

Institutional Change of Disaster Risk Reduction Management Offices in Selected Areas of Post-Haiyan Philippines



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Abstract The effects of Typhoon Haiyan caused an institutional change in the disaster risk reduction (DRR) response of the urban and rural Disaster Risk Reduction Management (DRRM) offices. The change resulted in the clearer implementation of the Philippine DRRM Act of 2010 (DRRM ACT). The implementation of the Act expanded the scope of services from mere national disaster relief response to DRR management. This chapter presents an examination of the DRRM plans and interviews with DRRM officers of the two most heavily affected areas of the typhoon. These are Tacloban City (the regional capital of Eastern Visayas, representing the urban scenario) and Guiuan, Eastern Samar (where Typhoon Haiyan made its first landfall, an illustration of the rural scenario). A majority of enterprises in these localities were (and still are) micro, small and medium enterprises (MSMEs), with both locations classified as tourism development areas by the National Economic and Development Authority (NEDA) of the Philippines. The chapter used qualitative content analysis of documents and thematic analysis of interview transcripts. Findings showed that there were different institutional changes implemented by both urban and rural DRRM offices before and after Haiyan. Most of the changes revolved around the focus and structure of DRRM institutions. DRRM offices were tied to postdisaster relief only, and their organizations were limited in scope before Haiyan. After the typhoon, these offices had their scopes increased to provide proactive measures and more inclusive DRRM. However, there were limited disaster resilience interventions specific to postdisaster tourism MSMEs. Thus, this chapter analyzes the institutional changes through the lens of the four dimensions of resilience namely, social, environmental, governance, and economic. Consequently, the chapter recommended an outline of a resilience program and a framework for postdisaster tourism MSMEs.

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1 Introduction

According to climate scientist, Kevin Trenberth (2018), with climate change, there is greater possibility that one big storm can accumulate and replace the impact of several smaller, weaker storms. Record-breaking storms, such as Typhoon Haiyan (Yolanda) which struck Philippines in November 2013, are becoming more common. Due to global warming and climate change, observations show that the number of typhoons hitting the Philippines has been increasing. An average of 20 typhoons strike the country annually (Salazar 2015).

According to Salazar (2015), Philippines' Region 8, otherwise known as Eastern Visayas, seemed vulnerable even before Typhoon Yolanda struck the area. The region had a poverty rate around 40%. Eastern Samar has a poverty rate at 63%. It is the province of the town of Guiuan, where the typhoon made its first landfall. In light of the socio-economic composition of the region, it becomes imperative for the government to find ways that counter the economic disparities which are further exacerbated by the catastrophe. Thus, National Economic and Development Authority (NEDA) and Office of the Presidential Assistant formulated the Yolanda Comprehensive Rehabilitation and Recovery Plan for Rehabilitation and Recovery (CRRP) (Salazar 2015). The livelihood cluster of the CRRP document cites the reinvigoration of micro, small and medium enterprises (MSMEs) to develop the areas affected by the typhoon. This is in consonance with NEDA's aim to rehabilitate income streams and enhance employment opportunities in postdisaster areas. Part of the MSME's service value chain is to reconstruct support for and to boost tourism to be more competitive. In fact, one of the four priority industries that were up for mobilization in Region 8 (Eastern Visayas) is tourism and its supporting industries. This is also one of the priority development areas of the Regional Development Council in Region 8 as stipulated in the Eastern Visayas' Regional Development Plan for 2017–2022 (NEDA 2017). The Plan aims for tourism development together with poverty alleviation, promotion of investments, and infrastructure resiliency.

Tacloban City, in Leyte, is the regional capital of Region 8 and considered as one of the tourism development areas by NEDA (2017). The city is the main gateway by air to the various tourism destinations in both the provinces of Leyte and Samar, according to the Department of Tourism. It also experienced the most damage to housing during Yolanda compared to all affected cities and municipalities. Being a highly urbanized city, it incurred a total damage worth Php 7 billion. Guiuan, Eastern Samar, declared as a small island tourism zone by NEDA (2017), had the greatest number of casualties in the province of Eastern Samar (NEDA 2014).

Nonetheless, the Philippines has a remarkable framework to address the ill effects of climate change prior to Typhoon Haiyan in its Philippine Development

Plan for 2011–2016. According to Alcantara (2014), the Philippine Disaster Risk Reduction and Management Act of 2010 institutionalized the National Disaster Risk and Management Framework to create the National DRRM Council. However, there appeared to be limitations in the disaster response of the National DRRM Council during the onslaught of typhoon Haiyan which left 6000 dead, 27,000 injured, and 3.9 million people displaced (CNN 2013 as cited by Alcantara 2014). The limited coordination by National DRRM Council with other agencies in both the public and private sectors seems to be the culprit for the damages incurred. It appears also that there was latent inadequacy of important materials to respond fully to such a catastrophe. The scattered island topography of the country, with major populations situated along coastal areas of both Tacloban City and Guiuan, exacerbated to its vulnerability. Hence, Alcantara (2014) suggests a need to strengthen coordination of disaster risk management with the private sector, the latter having the capacity to provide needed resources in disaster response. A comprehensive mapping seems necessary to approach this lack of government and private sector coordination from all angles in terms of probable threats and unlikely scenarios. More so, Salazar (2015) posits that the National DRRM Council was limited in its capacity and autonomy to implement fully its mandate. There is inadequate capacity building on disaster response and management of the frontline responders in times of disaster (Salazar 2015). Since the frontline responders on the local scene are the City DRRM and Municipal DRRM offices, these offices seem inadequate in terms of capacity building.

With the seven strategic priorities of the National DRRM Council, it seems that businesses have the ability to address four, to mitigate the adverse effects of climate change. The four main concerns that businesses are capable of addressing are (1) ecosystem and environmental sustainability; (2) “climate-smart” industries and services; (3) sustainable energy; and (4) knowledge and capacity development. In fact, the 2030 Agenda for Sustainable Development stipulated that businesses implement their creative and innovative solutions to address the challenges posed by sustainable development (United Nations 2015 as cited by Hughes and Scheyvens 2016). To attain lasting development, business sectors, civil society, and the government, through their partnerships, should push for the synergy of economy, ecology, and social equity (Lashley 2016).

However, the disaster resilience engagement of small and medium enterprises in the Southeast Asian countries seems relatively low particularly in Indonesia, Thailand, and the Philippines (Mavrodieva et al. 2019). There seems to be less knowledge on risk management techniques in these countries. There is also lack of coordination pervading among the responsible administrative bodies expected to form small business resilience. Mendoza et al. (2018) claim that there is an inadequate translation of the national policy into the local and sectoral plans. The mainstreaming of national policies is valuable for the government to formulate direct strategic plans. The plans should ideally consider the vulnerabilities that are specific to the business continuity of the small and medium enterprises.

The aforementioned idea is reinforced by the Stakeholder Theory where the core environment is encircled by a group of stakeholders (Bonnafous-Boucher and

Rendtorff 2016). Discourse on Stakeholder Theory by Nicolaides (2015) states that the creation of value for everyone is in conjunction with decision-making processes, crafted accurately to achieve tourism-related enterprise success. Hence, the post-Haiyan tourism MSMEs, along with an enabling disaster risk reduction management from the government, must be strengthened to increase value for all stakeholders in, and to, the region. The notion of the Resilience Theory from a social science standpoint aims for enterprise success fueled by value creation with decision-making processes as basis.

In Resilience Theory, the delineation of the system boundaries permits the development of solutions on applied policies (Lew 2018). The adaptive cycle model in Resilience Theory (Wu and Wall, 2018), points out the response of the social-ecological systems in the face of changing conditions through circular phases. The phases include self-organization, rigid path dependency, collapse, and a chaotic period of reorganization. DRRM offices in both post-Haiyan urban and rural areas need this kind of transformation practice, as it is essential to bridge the seeming disconnect of disaster resilience to tourism MSMEs. More so, it will initiate sustainable postdisaster economic development in communities.

It is in this context that this chapter recognizes the valuable role held by the post-disaster DRRM offices in promoting tourism resilience as these offices undergo various institutional changes. These DRRM offices are major catalysts to equip Tourism MSMEs in these provinces with disaster preparedness mechanisms. To improve the DRRM offices further, this chapter followed the direction offered by the comprehensive development framework espoused by the Organization for Economic Cooperation and Development covering economic (industry innovation and diversification), social (inclusive and cohesive societies), environmental (sustainable urban development, reliable infrastructures, and natural resources), and institutional/governance (open, participatory, and collaborative leadership) resilience (Figueiredo et al. 2018). With the comprehensive stance of economic, social, environmental, and governance resilience, the chapter highlights the strengths and points needed for improvement in these offices. The OECD comprehensive development framework serves as the springboard for the formulation of a recommended resilience program outline and resilience framework for postdisaster tourism MSMEs. The focus on tourism resilience could achieve a holistic approach to rehabilitate a postdisaster community. The program outline and proposed framework can contribute to the body of knowledge on strengthening the sustainability of post-disaster tourism. Postdisaster sustainability will redound, hopefully to an expedited recovery of the postdisaster economic slump in the region and vice versa in the long run.

This chapter employs qualitative lenses in documentary analyses, particularly, qualitative content analysis. The analysis utilized deductive and inductive category approaches in examining the DRRM plans of both postdisaster rural and urban areas. Moreover, thematic analysis measured the qualitative interview transcripts from the DRRM government offices. The method allowed the proponents to note the emergent themes in light of economic, social, environmental, and governance resilience.

The chapter starts with related literature on sustainability and climate change mitigation and adaptation, followed by studies on tourism resilience. The next section presents the status of DRRM offices in both locations (Tacloban City and Guiuan), followed by DRRM offices after Typhoon Haiyan. The chapter also presents the statuses of DRRM office subcategorized into social resilience, governance resilience, environmental resilience, and economic resilience. Last, the chapter provides a resilience program outline and framework for postdisaster tourism MSMEs. The framework shows the valuable impact of governance resilience through these DRRM offices as they interplay with social, economic, and environmental resilience. This chapter contributes to the scarce knowledge on postdisaster tourism resilience, and postdisaster MSMEs. It intends to bridge the apparent disconnect between government and private sectors regarding tourism business resilience.

2 Sustainability and Climate Change Mitigation and Adaptation

According to Kelman (2017), pollution prevention roughly denotes climate change mitigation and disaster risk reduction spells climate change adaptation. Both concepts are under the scope of sustainable development (Kelman 2017). However, climate change policies addressed mitigation with less focus on climate change adaptation according to UNWTO (2014) as cited by Moyle et al. (2018). The tourism industry waits on the leadership and initiatives of the government to address climate change. The 15 local tourism planning policy documents of Australia centered on issue identification prove that climate change focus relies upon political election cycles (Moyle et al. 2018). Political leaders, according to Collymore (2011), will have a broad-based inducement to render tactical support to form a culture on disaster risk reduction if there is strengthened engagement of both the private sector and civil society. This kind of engagement should be in a structured format. It is in this context that national disaster offices should capacitate themselves to provide support for coordination and strategic directions. Hence, they can effectively become agents for national advocacy efforts. The importance of this kind of coordination underscores the fact that most of the existing risks are in key production sectors and enterprise zones. Accordingly, Collymore (2011) urges the necessity to look at the relationship of risk management vis-à-vis organizational management and corporate social responsibility.

In Queensland, the government implemented a climate smart business cluster program. However, Meath et al. (2015) observed that the program focused on the barriers experienced by SMEs (small and medium enterprises) in terms of the implementation of energy savings and sustainability measures. They suggested a shift of the program focus, from barriers to the promotion of its benefits, to motivate SMEs to adapt these measures. As a result, they proposed a framework that will continually identify and implement both energy savings and sustainability measures.

It is not only in corporate social responsibility that the conduct of businesses integrates environmental sustainability. Yang et al. (2017) formulated a sustainability value analysis tool borne out of the business model innovation for sustainability. This model captures four key concepts: the thinking that goes with the production process; inclusion of multiple stakeholders; uncaptured value; and the value involving economic, social, and environmental aspects (Yang et al. 2017). The tool provides an opportunity for businesses to discover value in all aspects of the business process. The process may cover from product lifecycle to multiple stakeholders, while taking into consideration a sustainably focused approach in pursuing business model innovation. In South-West England, even the owners and managers of tourism accommodation businesses initiated technologies on renewable energy (Coles et al. 2015).

At an international seminar on climate change adaptation and mitigation in the tourism sector, Mahadew and Appadoo (2018) noted that there was a policy for mitigation suggested for tourism-related businesses. Thus, they proposed a legislative framework on climate change and tourism industry for Mauritius in East Africa. The legal framework would push business operators to conform to standards on climate change mitigation. Raising awareness through education for those directly, and indirectly, involved in the tourism industry can supplement the legal framework.

Moreover, sustainability is one of the broad themes considered as highly influential in Asia Pacific tourism trends (Tolkach et al. 2016). However, there seems to be limitations on the understanding of sustainability. The dearth of sustainability in tourism planning can be regarded as a threat to the strategic development of the industry in the Asia Pacific region. The lack of sustainability concepts in tourism planning affects the preservation of regional, natural, and cultural attractions. Key players in tourism according to Bjork (as cited in Roxas et al. 2018) are government authorities, tourism businesses, local stakeholders (such as communities), and tourists (Bjork 2000 as cited in Roxas et al. 2018). However, if the surging growth of tourism is unregulated, such could threaten sustainability. Without sustainability, the region loses the potential to ward off the ill effects of climate change.

With a systems thinking model, Roxas et al. (2018) emphasized that there are three significant drivers for the formulation of substantial policy interventions: (1) profitable businesses, (2) jobs in the locality, and (3) tourist satisfaction. Policy interventions should encompass both the supply (profitable businesses and local jobs) and demand (tourist satisfaction) sides of the tourism industry. Policies should involve profitable businesses and community leadership at the supply side. The involvement would inculcate a sense of ownership for sustainable endeavors in these sectors. Moreover, there should be an implementation of strategic policies on capacity management at the demand side. The implementation could include avoiding overcrowding in tourism destinations and providing incentives for sustainable practices. Hughes and Scheyvens (2016), on the other hand, propose a development first framework that covered an all-inclusive, long-lasting, and society-centered approach for tourism businesses. This is an augmentation to their corporate social responsibility (CSR) compared to the usual limited norms of CSR implementation. There are also implementations of sustainable endeavors according to Lashley

(2016) in some hospitality organizations as The Green Hotel Association, the Sustainable Restaurant Association, and Accor Hotels. The aforementioned organizations by implementing sustainable endeavors adhere to their ethical standards thereby mitigating environmental negative impacts from operations.

In the Philippines, the Executive Order 111 of 1999 installed ecotourism development guidelines, which paved the way for the formulation of National Ecotourism Strategy. The Department of Tourism and Department of Environment and Natural Resources collaborate to implement, monitor, and evaluate this strategy (Rivera and Gutierrez 2018). Nevertheless, inadequate technologies in the country are impediments for the business sector to implement sustainable endeavors. More so, the tourism industry characterized by private businesses dominating the local communities relies upon local government intervention to promote ecotourism. Ideally, the provision of public infrastructures and services to encourage sustainable ecotourism participation can complement government interventions. In relation to this, Rivera and Gutierrez (2018) proposed a tourism value chain for the country, which integrates the quadruple bottom-line approach consisting of financial growth, stewardship toward the environment, community participation, and organizational development at all stages of travel to aim for sustainable tourism. Hahn et al. (2015), on the other hand, acknowledged that corporate sustainability entails going beyond addressing the environmental, economic, and social factors. According to them, there is a need to recognize different tensions in pursuing the triple bottom line. Thus, they suggested a framework that augmented the dimensions covering tensions that occur among the systemic, organizational, and individual levels of the firm. It also includes the change from nonsustainable practices toward pursuing sustainable endeavors in the context of temporal and spatial elements. Having identified the tensions, firms can embark on proposed strategies as acceptance and resolution strategies.

Moreover, for indigenous communities, the combination of the four factors unique to them namely community, spirituality, sustainability, and entrepreneurship created a subset of factors (Walters and Takamura 2015). When community and sustainability overlap, it creates an environmental factor. The combination of community and spirituality creates cultural factors. Spirituality and entrepreneurship produce social factors. Last, economic factors are borne out of the merging of entrepreneurship and sustainability. At the heart of it all, is indigenous innovation. Furthermore, the combination of community and sustainability gives birth to environmental factors, thus encompassing four approaches to sustainability namely vulnerability, adaptive capacity, transformability, and resilience.

However, traditional risk management according to May and Plummer (2011) as espoused by current bureaucracies and authorities seems to have scarce attention toward stakeholder involvement. Thus, they proposed a kind of management that bridges technical and social aspects. The adaptive collaborative risk management guarantees collaboration, codevelopment of information, and shared learning among stakeholders. Disaster risk reduction and resilience building therefore sit at the apogee of importance, to support adaptation to climate change hazards, and prevent interruptions in societies as they endeavor toward further development

(Birkmann and von Teichman 2010). The foregoing studies, therefore, recognize the importance of government policies and multiple stakeholder involvement. The involvement promotes climate change mitigation and adaptation as factors toward sustainability. The direction of these factors should be toward business practices, particularly in tourism areas, as tourism MSMEs push for social, environmental, and economic resilience and sustainability. Sections 5 and 6 of this chapter highlight the valuable role played by the postdisaster DRRM offices, while they undergo institutional changes in promoting MSME resilience.

3 Tourism Resilience

According to the Intergovernmental Panel on Climate Change (2007) as cited by Jamalia and Powell (2018), resilience is the ability of a social or ecological system to maintain a basic structure and manner of functions while it absorbs changes (IPCC 2007 as cited in Jamalia and Powell 2018). Redman (as cited in Holladay and Powell 2016) distinguishes resilience from sustainability. Resilience has its focus on the qualities of the system, while sustainability delves into the present and future circumstances of the same system. In the context of tourism resilience, Jamalia and Powell (2018) indicate four dimensions namely, social, environmental, governance, and economic. They used these dimensions to gauge ecotourism resilience in the Dana Biosphere Reserve of Jordan. Their study found that the socio-ecological system of Dana Biosphere Reserve was moderately resilient to the adverse effects of climate change. The community perceived that the environmental conditions were relatively more resilient compared to social, economic, and governance resilience.

Social resilience is the capacity for a group of individuals to exhibit a collective action to cope with external disturbances. Social interactions, strengthened networks, and a relatively high level of trust and civic engagement promote social resilience (Jamaliah and Powell 2018; Pyke et al. 2018; Powell et al. 2018). The endeavors allow locals to be self-reliant and have the ability for self-organization (Holladay and Powell 2016). Ideally, the high level of social resilience would trickle down to the perceptions of tourists visiting a postdisaster area such as that of Taiwan in the study of Shou-Tsung et al. (2019). The nice recreational experiences of tourists did have a bearing on their perceived values of the reconstructed destination and their willingness to revisit the area. In a postdisaster nature-based tourism destination in Australia, building community resilience requires stakeholder engagement (Pyke et al. 2018). Recognition of the “bottom up” approach to planning involves locals as well supplements stakeholder engagement. Moreover, a high level of social and environmental resilience exists in Vietnam despite the low level of economic resilience perceived by the tourism destination households (Powell et al. 2018). The authors also added that there seems to be a disparity of perception between urban and rural tourism residents in the area. Urban residents reported a high degree of perceived economic and environmental resilience compared to that of rural residents, while social resilience did not vary at all between them.

Economic resilience on the other hand in the tourism industry means controlled financial outflow, the presence of various tourism products and attractions, and different options of livelihood sources (Jamaliah and Powell 2018; Powell et al. 2018). More so, it entails accessibility to financial resources through government support and organizational grants, and the proactive development of facilities that promote green tourism. Through the lens of smart specialization strategies implemented by the European regions, Bellini et al. (2017) proposed a framework that looked into the role of tourism with regard to economic resilience. The authors posited that tourism contributed toward engineering and ecological resilience while playing a transformative role in renewing a regional economic structure.

More so, if a particular destination can tolerate a level of disturbance without showing a substantial change to the process and structure, this area exhibits environmental resilience (Jamaliah and Powell 2018; Powell et al. 2018). In addressing the interplay between ecological and social urban systems, building environmental resilience considers green infrastructure as an important factor. It promotes the common driving forces of connectivity, participation, adaptation, and cooperation (Schiappacasse and Müller 2015). The authors contend though, that holistic planning does not consider this as the sole approach. In fact, it remains a challenge for planners to integrate green infrastructure with other sectors for policy making such as social consolidation and other important factors namely transport, energy, water, and agriculture.

For protected areas (PA) on the other hand, resilience attributes to the direct influence of the ecological, economic, and social processes at microlevel (Cumming et al. 2015). However, in a broader spectrum, social and economic processes dominantly shape and alter the resilience of PAs. In India, there seem to be research gaps noted in wildlife, particularly on monitoring and conservation, the interaction of wildlife with humans, and the socio-economic factors in implementing wildlife projects (Puri et al. 2019). Attention on wildlife is significant as ecotourism is one of the potentials of India given the natural, cultural, and wildlife resources of the country. There should be a recognition of ecotourism's potential to promote socio-economic development of communities, which could be a catalyst to solve the country's problems on poverty. Conversely, in Sweden, Koninx (2018) maintains that there seems to be tension with how local communities perceive the ecotourism plans of rewilding, which is a large-scale and comprehensive ecosystem restoration of Swedish Lapland. The conflict rises from the hut wardens and hikers who have developed an attachment to nature at the personal and emotional level. Thus, they may react to ecotourism plans that intend to promote the experience of exclusive and expensive ecotourism and so with unrestricted "free access." It would be prudent therefore, for planners to look into how the local community perceives human-nature relations for the success of ecotourism plans.

Governance resilience on the other hand entails collaboration of many organizations and stakeholders, propelled by effective leadership as they respond to challenges with the support of apt policies and implementation of relevant legal actions (Jamaliah and Powell 2018; Powell et al. 2018). According to Eckerberg et al. (2015), legal collaborations were evident in the management of environment and

natural resources and so with sustaining mountain development in the Swedish mountain regions. In these areas, the top-down and bottom-up collaborations complement each other in the implementation of public policies. The authors added that tourism rural development exhibits bottom-up collaborations. It was evident in collaborations that it requires actions and state support in the form of funding and in local partners pushing for reciprocal goals. Governance on policy networks and pertinent power over nature and functions were exhibited by top-down collaboration. More so, a combination of both top-down and bottom-up collaborations was evident in policy and organizational collaborations.

To promote wildlife habitat resilience, Choi et al. (2017) built an eco-restoration program that involved the governance of multiple actors which benefited the wildlife habitat and local community, promoted ecology education, and established collaboration of different stakeholders. The key was subdividing the ecotourism system of Eulsukdo Island in South Korea into business, economy, environment, and society fields by employing systems thinking and transformation planning process. In the Philippines, a conflict arises between the urban protected area management and land use. There seems to be limited coordination between land use planning and protected area management (De Leon and Kim 2017). This is so because the urban regional development goals of residential homeowners' association, commercial developers/firms, and the local government unit control the management of an urban protected area. The protection of urban protected area as a natural resource is set aside to accommodate the demands of stakeholders promoting urban development.

Thus, it is significant that tourism areas, particularly in postdisaster communities, consider tourism resilience factors. The majority of the businesses present in these societies should better practice these, and these are the MSMEs. The MSMEs, if equipped with the dimensions of tourism resilience, can contribute toward a sustainable postdisaster tourism economy. The involvement of DRRM offices in coordination with other government offices can best achieve this. Sections 5 and 6 of this chapter emphasize what the DRRM offices currently have and what more they can offer for tourism MSMEs to be resilient and sustainable.

4 MSMEs and Postdisaster Tourism

According to the Asian Development Bank, the backbone of Asian economies is the SMEs (Natividad 2016). SMEs consist of 98% of all enterprises and contribute to 66% of national labor force in 2007–2012. In fact, according to the Philippine Statistics Authority, MSMEs account for 99.57% or 911,768 business establishments that were reported in 2015 (Department of Trade and Industry 2016a). Moreover, MSMEs account for 25% of export revenue, and 60% of all exports belong to the MSME category through linkages and subcontracting arrangements with large firms. These contributions are significant factors in the growth of GDP

during the 3rd quarter of 2016, pegged at 7.1% growth rate, contributing to 6.6% of total GDP growth, and recognized as one of the highest in Asia (Castillo 2017).

With the remarkable contributions of MSMEs in the Philippine economy, the Department of Trade and Industry (DTI) continues to make plans to develop this sector. As part of their means to improve productivity and efficiency, DTI resorts to industry clustering for MSMEs to improve industry focus, private sector active involvement, and convergence of commodities. Example clusters include coffee production, processed fruits, nuts, and tourism support industries among others. From all of these clusters, Eastern Visayas contributes close to 30,000 MSMEs (Department of Trade and Industry 2016b). The National Statistical Coordination Board adds that the Regional Development Plan for 2011–2016 sees Eastern Visayas as an eco-tourism haven and a leader in agri-business and Information Communications Technology. There are three major islands in Eastern Visayas or Region VIII, and these are Leyte, Samar, and Biliran. The region has seven cities that include Tacloban as the regional capital and highly urbanized city. The region covers 136 municipalities as well, according to National Statistical Coordination Board (NSCB n.d.).

Moreover, the tourism industry augments to the substantial economic contributions of MSMEs. According to the World Travel and Tourism Council, as cited by Nicolas (2017), the travel and tourism industry contributed Php 2.85 trillion to the GDP of the Philippines in 2016. This contribution amounted to 19.7% of the total GDP of the country. The trend in foreign tourist arrivals increased to 6.6 million in 2017 which is 11% higher than 2016's 5.87 million (Business World 2018). Data by UNWTO World Tourism Barometer purports (as further quoted by Department of Tourism) that the increase of arrivals in the Philippines surpassed the 6% tourism growth of Asia and the Pacific and the 8% growth in Southeast Asia (Chan 2018). In Eastern Visayas, Department of Tourism records show that despite the damages and ruins caused by Typhoon Yolanda (Haiyan) in the provinces of Leyte, Southern Leyte, Samar, Eastern Samar, Northern Samar, and Biliran, the areas were still visited by more than a million tourists (Gabieta 2016). Most of the visitors were local tourists and 42,000 foreign nationals, which contributed Php 9 billion to the economy of Eastern Visayas.

According to National Economic and Development Authority (2017), tourism is vital for MSME development. It provides support in terms of increase in tourist arrivals, which leads to higher demand and increases in sales of goods and services offered by MSMEs. Before the onslaught of Typhoon Yolanda, particularly in 2011, there was a decline in the number of MSMEs, which attributed to an unfavorable business environment, limited access to capital and credit, substandard product packaging, disorganized small entrepreneurs, limitations in distribution channels and the pertinent market of products and services, and low entrepreneurial spirit (NEDA 2011). However, the domestic sales of MSMEs totaled Php 293.2 million in 2011 according to National Economic and Development Authority (2017). In 2012, MSMEs generated 131,359 jobs for the region. Moreover, 2011 data showed an underdeveloped tourism industry characterized by insufficient investments from the private sector (NEDA 2011). Less promotion of the tourism industry aggravated its

underdevelopment. The industry was limited in the marketing of tourism sites, along with relatively low capabilities of tourism areas and products, which were in dire need of adequate maintenance. Thus, despite the remarkable aims of the regional development plan for the years 2011–2016, there was a negative 6.2% in GDP in 2012 which was a plunge from 1.8% growth in 2011 (Leyte Samar Daily Express 2013). This marked Eastern Visayas as the only region among the 17 areas in the Philippines to show an economic decline in 2012.

According to the Department of Trade and Industry as cited in Meniano (2017), Super Typhoon Haiyan (locally known as Yolanda) damaged 5322 registered small and medium enterprises in Eastern Visayas on November 8, 2013. National Economic and Development Authority (2017) reported that there were 13,312 MSMEs affected in the region by the typhoon. The bulk of these MSMEs were microenterprises and only 8% from small and medium enterprises. The challenges, therefore, for MSMEs after the typhoon, included provision of technical assistance for both start-up and existing enterprises. The sector also needs assistance on product development through enhanced packaging and labeling, together with access to finance. Given the tragedy that befell the area, there was also the need to strengthen industry resiliency by complying with standards in operation and availing of risk insurance. Another challenge for these MSMEs is to adopt environment-friendly processes in production and the efficient use of utilities. Moreover, the tourism industry also needs investments in underdeveloped tourism destinations and products (National Economic and Development Authority 2017). A strengthened partnership across tourism subsectors will counter weak tourism governance and enhance human resource capabilities.

Nevertheless, one of the missing elements of the CRRP in terms of livelihood is the failure to include principles on disaster risk reduction (Salazar 2015). There are insufficient pre-disaster measures in smaller firms due to a lack of knowledge on these matters. More so, there is a scarcity of funding to cover the extra costs entailed by these measures (Mendoza et al. 2018).

The extant literature shows how tourism resilience through MSMEs, in the context of social, governance, economic, and environmental resilience, could contribute toward climate change mitigation and adaptation. However, there is a need for adequate government policies and multistakeholder involvement to achieve this type of comprehensive resilience. The role of equipping these tourism MSMEs with tourism resilience capacity rests on the shoulders of the DRRM offices in post-disaster areas. Therefore, the disaster risk reduction management offices are a catalyst for tourism MSMEs to effectively contribute toward climate change mitigation and adaptation, which are major factors in achieving sustainability. This section, together with Sects. 5 and 6, was the basis for recommending a resilience program outline and a framework for post-disaster tourism MSMEs discussed in Sect. 7.

5 DRRM Offices Before Typhoon Haiyan

In the Philippines, there is a local disaster management council and management officer in every town. However, in a discussion paper series on Typhoon Haiyan response and its coordination between Philippine government, civil society and international actors, Dy and Stephens (2016) noted that the councils on disaster were mostly inactive. More so, due to resource constraints, these disaster officers had dual appointments. Some positions in disaster offices remained unfilled while political appointees in temporary status occupied other disaster offices. Skills on damage and needs assessment were found lacking in local governments. The lower levels of the government seemed unfamiliar with the cluster system; thus, they had not incorporated it into their operations despite the fact that the national level adopted this. In Region 8, where Tacloban City in Leyte and Guiuan Eastern Samar are located, the National DRRM Council noticed that despite having risk maps and the identification of no-build zones, public and commercial buildings were still located in coastal areas (National DRRM Council 2014). The DRRM officers had also a different understanding of the term “storm surge,” and even the Barangays were not aware as to how to utilize the 5% of their internal revenue allocation intended for disaster response. Table 1 describes the status of Post-Haiyan DRRM offices before typhoon Haiyan.

In an interview with the city DRRM officer in Tacloban City, Mr. Bernadas explained that before Typhoon Haiyan, the City DRRM Office was part of the city

Table 1 Status of post-Haiyan DRRM offices before Typhoon Haiyan

Dimensions of resilience	Urban area	Rural area
Social resilience	Lacking coordination between committees	Lacking coordination among the local government unit
	Committees having multiple roles	DRRM officer had multitasking roles
Governance resilience	No autonomy of CDRRM office	Office was connected to the mayor
	Focus on rescue unit alone	The office had a DRRM plan and DRRM handbook
		Trained barangay officials on disaster preparedness, supported by the DILG
		The town had one of the Philippine atmospheric, geophysical, and astronomical services administration’s (PAGASA) field stations
		Unorganized relief operations
Environmental resilience	Responders came from coastal areas	
Economic resilience	Office had limited capacity	Small businesses were not part of trainings on basic life support

Source: Authors Own Table (2020)

mayor's office. The drawback according to him is that the changing of political guards after every election challenged the continuity of the office. With regard to DRRM operations, the committees were not necessarily interoperating, with other committees seemingly lacking coordination. The people and departments engaged in DRRM were also members of many different committees. The limitations in focus of these members resulted to problems in decision-making. More so, despite having private organizations helping the local government on emergency response, the focus was solely on the Tacloban rescue unit. Many responders came from coastal areas who were also vulnerable to the onslaught of disasters and this compounded the limited capacity of the office.

Guiuan, Eastern Samar, on the other hand, is the location of one of the Philippine Atmospheric, Geophysical and Astronomical Services Administration 20 field stations. It also boasts of sophisticated equipment with one of five surveillance weather radars; and one of the three Doppler radars in the Philippines, developed by Japan Radio Company (National DRRM Council 2014). The local officials had a DRRM plan, which incorporated emergency provisions and contingencies. The office even had a DRRM handbook with identified local hazards and salient features of the DRRM law. Nonetheless, it failed to mention storm surge, which was identified as a hazard in the Barangay DRRM Plan of one of its barangays known as Victory Island. The said omission indicates the lack of coordination among the local government unit. The inadequate coordination resonates with the findings of Dy and Stephens (2016), where the DRRM officer does multitasking roles as secretary to the Mayor and a member to two different organizations in the local office. In an interview with the officer in charge of the Municipal DRRM Office of the town, Mr. Sabulao expressed that the office focused on disaster preparedness of the barangay officials before the typhoon with trainings supported by Department of Interior and Local Government (DILG). However, the office connected to the Mayor's office then had barely three personnel. There were also limitations in the implementation of Republic Act No. 10121 known as the Philippine Disaster Risk Reduction and Management Act of 2010 as evidenced by the unorganized relief operations. More so, small businesses were not recipient to trainings on basic life support as well.

On November 7, 2013, Guiuan Eastern Samar and Tacloban City conducted a preemptive evacuation. There was an orderly evacuation, and the centers were equipped with food and water (National DRRM Council 2014). According to Department of Science and Technology, Typhoon Haiyan made its first landfall in Guiuan Eastern Samar at 4:40 a.m. as shown in Fig. 1. The typhoon resulted in the complete destruction of 11,571 houses, with 70% of Guiuananons living in coastal barangays. There was a Php 375 million-worth of loss in the fisheries sector of the town (Municipal DRRM Committee – Guiuan 2017). Tacloban City took most of the brunt of the brutal Haiyan winds and the fatal storm surge that resulted in about 2678 fatalities (National DRRM Council 2014). The roof collapsed, and there was inundation of the lower portions of the Astrodome evacuation center, as it was located near the coasts. Rains damaged the rice stockpiles, and seawater swept away other relief goods prepared by the City DRRM Office. Looting of business establishments occurred in both Guiuan Eastern Samar and Tacloban City.

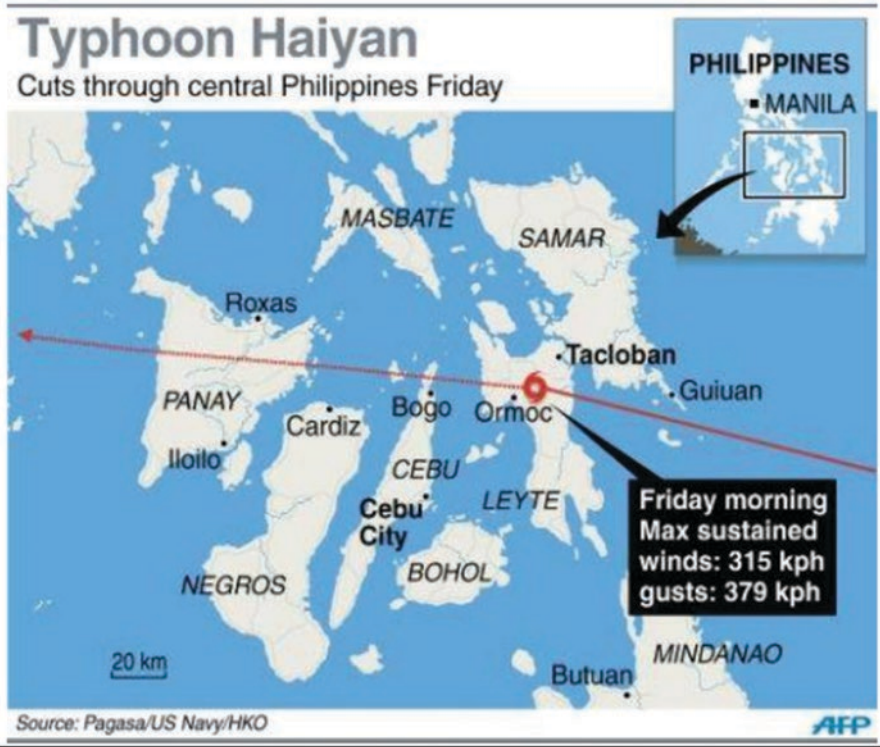


Fig. 1 Path of Typhoon Haiyan on November 8, 2013. (Source: Pagasa/US Navy/HKO as cited by Davidson (2016))

6 DRRM Offices After Typhoon Haiyan

Major changes occurred after Typhoon Haiyan for the DRRM offices of both Tacloban City and Guiuan Eastern Samar. Notable modifications were in the autonomy of the DRRM offices for both locations, which separated from the Mayor’s office with a permanent City DRRM Office for Tacloban and Municipal DRRM Office for Guiuan. More so, both locations implemented RA 10121 with emphasis on the cluster approach system. Though at varying degrees, both areas intensified capacity buildup and trainings and even extended these to business establishments.

In Tacloban City, to address the needs of the impacted community, the City DRRM office did a rapid assessment and needs analysis. Further, the 11 clusters of the national level were augmented to include another 3 to reach 14 clusters for the city. Table 2 shows the cluster of the City DRRM Office with the fire incident cluster added only in 2018 to manage secondary hazards. With regard to the looting incident, the office made sure that uniformed personnel would focus on peace and order alone. These personnel will not be involved with the search and rescue operation. The sole focus of uniformed personnel will be to ensure the security of the city

Table 2 Cluster roles and functions

No.	Cluster name	Cluster lead	Major roles and functions
1.	Search rescue and retrieval	City DRRM office	Organizes the overall search and rescue committee and pertinent activities
2.	Health and nutrition	City health office	Organizes the overall health and nutrition committee and inclusive activities
3.	Engineering operations	City engineering office	Organizes engineering and reconstruction service committee and clearing activities
4.	Peace and order	Tacloban City police office	Organizes overall peace and order committee and activities
5.	Relief operations	CSWDO	Organizes relief service committee and pertinent activities
6.	Shelter and infrastructure	CHCDO/CEO	Organizes shelter and infrastructure committee, reconstructions, and coordination
7.	Camp coordination and camp management (CCCM)	CSWDO	Organizes a camp management committee and activities
8.	Management of the dead and missing	City DILG	Ensures coordination at several levels: Local, regional, and national to manage activities for the dead and missing
9.	Logistics and support system	City DRRM office	Organizes a logistics and support system including warehousing, inventories, and trucking of deployed items
10.	Public information and media management	City information office	Organize public information and media management system
11.	Price monitoring and control	Business permit and licensing office	Organizes a price monitoring and control committee and activities
12.	Livelihood and food security	City veterinary office	Organizes a livelihood and food security committee in coordination with different agencies
13.	Economics and fund management	City budget office	Ensure the proper utilization of the LDRRMF
14.	Fire incident	Bureau of fire protection	Organizes committee for the management of secondary hazards

Source: City Disaster Risk Reduction and Management Plan for 2016–2022 of The City of Tacloban (City Disaster Risk Reduction Management Committee-Tacloban City 2016)

including commercial facilities. The office believes that by securing these commercial facilities, it ensures food security as well. These establishments will be their source for the relief operation needs including basic food, water, and medical sources.

The Municipal DRRM Office in Guiuan Eastern Samar, on the other hand, took a different approach to solve the looting incident by implementing an antilooting ordinance. The implementation supplemented the strengthened security for businesses during disasters by employing uniformed personnel. The implementation of RA 10121, on the other hand, led to a more organized relief delivery operation in

Guiuan. Their cluster operations include plan and rescue, public information and education, evacuation and security, communication and warning, engineering shelter, emergency/disaster preparedness plan, health and sanitation, and transportation and emergency. More so, the municipal offices, together with each barangay, are encouraged to establish a memorandum of agreement with businesses to buy their goods and medicines in the event of disasters.

(a) Social Resilience

With regard to social resilience in Table 3, Mr. Bernadas of the City DRRM Office of Tacloban City observed increased involvement of people after Haiyan. Part of their enhanced strategies is reaching out to the communities through intensified training of the barangay DRRM committees. It includes proper orientation for these barangays to access and maximize their allotted disaster fund. They also ensure that businesses get proper representation in the cluster approach system together with other sectors in the pursuit of inclusive DRRM.

For Guiuan Eastern Samar, the approach focused on organizing small businesses such as the Guiuan Integrated Micro-enterprises Association. The MDRRM office provides these organizations emergency funds for recovery and rehabilitation of the latter. The assistance intends to provide immediate alternative sources of income for fishing and farming communities. More so, business associations were encouraged to have their own contingency plans and the incorporation of the basic first aid and basic life-support trainings (particularly for hotels and resorts). The office has learned also to reach out to all sectors in the community, and coordinate with DTI for pertinent price monitoring and control right after the disaster. The latter activity was to avoid exorbitant pricing of commodities that usually happens after a catastrophe.

(b) Governance Resilience

Increasing the transparency of the City DRRM Office Fund utilization manifested governance resilience in post-Haiyan Tacloban City, as depicted in Table 4.

Table 3 Status of post-Haiyan DRRM offices after Typhoon Haiyan

Dimensions of resilience	Urban area	Rural area
Social resilience	Intensified trainings of barangay DRRM committee	Organized small businesses
	Orientation on access and maximization of funds for disasters	Provision of emergency funds
	Implements inclusive DRRM	Encourages contingency plans for business associations
		Conduct of basic life-support training for hotels and resorts
		Price monitoring in coordination with DTI

Source: Authors Own Table (2020)

Table 4 Status of post-Haiyan DRRM offices after Typhoon Haiyan

Dimensions of resilience	Urban area	Rural area
Governance resilience	Transparency of fund utilization and recruitment of volunteers	Formulation of associations
	City DRRM offices have top-of-the-line disaster risk reduction equipment	Advanced security of establishments
	Collaboration between local government units	Visibility of rescue operators in public places

Source: Authors Own Table (2020)

Documents describing the allocation of funds are posted in public places. There was also a publication of the continuous recruitment of volunteers, as the office believed that growth (in terms of capacity level) is significant to avoid being caught unprepared. However, the office also believed that the local chief executive support of any Local Government Unit (LGU) is another important factor. Limited support leads to roadblocks in disaster management implementation. There is also a need to collaborate with other LGUs by sharing best practices and seeking their assistance should the need arise. In fact, the City DRRM office of Tacloban lent their top-of-the-line equipment to other units for training purposes during the regional DRRM summit dubbed as Rescue Jamboree. The summit also encouraged collaboration with other units with regard to disaster management.

The Municipal DRRM office of the rural area, on the other hand, shows governance resilience by their efforts to strengthen small businesses through the creation of associations. These associations serve as representatives for businesses in the formulation of disaster management policies. One of the projects of the Municipal DRRM Office was the installation of CCTVs for the advanced security of establishments. They also ensured the public with the visibility of rescue operators in public places. More so, they made sure that the implementation of disaster management was devoid of biases through equal treatment to avoid suspicions of political patronage. The office was also flexible and open to changes in plan implementation. Through this, the attitude of the people reflects governance resilience as they manage limited emergency funds provided to them just to start businesses.

(c) Environmental Resilience

Promoting environmental endeavors among coastal communities has been a prevailing challenge for the City DRRM Office in Tacloban City. According to the office, as shown in Table 5, there was limited appreciation of the mangrove forests among coastal barangay residents. Another challenge for them was lobbying against the planned tide embankment project of the Department of Public Works and Highways. The City DRRM Office does not believe in walling the entire coastline as the only solution to storm surge. The basis was the Dutch consortium study that reported the importance of allowing the beach forest to return as mitigation to hydro meteorological hazards. Fortunately, the national government relented to the lobbying of the office to choose which parts of the city are to be subjected to tide embankment and which parts would resort to mangrove reforestation. Thus, it became their

Table 5 Status of post-Haiyan DRRM offices after Typhoon Haiyan

Dimensions of resilience	Urban area	Rural area
Environmental resilience	Implement mangrove reforestation against storm surge	Implement mangrove reforestation and coastal cleanup
		Conduct advocacies on waste management

Source: Authors Own Table (2020)

Table 6 Status of post-Haiyan DRRM offices after Typhoon Haiyan

Dimensions of resilience	Urban area	Rural area
Economic resilience	Relocated fishing communities to less vulnerable sites	Provision of street signage
	Increased security for malls	Provision of security and safety during tourism activities
	Implemented livelihood trainings for microbusinesses	Funds allocation for livelihood recovery and rehabilitation
	Implemented cluster livelihood programs in relocation sites incorporated with DRRM	Installation of sea walls for businesses in coastal areas

Source: Authors Own Table (2020)

strategy to create a mangrove eco-park in Barangay 83, Paraiso, in Tacloban City. The office also intended to collaborate with the regional office of the DENR for mangrove area protection and clearing residences from these areas. They have associated with Wetlands International and even piloted 4 barangays as potential for mangrove ecotourism areas. Their challenge now is for the 33 identified coastal barangays of the city for them to promote mangrove reforestation through pertinent policies and programs. They also intend to inculcate among coastal residents the integral appreciation for the environmental value of mangroves. The efforts aim to emphasize the significance of mangrove reforestation not only as an ecotourism aesthetic but also as protection against storm surge and tsunamis.

The Municipal DRRM Office in Guiuan Eastern Samar employed simpler strategies to promote environmental resilience such as mangrove reforestation and coastal cleanup. Integrated in one of their livelihood programs is providing cash for work in mangrove plantation projects. The office also promoted advocacies on waste management, segregation, and proper waste disposal for coastal resorts.

(d) Economic Resilience

The City DRRM Office of Tacloban implemented different strategies to boost economic resilience among affected communities, as shown in Table 6. For fishing communities, especially those previously located in the San Jose Airport area, residents were relocated to where they could still sustain their fishing livelihood. These were less vulnerable sites but indirectly connected to the sea albeit at a safer distance from the communities. The office claimed that other residents began fish cage businesses, and the city government thus promoted their harvests by providing a

market for their fish produce. The Tacloban City DRRM Office recounted that the city government encountered limitations in providing initial capital for small businesses due to inadequate support from the national government. Thus, the city government opted to award returning MSMEs with 1-year tax holiday with no permits and pertinent regulated fees so they could grow their businesses within the year. For the malls that decided to close operations due to massive looting, they came back with the condition that increased security is provided to them and controlled shoppers during the first month after the typhoon. Further, the office implemented livelihood trainings for some microbusinesses after which there were provision of kits upon graduation. There were cluster livelihood programs for relocation sites as well, incorporated with DRRM.

In a small island tourism zone such as Guiuan, the Municipal DRRM Office's assistance comes in the form of street signage and the provision of security and safety during tourism activities. There is also implementation of the 30% fund intended for recovery and rehabilitation for fishing and farming communities in coordination with other government agencies such as the Department of Agriculture and Department of Trade and Industry. The office also provided facilities, as sea walls, to protect businesses located in coastal areas.

7 Resilience Program Outline for Postdisaster Tourism MSMEs

Table 7 highlights the pertinent strengths of City DRRM Office in Tacloban City and Municipal DRRM Office in Guiuan, Eastern Samar, *vis-à-vis* points needing improvement. In terms of social resilience, the urban area succeeded in having business sector representation with regard to disaster management. However, activities may also be promoted that would strengthen networking between barangay DRRM committee and tourism MSMEs within their barangays. Empowered barangay DRRM committees may involve tourism MSMEs in DRRM trainings, formulation of disaster risk policies, and other activities such as environmental promotion endeavors. The aforementioned activities will enhance social interaction, strengthened network, social trust, and civic engagement. Given that Guiuan, Eastern Samar, is a potential tourism destination area, municipal DRRM activities should have an enhanced inclusion of tourism MSMEs. The activities could be implemented as a municipal endeavor or at the barangay level (for big communities) to empower barangay DRRM committees and enhance consolidation of these sectors.

Governance resilience efforts for City DRRM Office are just limited within its role as DRRM implementer. The implementation does not yet extend to empowering tourism MSMEs that would boost their capacities to manage disaster risks. The extension of implementation will be able to provide a venue of strengthened collaboration, joint problem solving, and effective leadership among tourism MSMEs. The office, on the other hand, expressed transparency by providing unbiased

Table 7 Status of post-Haiyan areas in terms on dimensions of resilience

Dimensions of resilience	Strengths		Points needing improvement	
	Urban area	Rural area	Urban area	Rural area
Social resilience	Intensified training of barangay DRRM committee	Small businesses organization	City DRRM Office may implement activities that would promote strengthened network between communities and business sectors	Municipal DRRM Office may provide activities that will enhance cohesion among small businesses and vulnerable sector in promoting DRRM
	Barangay orientation to access and maximize disaster fund	Emergency fund for recovery and rehabilitation of vulnerable sectors		
	Business sector representation	Contingency trainings for business associations		
		Collaboration with Department of Trade and Industry for price monitoring		
Governance resilience	Transparency of fund utilization and disaster volunteer recruitment	Formulation of business associations	Enhancement of joint problem solving and power sharing among small businesses	Venues for joint problem solving, transparency, and power sharing
	Collaboration with local chief executive and other LGUs	Added security to establishments		
		Unbiased disaster management implementation		
		Flexibility to plan changes based on implementation		
Environmental resilience	Implementation of mangrove eco-parks	Mangrove reforestation and coastal cleanup	Enhance environmental education and outreach to push communities to provide policies for biodiversity conservation	Implement a comprehensive environmental education and outreach among communities and businesses
	Value formation on mangrove appreciation	Advocacies on waste management, segregation, and proper waste disposal		

(continued)

Table 7 (continued)

Dimensions of resilience	Strengths		Points needing improvement	
	Urban area	Rural area	Urban area	Rural area
	Renewable energies in the transportation sector			
Economic resilience	Sustained fishing communities	Street signage, facilities, and security for tourism activities	Enhance livelihood opportunity options to promote diversity of products	Extend livelihood programs to other small businesses packaged with DRRM schemes
	Alternative source of fishing livelihood	Coordination with government agencies for the implementation of recovery and rehabilitation livelihood	Provide access to financial resources that would promote disaster risk management among small businesses	
	Tax holiday incentives for small businesses			
	Added security for big businesses			
	Livelihood trainings for microbusinesses			
	Disaster resilience reduction management trainings for microbusinesses			

Source: Authors Own Table (2020)

implementation of its programs. However, the activities are vague for all businesses and do not specify inclusion of tourism MSMEs especially resorts located in coastal areas, which need to have a strong collaboration with their respective barangay disaster risk committees.

With regard to environmental resilience, both communities rely on mangrove reforestation as an initiative to promote biodiversity conservation. The City DRRM Office shows advancement in this aspect as the promotion of the mangrove ecotourism park can give birth to various activities. The dual impact of mangrove reforestation both as hazard mitigation and as proliferation of marine species is an efficient means to achieve environmental resilience. However, the sustainability of this endeavor can be undermined if not supplemented with environmental education and

outreach programs to coastal communities and tourism resorts alike. The promotion of renewable energies not only in the transportation sector, but also in tourism establishments, is an equally important contributor to environmental resilience. The strategy does not only conserve energy but it also offers the least cost for establishments in the long run.

Livelihood programs promoting economic resilience are commendable for both locations. However, there is a need to promote livelihood programs that pave the way for diversity of products and to include tourism MSMEs. These livelihood programs should also be packaged with disaster risk reduction management schemes to guide small businesses in times of disaster. The economic sustainability of their businesses is a big factor toward the economic sustainability of the community as a whole.

Table 8 shows the recommended resilience program outline for postdisaster tourism MSMEs in general. Proposals culled from the initial best practices of DRRM offices in both Tacloban City and Guiuan, Eastern Samar, were in the context of social, governance, and environmental and economic resilience. Manifestations of social resilience are in the strengthened interaction, networking, social trust, and civic engagement of tourism MSMEs with the government sector. Orientation trainings starting from all barangay DRRM committees particularly on the access and pertinent disaster fund maximization can reinforce social resilience. Their utilization of funds should include contingency trainings for tourism MSMEs within their barangays to enhance business continuity planning and business DRRM. Conducting a series of disaster simulation workshops that emphasize the active roles of tourism MSMEs will further enhance social resilience in the community.

With the inclusion of tourism MSMEs in disaster fund utilization, there can be an organization of a tourism MSME DRRM association from the respective tourism sector. Each sector would be able to produce a disaster management trainer, customized to the disaster needs for each sector such as hotels, resorts, restaurants, and the like. The trained tourism MSME responder could conduct peer trainings for other tourism MSMEs within their sector thus spreading governance resilience to the whole tourism MSME industry.

Fostering environmental resilience through environmental education and outreach could inculcate inherent sustainable environmental business practices for tourism MSMEs. They can be encouraged to practice sustainable environmental business practices that may imbibe creativity within MSME tourism groups by providing incentives. There can be an integration of renewable energy utilization in business practices. A showcase of these best practices would encourage others to follow suit. More so, the promotion of mangrove ecotourism parks in both the urban and rural locale is also an efficient way to promote biodiversity and mitigate the adverse effects of climate change. Social entrepreneurship components of tourism MSMEs may be through the conduct of mangrove reforestations. The formulation of the mangrove ecotourism planning and marketing should be in coordination with tourism MSMEs, Department of Environment and Natural Resources, Department of Trade and Industry, and Department of Tourism to have a holistic and sustainable framework for the proposed coastal tourism destination.

Table 8 Recommended resilience program outline for postdisaster tourism MSMEs

Dimensions of resilience	Proposed programs	Proposed sample activities
Social resilience	Social resilient tourism MSMEs	
	Strengthening collaboration between barangay DRRM committee, tourism MSME organizations, and DTI	Orientation trainings for barangay DRRM committee on fund maximization that includes involvement of tourism MSMEs within the barangay
		Contingency trainings for tourism MSME associations in coordination with DTI for enhanced business continuity planning that incorporates disaster risk management
		Disaster simulation workshop with emphasis on the active roles of tourism MSMEs and barangay DRRM committee in the face of disaster
Governance resilience	Governance resilient tourism MSMEs	
	Inclusion of tourism MSMEs as recipients in the utilization of disaster funds	Instructors' training/workshop for tourism MSME disaster management volunteer associations in coordination with DRRM Offices, Department of Trade and Industry and local government unit
	Formulation of tourism MSME disaster management volunteer associations for hotels, resorts, restaurants, transportation, travel and tours, and sectors	Trained tourism MSME disaster volunteers can conduct peer trainings for tourism MSMEs in respective sectors
Environmental resilience	Environmentally resilient tourism MSMEs	
	Environmental education and outreach for tourism MSME disaster management associations on environmentally sustainable business practices	Seminar/workshop on environmentally sustainable business practices for tourism MSME disaster management associations
	Promotion of environmentally sustainable business practices done by tourism MSMEs	Provide incentives/awards for tourism MSMEs embarking on environmentally sustainable business practices

(continued)

Table 8 (continued)

Dimensions of resilience	Proposed programs	Proposed sample activities
	Promotion of mangrove ecotourism parks in coastal areas in coordination with Department of Environment and Natural Resources, Department of Trade and Industry, and Department of Tourism and Organized Tourism MSME Disaster Management Associations	Conduct mangrove reforestations as CSR components of tourism MSMEs
	Promotion of renewable energy in transportation, hotels, resorts, and other tourism establishments	Mangrove ecotourism park planning and marketing workshop with tourism MSMEs, Department of Environment and Natural Resources, Department of Trade and Industry, and Department of Tourism
		Advocacy trainings on incorporating renewable energy in tourism business practices
Economic resilience	Economic resilient tourism MSMEs	
	Livelihood trainings promoting diverse tourism MSME products/attractions with Department of Tourism, Department of Agriculture, and Department of Environment and Natural Resources	Diverse business ideas training/workshops for tourism MSMEs highlighting best practices of successful tourism MSMEs
	Linking tourism MSMEs to financial resources in coordination with Department of Science and Technology, Department of Trade and Industry, and private financial institutions for disaster resilience funds	Financial literacy workshop for tourism MSMEs incorporating allocation for disaster resilience funds

Source: Authors Own Table (2020)

Livelihood trainings that promote diverse tourism MSME products and attractions can invigorate economic resilience. These livelihood trainings should encourage creativity of tourism products that are not only attractive but environmentally friendly as well. Recycled souvenir items can be one of these livelihood trainings such as eco bags from recycled flour sacks and many others that can add value to tourism MSME products. Training to diversify business ideas could spark creativity among tourism MSMEs, which potentially supplements the best practices of successful tourism MSMEs. Another important factor for tourism MSMEs is their ability to access funding for these ideas. To address access to funds, there is a need to link tourism MSME beneficiaries to other agencies such as Department of Science and Technology, Department of Trade and Industry, and other angel private financial institutions.

The adverse impacts of climate change took their toll upon developing economies such as the Philippines where micro, small and medium enterprises categorized a majority of businesses. The ravages brought about by Haiyan were both a curse and an opportunity to tourism MSMEs in Region 8. It is in this context that rehabilitating postdisaster tourism MSMEs needs a holistic approach. It should cover the dimensions of resilience for them to survive the ever-changing landscape of tourism destinations in the advent of climate change. A strong network and collaboration are key for government institutions in partnership with the private sector to promote sustainable and resilient rehabilitation of tourism MSMEs. Moreover, economic strategies should integrate environmental business practices with the integration of renewable energy use and disaster contingency aspects. The efforts will empower tourism MSME and pave the way for sustainable growth. Strategies should not only address temporary solutions for compliance purposes but should target the heart and soul of sustainable development. The efficient management and amalgamation of economic and environmental strategies could fortify social resilience among various tourism stakeholders. A fortified social resilience anchored on economic and environmental schemes may be the best test of governance resilience. A socially resilient postdisaster tourism destination can continually address the challenges of climate change unabated by any catastrophe that may arise as they draw strength from cohesive partnerships.

The right strategies anchored in the OECD comprehensive development framework of economic, social, environmental, and governance resilience could further promote economic growth. Economic progress, in turn, can give birth to more sustainable and disaster-resilient endeavors, thus the importance of a policy environment and business ecosystem for the continued transformation of tourism MSMEs. The harnessing of available resources with the support of government entities, industry, and the community can push against barriers to postdisaster sustainability. An empowered tourism MSME can be a catalyst toward the development of the overall postdisaster community.

In Fig. 2, good governance with the help of the people and other stakeholders could shape economic progress and environmental endeavors. An economic activity that is integrated with environmental efforts may promote diverse products and attractions for tourism MSMEs in post-Haiyan areas. This is in conformity to the position of O'Brien and van Dorresteijn (2018) where government should prioritize an enabling environment that incorporates MSMEs in the pursuit of investment in the public sector and climate strategies.

Furthermore, literature on business resilience posit strategies on the application of survival, adaptation, and innovation (Dahles 2018). Dahles (2018) adds that businesses are mostly successful in sustaining operations even during crisis when they implement diversification within and throughout the tourism industry. The diverse tourism MSME products and attractions form part of the supply side of the postdisaster tourism community. Controlled tourism and tourist satisfaction on the demand side complement the supply side. The demand side implementation of strategic policies on capacity management includes not allowing overcrowding to take place, sustainable practices incentives, and satisfaction of tourists (Roxas et al. 2018).

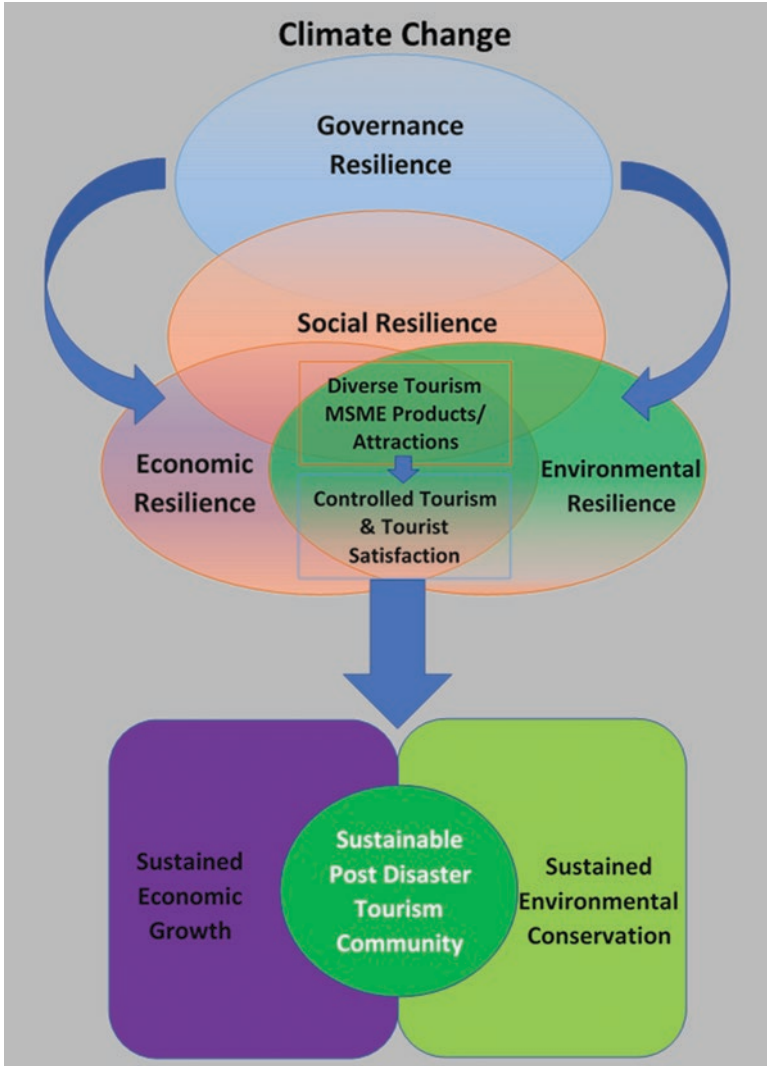


Fig. 2 Resilience framework for postdisaster tourism MSMEs. (Source: Authors Own Figure (2020))

These efforts are important catalysts toward a sustainable postdisaster tourism community anchored on sustained economic growth and sustained environmental conservation.

Nonetheless, though resilience is not equivalent to sustainability (Lew et al. 2017), most authors look at tourism resilience in relation to sustainable development (Lew and Cheer 2018; Cochrane 2010; Luthe and Wyss 2014; Becken 2013). In fact, Saarinen and Gill (2019) argue that a fundamental part of sustainable

tourism thinking is resilience. Better governance implementation and management (Saarinen and Gill 2019) in the form of governance resilience uniting social, economic, and environmental resilience to the fore is a key factor in sustainable tourism development. As shown in Fig. 2, the enabling function of DRRM offices to reinforce resilience among tourism MSMEs in the supply side and controlled tourism in the demand side will contribute toward a sustainable postdisaster tourism community. The sustainability of the postdisaster tourism community will be held in place over time by sustained economic growth in tandem with efforts on sustained environmental conservation. The local government units can see the significance of their role through governance resilience practices in providing an enabling environment for tourism MSMEs and the rest of the postdisaster tourism destinations in general. The tourism MSMEs on the other hand can integrate strategies to enforce resilience in their business plans and business continuity plans. Their sense of security and safety against future disasters will empower them to diversify tourism products/attractions in their business plans for them to provide added satisfaction for tourists. The diversification of tourism products and attractions, ideally, should integrate environmental conservation techniques, for example, the use of resources and waste management practices in their packaging. All the aforementioned efforts will uphold a sustainable postdisaster tourism community.

8 Conclusions and Implications

Typhoon Haiyan was both a curse and a revelation to DRRM institutions as well as tourism MSMEs in Eastern Visayas. It brought huge devastation to an area, which has been economically struggling and beset with the challenges of climate change. However, the onslaught of the typhoon opened up to discoveries and unraveling of the best potentials of the region. At a macroperspective, despite low-economic levels, the area is blessed with geographical, historical, and cultural tourism potentials. More so, it has the tourism MSMEs to translate these potentials into economic growth and sustainability.

On the part of the government, the typhoon showed some realizations on limitations of the practices in both the urban and rural areas particularly for DRRM offices. This paved the way to initiate institutional changes that embraced not only a limited focus on disaster resilience but on a larger scale, encompassing social, environmental, economic, and governance perspective. DRRM offices play a large role in promoting a sustainable tourism economy in these postdisaster areas. DRRM offices can do this by extending their services to tourism MSMEs in coordination with Department of Trade and Industry, Department of Tourism, and Department of Environment and Natural Resources in protected areas. A resilient tourism MSME, supported by strengthened and compliant DRRM offices, will allow the former to address the barriers of providing diverse tourism products and attractions anchored in environmental perspectives. This could translate to economic growth and

consequently more sources to promote climate mitigation and adaptation of business practices toward sustainability.

The contents of this chapter could provide insights for policies that are specific to postdisaster tourism MSMEs. However, postdisaster areas with tourism potentials could also benefit from future studies on disaster resilience that are peculiar to other tourism sectors such as accommodation, food and beverage, travel and tours, and transportation.

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