental education", can build member self-efficacy and augment social capital to behave greenly (Joo et al., 2020).

Also, signals (e.g., public opinion, community evaluation, humor) in social movements reflect residents' cognitive and psycho-social features, which offer clues about innovative strategies (Wu et al., 2022). DMOs should understand the signals of communities and extract community cultural psychology (e.g., face consciousness) from real-life incidents to encourage residents' PEB. For example, a beautiful courtyard program by women's association can enhance female hosts' psychological ownership, create the desire to gain face, and improve family member willingness to join in waste-sorting activities. In these ways, residents' PEB can be changed and shaped.

Limitations and future research

This research has certain limitations. First, the research only investigated two tourism

villages in Eastern China, in which B&Bs and restaurants constitute the major industry in local economies. Further studies should explore residents' waste-sorting at different destinations and across different tourism contexts in developing countries. Second, data collection spanned from 2016 to 2022. Major changes (especially COVID) have caused different PEB patterns. Future studies should investigate how COVID influenced different patterns of residents' and travelers' PEB. Third, the characteristics (e.g., power exercise) of Chinese local governments may not be transferable to other settings. Further research is needed to explore how local governments in different geopolitical regions exert individual-level and/or organization-level influence on destination community green practices. Fourth, based on social movement theory, the findings are limited in explaining behavioral changes from the perspective of social interaction between local governments and residents. Future research should adopt other theoretical frameworks, such as digital governance and process management theories, and adopt a multi-stakeholder approach to discover the underlying characteristics of green social movements in destinations.

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