

# Challenges and Opportunities for Sustainable Tourism Development in Ulithi Atoll

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## Abstract

■ This article aims to analyze the tourism potential of Ulithi Atoll, in the Federated States of Micronesia. It identifies possibilities for sustainable tourism development, while taking into account the major issues that threaten the environment, the cultural integrity and the future of the local community. Through a review of existing research and an assessment of the web presence, the study develops a diagnosis of the current situation of the tourism sector in the destination. The tourism potential of Ulithi mainly relies on its beautiful physical environment and authentic cultural heritage, but it is still largely untapped due to limited development. Tourism represents a strategic tool for the economic growth and empowerment of Ulithi community. Presently, however, the atoll's biggest problem is the recovery from the recent disastrous Typhoon Maysak. Other pressing challenges are climate change and the erosion of traditional knowledge. The study identifies ecotourism and voluntourism as key niche market opportunities for the destination. Encouraging greater participation among the stakeholders and a concrete commitment to sustainability within the strategic plans are some of the recommendations that aim to build the tourism industry in a way that supports the local culture, the natural resources and the way of life.

### *Key Words:*

Sustainable tourism, Federated States of Micronesia, Ulithi Atoll, Yap State

## Resumen

■ El artículo tiene como objetivo analizar el potencial turístico del atolón de Ulithi, en los Estados Federados de Micronesia, identificando las posibilidades de desarrollo turístico sostenible, teniendo en cuenta los principales problemas que amenazan al medio ambiente, la identidad cultural y el futuro de la comunidad local. A través de un análisis de la bibliografía existente y de una evaluación del web, la investigación elabora una diagnosis de la situación actual del sector turístico en el destino. El potencial turístico de Ulithi, basado principalmente en sus preciosos recursos naturales y en su auténtico patrimonio cultural, está casi íntegramente inexplorado. El turismo representa una herramienta estratégica para el crecimiento económico y el fortalecimiento de la comunidad de Ulithi. Sin embargo, el mayor desafío al que se enfrenta actualmente el atolón es la recuperación del reciente desastroso Tifón Maysak. El cambio climático y la pérdida de los conocimientos tradicionales son otros desafíos apremiantes. El estudio identifica el ecoturismo y el volunturismo como oportunidades de mercado clave para el destino. Fomentar la participación entre las partes y el compromiso con la sostenibilidad en los planes estratégicos son algunas de las recomendaciones que aspiran a configurar el sector turístico de una manera que apoye la cultura, los recursos naturales y las formas de vida locales.

### *Palabras clave:*

Turismo sostenible, Estados Federados de Micronesia, Ulithi, Estado de Yap

## Introduction

■ Located in the waters of the western Pacific Ocean in the Caroline Islands, Ulithi Atoll is administered by Yap State, within the Federated States of Micronesia (FSM). Ulithi is a cluster of 41 low-lying islets totalling about 4.5 km<sup>2</sup>, surrounding the fourth largest lagoon in the world and situated about 191 km east of Yap Island. The population of Ulithi is less than one thousand people grouped into four islands: Falalop, Mogmog, Asor and Federai (see Figure 1). The local economy is based on fishing, agriculture and some livestock.

Ulithi offers an incredibly rich natural heritage and a strong local culture. The coral reef and the sea turtles are the outstanding elements of the atoll's natural environment. Rare corals, sponges, colourful tropical fish and reef invertebrates exist in profusion in the pristine reef. Ulithi is also home to one of the largest populations of nesting sea turtles in Micronesia, with approximately 1,000 turtles nesting annually between April and August. Beside the natural heritage, the traditional island culture is also of great value, primarily thanks to the local dances, the art of navigation, the Ulithian language, and other authentic indigenous practices and knowledge. Since the 1930s, Ulithians have gradually been converted to Roman Catholicism, although the old beliefs and practices are still largely present in the local culture.

However, Ulithi has to deal with several alarming issues that harm its environment, the authentic culture and the population. In April 2015, Typhoon Maysak ripped through Micronesia's Yap State causing extensive damage to Ulithi Atoll. Natural disasters are only one

of the stressors that are threatening the atoll and other small islands, which are particularly vulnerable to climate change.

From a tourism point of view, Ulithi has considerable tourism potential. With its palm trees and white-sand beaches, surrounded by coral-rich aquamarine waters, to the eyes of visitors Ulithi appears as an exotic destination in one of the most remote and untouched corners of the world. However, tourism on Ulithi is on a very small scale, mainly due to the remoteness and to the limited carrying capacity of the islets.

For Ulithi, tourism represents a driver for the development of the destination, with the potential to boost the local economy and wellbeing of the community, support the conservation of the biodiversity and the revitalization of the local culture. In the context of Small Island Developing States (SIDS), tourism is widely recognized as a key engine of growth, and represents a significant source of foreign exchange earnings, employment and opportunities for the communities, both directly in tourism and indirectly in the ancillary sectors (Craigwell, 2007; Scheyvens & Momsen, 2008). So often, tourism represents one of the few activities with a strong competitive advantage for SIDS, due to their location and their exceptional natural and cultural resources (World Tourism Organization, 2012). Milne (1997: 238), who examined the national development plans of South Pacific Islands, suggests that "with careful management and improved levels of local participation these nations [South Pacific microstates] have the potential to develop tourism in a way that offers long-term economic growth without sacrificing the cultural and environmental inheritance of future generations". Moreover, tourism can also represent a way to revitalize local culture, by promoting and protecting the cultural heritage, and to benefit the conservation of the natural environment, by providing income to protected areas through admission fees, operators' concessions, sponsorship and gifting from enterprises and tourists, for example (UNEP, 2014; UNWTO, 2012).

On the other side, tourism can be environmentally, culturally and economically disruptive, especially in view of competition for scarce land (Scheyvens & Momsen, 2008; UNEP, 2014; UNWTO, 2012). Therefore, in looking ahead to the future of Ulithi, it is of vital importance to build the basis for sustainable tourism management.

In the academic literature, there are a few studies on Ulithi, mostly done in the fields of Anthropology and Natural Science. In particular, most of the anthropological studies were done by the American academic Lessa, who started to conduct fieldwork on Ulithi in 1947, providing a significant contribution to the Micronesian studies (Lessa, 1950, 1964, 1966, 1980). There are only a few studies from the specific viewpoint of tourism in Ulithi. They discuss the situation of traditional culture

Figure 1: Map of Ulithi



Source: Pacific Worlds & Associates

and social change (Kuwahara, 2005) and describe some community conflicts about tourism projects on the atoll (Rubinstein, 2003). Other publications somehow related to the tourism field in Ulithi focus on the agriculture and food supply (Onjo et al., 2003), on the archaeological settlement pattern (Craib, 1981) and on the significance of Ulithian dances (Aoyama, 2003). In 2006, the Habel Outer Island Education Fund disseminated a publication about the changes in the society influenced by the westernization on the atoll (Mellen, 2006); and an entire chapter is dedicated to the colonialism and globalization in Ulithi and Guam in the book “Colonial and Global Interfacings: Imperial Hegemonies and Democratizing Resistances” (Herman, 2007).

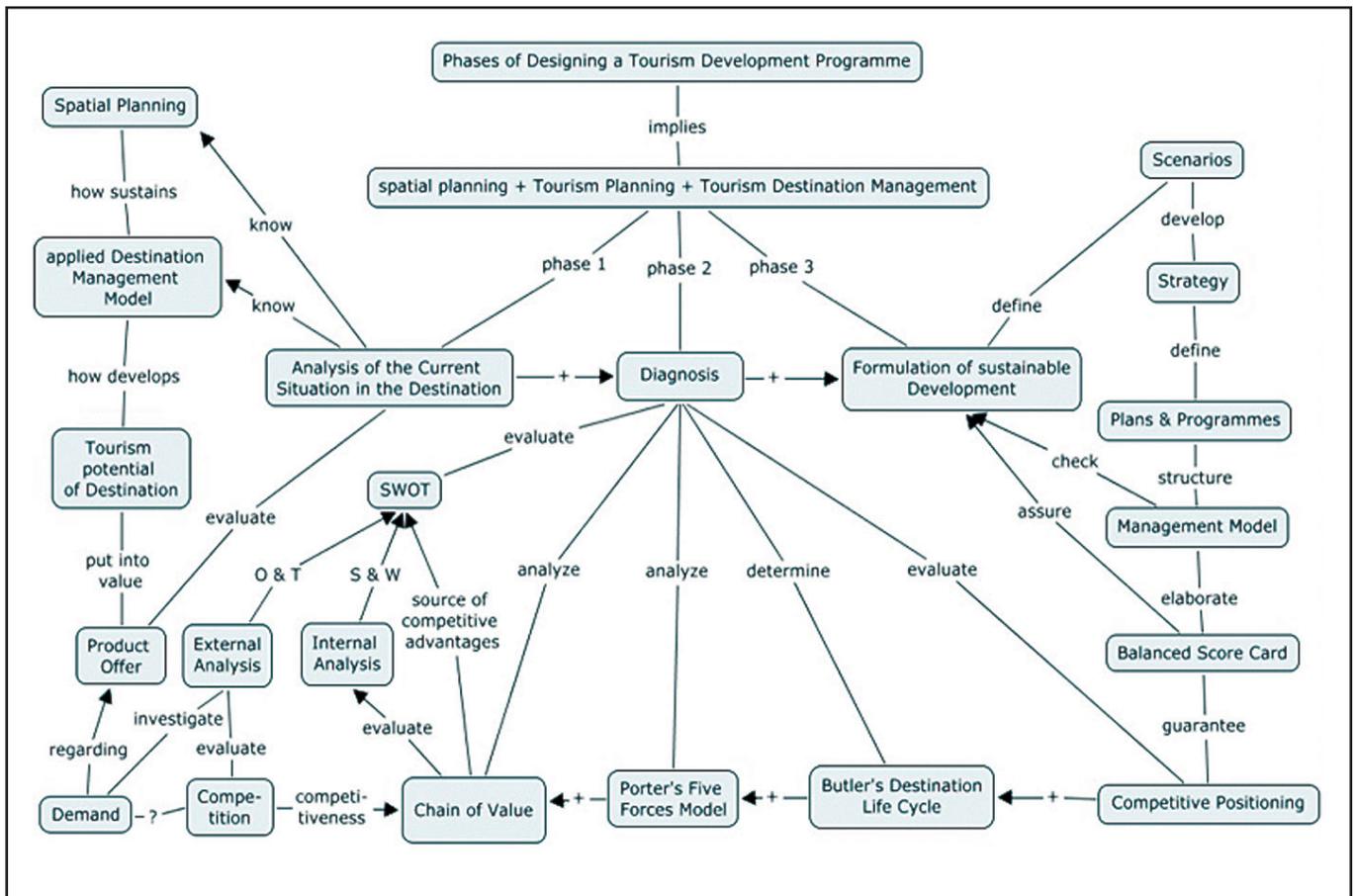
However, there is a lack of studies exploring the challenges and the opportunities for tourism development on Ulithi. Thus, this paper aims to develop a diagnosis of the tourism sector on the atoll and specifically to analyse the major issues affecting the destination. The research study also intends to explore what are the possibilities for future sustainable tourism development in Ulithi, by identifying potential target markets and suggesting some key recommendations for the tourism industry.

## Methodology

■ This study followed a qualitative exploratory approach. In order to develop the analysis of the current situation and diagnosis of the tourism industry for Ulithi, the data gathered have been analysed using an adapted model of the Diagnosis-Implementation-Monitor (DIM) methodology presented by Escola Universitària d’Hoteleria i Turisme CETT Research Team (2007) (see Figure 2). The DIM methodology is a model diagnosing the sustainable competitiveness in tourism destinations in the long term. It provides a group of diagnostic tools that analyse the present situation of a destination in order to design future development strategies and establish the guidelines for monitoring the strategy (Alvarez, 2007).

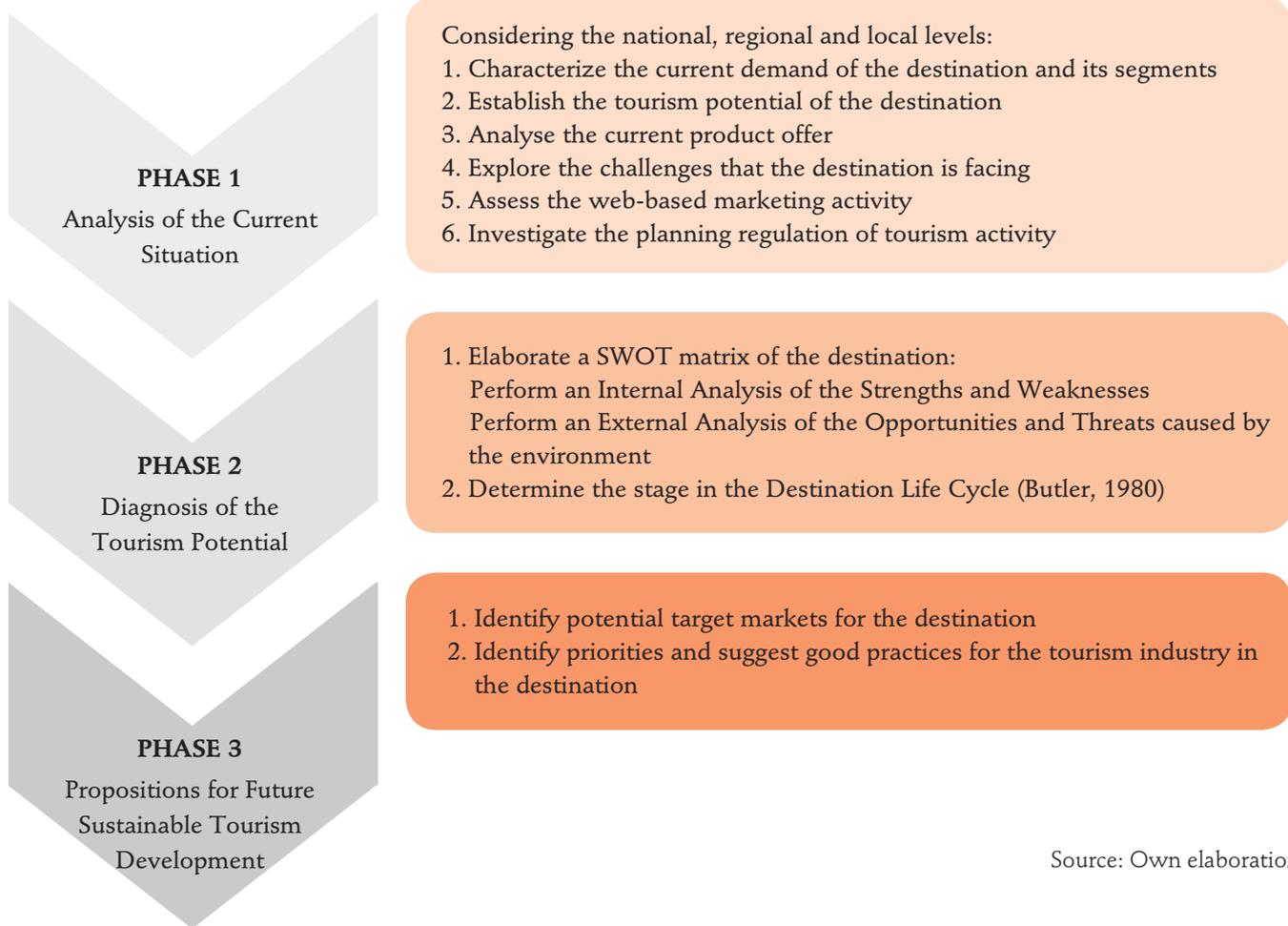
Since the aim of the study was not to formulate a tourism development strategy for Ulithi, the model has been adapted and organized into three phases (see Figure 3). For Phase 1 we undertook an analysis of the current situation looking at multiple elements. This analysis was structured from the national (FSM) to the regional (Yap State) to the local level (Ulithi) in order to obtain overall and exhaustive results regarding the tourism sector in

Figure 2 Conceptual Map DIM Methodology



Source: Escola Universitària d’Hoteleria i Turisme CETT Research Team (2007) reported by Alvarez (2007)

**Figure 3 Model of the methodology adopted for the research study**



the destination. Phase 2 consisted of the diagnosis of the tourism potential of Ulithi through a SWOT analysis and the determination of the stage in the Tourism Area Life Cycle of the destination. Finally, Phase 3 intended to identify potential target markets for Ulithi and provide recommendations for future tourism development.

Two methods were used to collect the data for this study: a literature review of existing research and a web audit including an online content analysis and review of visitor comments. The literature review consisted of the analysis of secondary data such as existing plans, policies, publications and statistics that could be obtained. The specific goal of the web audit was to evaluate the web-based marketing activity of the destination. Key sites have been reviewed ranging from government tourism sites, through to large global sites (Google, Wikipedia, Wikitravel and Lonely Planet) and individual business sites. In each case we looked to get a detailed feel for the images and messages that are being presented to the prospective visitor and the degree to which marketing materials link to broadened experiences and potential

yield creation. The review of visitor comments about the destination concentrated on TripAdvisor, as a major user generated content (UGC) site.

These data collection methods have been chosen as considered appropriate for the objectives of the research project. It is worth to note that for this study no on-site survey was conducted nor primary data was collected. This can represent a limitation to this research. Nevertheless, from the author's perspective, the data collection methods chosen are a valuable alternative to fieldwork in the destination.

## Results

### Issues

■ The results show that the Micronesian atoll is currently dealing with several pressing issues that concern its environmental and cultural integrity and threaten the

future of the local community. The recovery of Typhoon Maysak represents the biggest challenge at the moment. Maysak devastated nearly everything on the atoll and strongly affected the reefs and the whole atoll ecosystem. Natural disasters are likely to increase as a consequence of climate change and this is a major threat for the atoll and many other low-lying small island nations.

It is relevant to note that although the Small Island Developing States have contributed relatively little to the problem of climate change through their historic greenhouse gas emissions, they are considered to be among the most vulnerable to the impacts of climate change. Climate change is already affecting economic growth, health indicators, water availability, food production and the fragile ecosystems in SIDS (United Nations-OHRLLS, 2011).

In Ulithi global warming and consequent sea level rise, pollution, invasive species, erosion, eutrophication and overfishing represent major ocean threats for the destination. Coral reefs are suffering from multiple stressors and the sea turtles are not as abundant as they were before. Ulithi community is also at risk of losing traditional resource management practices. The erosion of traditional culture and social changes in Ulithian traditional way of life brought with the advent of globalization are serious sociocultural issues for the local community and its identity. Particularly, the analysis highlighted the risk of losing and trivializing traditional cultural assets such as local values, taboos, and other kind of indigenous knowledge and practices, from fishing technique, to nutrition habits to dances to the art of navigation. It is interesting to notice that Ulithi was a large naval base for the U.S. during the Second World War. The occupation of Ulithi by US Naval Fleets changed the Islanders' way of life dramatically. Imported food, culture and language transformed the traditional ways of these remote islands. After the war, Ulithi Atoll has been under the strong socioeconomic and cultural influence of the U.S. and social and economic autonomy has been considerably lost (Kuwahara, 2003). The research reported that globalization has brought some comforts and convenience, but on the other side nowadays it is very hard for the local people to live without money, unlike in the past. One of the consequences is that many young people go abroad to study. It is becoming a big challenge for Ulithians to be self-sufficient economically while at the same time respecting their own traditions.

### Diagnosis of the Tourism Industry

■ According to the Tourism Area Life Cycle (TALC) model proposed by Butler (1980), the analysis of the data reports that Ulithi as a tourism destination can be positioned in the "exploration" stage. This is due to the small number of tourists who visit the atoll (less than 200

visitors per year), and to the fact that the destination is mainly based on primary tourist attractions, especially natural heritage. The area is unspoiled and none but a few tourist facilities and services exist in only one of the islets of Ulithi (Falalop). The key tourist infrastructures are a ten-room resort and an airstrip, with one airline (Pacific Missionary Aviation) that flies twice a week from Yap Island to Ulithi on a nine-seat plane. The study also showed that at the moment, tourism has no great economic or social significance to local residents.

The analysis of the current situation of the tourism industry in Ulithi suggests that the main strengths of Ulithi lie in its unique physical landscape and natural resources, its authentic cultural heritage and its people (see Table 1). The natural environment with its pristine waters, the coral reef and the sea turtles are assets of great value. Moreover, the remoteness and the uniqueness of Ulithi enhance the exclusivity and the exoticism of the destination. Another strength is represented by the positive reviews from previous travellers about the place and the accommodation provider on the atoll.

On the other side, in respect of the development of the tourism sector, Ulithi presents considerable weaknesses. The damages caused by Typhoon Maysak represent the major fragility at the moment, in terms of harm to the environment, infrastructure and living conditions of the local community. Besides, vulnerabilities are seen in the lack of tourism development (particularly as to poor infrastructures, services, activities, and accessibility), the disadvantages derived by a small economy, including limited investments and a small domestic market, and lack of training and education opportunities. Poor name recognition and promotion represent other relevant weaknesses of tourism development on the atoll as well as the lack of (updated) information available for visitors.

The study revealed that opportunities for tourism in Ulithi are various and largely lie in new product development, brought by the enhancement of cultural and heritage assets, local food and natural resources. In addition, improvements on infrastructures and accessibility in terms of better air links and boat transport services between islands represent significant future opportunities. The enhancement of Yap and FSM recognition, and the overall brand of the Pacific Islands, together with the product development in this broader geographical area, would boost tourism in Ulithi itself. For instance, specific opportunities lie in sport and cultural events in Yap or in other FSM States, as well as in the universal recognition given to some heritage sights by UNESCO. The growing interest of visitors in seeing the outer islands represents another exploitable opportunity for the atoll. The expected economic growth in the FSM for the next years along with the priority of the Government to encourage the development of the private sector are positive aspects to consider as well.

**Table 1 SWOT Analysis of Tourism in Ulithi**

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>- Unspoilt and pristine natural environment</li> <li>- Isolation, remoteness</li> <li>- Uniqueness of the atoll (40 islets)</li> <li>- Exclusivity, low visitor numbers</li> <li>- Unique and diverse marine wildlife: reefs and sea turtles</li> <li>- Authentic culture and strong traditional values</li> <li>- Friendly community</li> <li>- Unique traditional knowledge (e.g.: canoeing, navigation, fishing techniques, language, dances)</li> <li>- Interesting historical heritage (WWII shipwreck and military relics)</li> <li>- Willingness and commitment of local community with the preservation of traditional culture and natural resources</li> <li>- Climate: warm temperatures all year round</li> <li>- Warm and clear water conditions</li> <li>- Safety</li> <li>- Positive experience and reviews from previous travellers about the destination and accommodation provider</li> <li>- Proximity and affinity with Yap, the other FSM States and other Pacific Islands</li> </ul>	<ul style="list-style-type: none"> <li>- Consequences of Typhoon Maysak                             <ul style="list-style-type: none"> <li>- Changes in the environment (damaged vegetation and reefs)</li> <li>- Difficult living conditions for the local community (e.g. issues concerning economic activities and food supply, run-down buildings)</li> <li>- Damaged tourism-related infrastructures (e.g. hotel)</li> </ul> </li> <li>- Small economy                             <ul style="list-style-type: none"> <li>- Limited resourcing and high cost for marketing and investment</li> <li>- Small population → small domestic market</li> </ul> </li> <li>- Lack of know-how and limited training opportunities</li> <li>- Lack of tourism related subjects in school curriculum</li> <li>- Problems of fresh water/power supply and costs</li> <li>- Poor and expensive telecommunication and internet connection</li> <li>- Lack of tourism-related infrastructure (accommodation options, restaurants, shops, hospitals...)</li> <li>- Limited capacity and facilities of Ulithi airstrip (and airport facilities of Yap and other FSM States)</li> <li>- Limited and expensive international and domestic air links and limited PMA planes' capacity</li> <li>- Remoteness (long flights)</li> <li>- Poor accessibility and transport facilities and service between the different islands</li> <li>- Lack of tourism products and services                             <ul style="list-style-type: none"> <li>- Lack of recreation opportunities and activities (e.g. tours, diving centres)</li> <li>- Absence of handicraft and cultural centres</li> <li>- Lack of maintenance and protection of heritage sights</li> </ul> </li> <li>- Poor name recognition</li> <li>- Poor marketing activity and promotion</li> <li>- Lack of (reliable) information available online and on site</li> <li>- Lack of understanding and support to tourism by part of the community</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>- International awareness and recognition after Typhoon Maysak                             <ul style="list-style-type: none"> <li>- Voluntourism</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Competition with other Pacific Islands that present more tourism development and are not damaged by recent typhoons</li> </ul>

Opportunities	Threats
<ul style="list-style-type: none"> <li>- Product development in Ulithi                             <ul style="list-style-type: none"> <li>- Events (e.g. Ulithi Culture Day)</li> <li>- Culture and community related products</li> <li>- Island hopper type of product to explore several islets</li> <li>- Water-based activities</li> </ul> </li> <li>- Niche tourism markets: ecotourism, wildlife, research</li> <li>- Eco programmes on the preservation of marine natural resources</li> <li>- Local food (e.g. fresh fish and taro)</li> <li>- Improvements on air links and tourism infrastructures</li> <li>- Visitors interested in visiting the outer islands</li> <li>- Tourism development in FSM and in Yap:                             <ul style="list-style-type: none"> <li>- Sport events (e.g. 2018 Micronesian Games in Yap)</li> <li>- Cultural events (e.g. Yap Day)</li> <li>- Island hopper type of product to explore more than one FSM island</li> <li>- Yachting and cruise shipping</li> <li>- Large scale development via FDI in Yap</li> </ul> </li> <li>- Strengthening of the Pacific Islands, FSM and Yap brands</li> <li>- National (FSM) and regional (Pacific Islands) synergies: research, marketing, HRD, planning</li> <li>- Cultural heritage in FSM recognized by UNESCO (e.g. Yap Stone money, Nan Madol in Pohnpei)</li> <li>- Expected economic growth for FSM</li> <li>- Tourism as a key priority for the Government</li> <li>- Priority of the Government to push the private sector → increase of tourism related businesses</li> </ul>	<ul style="list-style-type: none"> <li>- Effects caused by climate change                             <ul style="list-style-type: none"> <li>- Sea level rise → Disappearance of the atoll under the ocean waters</li> <li>- Natural disasters (e.g. typhoons)</li> <li>- Erosion of natural resources</li> </ul> </li> <li>- Lack of data and research on tourism</li> <li>- Limited support for tourism industry and development</li> <li>- Uncertainty over economic future and U.S Compact of Free Association with FSM</li> <li>- Large scale development via FDI in Yap</li> <li>- Conflicts in the community brought by tourism</li> <li>- Labour migration (especially young people)</li> <li>- Health (Chigunguya virus, dengue)</li> <li>- Global economic downturns</li> </ul>

Source: Own elaboration

However, the analysis also highlighted several threats for the tourism development of Ulithi which is primarily vulnerable to climate change and all the related issues. Furthermore, threats are also seen in the competition with other more developed island destinations as well as by the limited government support to the tourism industry and related lack of robust statistics - matters that affect the planning and management of the sector. Tourism development in Ulithi is also susceptible to the attitude of the community towards tourism. Conflicts may arise, particularly as regards current sociocultural issues concerning cultural authenticity and changes in the society. Finally, the migration of young labour to more developed countries and, more in general, the

uncertainty about the economic future of the FSM are other considerable threats to tourism development in the Atoll.

### Potential Markets

■ When identifying potential target markets for the destination, significant opportunities are seen in voluntourism and ecotourism. The identification of these markets is supported by the idea that niche tourism is beneficial as its numbers tend to be small, but produce more economic benefits per tourist than mass tourists who tend to travel with little personal and family budgets

(FSM SBOC, 2004). Moreover, niche markets have the potential to grow and develop in a challenging global competitive environment. Furthermore, according to the study, these niche markets stand out particularly at present, showing to have significant potential despite the consequences of Typhoon Maysak. Voluntourism in Ulithi can be seen as the form of tourism that allows visitors to support the recovery efforts from the recent typhoon, while spending vacations in the destination. Studies report that disaster volunteering is a notable trend (The International Ecotourism Society, 2013) and that there is growing interest around the world in voluntourism. Travelers are embracing the concept because it offers the opportunity for a more fulfilling and authentic visitor experience (NZTRI, 2014). In addition, in Ulithi there is a clear opportunity of linking conservation efforts with tourism under the form of ecotourism. Ecotourism expeditions are considered to have relevant and sustainable potential by generating multiple positive effects to the community: ranging from conservation of natural resources, to economic benefits to preservation of traditional practices and education of the community about the ecology behind their problems. In the last few years, Ulithi has been hosting a community-based ecotourism project, set up by the non-profit organization Oceanic Society, and focused on the preservation of the marine wildlife and habitats by deepening the connections between people and nature (Oceanic Society, 2014). This program allows tourists to travel to the atoll in small groups and get involved in local eco-projects. "Ulithi Atoll Community Conservation Program" is regarded to be successful and therefore can be seen as an example to be followed. Considering that the atoll presents relevant issues concerning its environmental and cultural integrity and that the approach of this study is on behalf of sustainability, ecotourism is preferred to other forms of tourism interested in the wildlife of the destination that are considered "less sensitive".

The analysis conducted in this study also pointed out that there is opportunity for other markets, such as diving and cultural tourism, although it is expected that this potential will be in the long term, considering the damages caused by the recent Typhoon. Diving is the core of leisure tourism in FSM. According to the results gathered from this study, previous divers are very satisfied with the marine environment offered by the atoll. The proximity with Yap, already a major diving center, adds significant potential to the diving market in Ulithi, especially considering visitors willing to explore more 'off the beaten path'. Regarding cultural tourism, outer islands like Ulithi represent some of the 'least visited' places in the world offering unique ways of life and this meets the interest of a small niche of visitors who seek more authentic experiences. In Ulithi there is real potential to develop small scale tourism experiences that focus on its authentic culture and heritage. Artistic expressions such as dances and other cultural elements and local events, together with the historical heritage (especially the WWII ruins)

are unique features and represent a clear opportunity for tourism development. Particularly, Ulithi Culture Day is a great occasion to see the authentic local dances, traditional games and competitions, and to buy local handicrafts, among other things.

## **Recommendations for Future Sustainable Tourism Development**

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■ The aim of these propositions is not to come up with strategic actions, as stakeholders have not been consulted. Instead, the intent is to offer recommendations of value that should be considered while planning tourism in Ulithi. While participation and commitment are required by all the stakeholders in the planning process, each priority is the responsibility of different bodies, including the national government, regional authorities, village chiefs, tourism companies and associations, local businesses and groups, and others. Some of these recommendations are higher priority than others. For example, at the moment, the priority is the recovery from Typhoon Maysak, therefore many actions for the tourism industry will have to take second place and represent guidelines for the longer term. Six key areas have been identified: sustainable tourism planning, research and statistics, accessibility and infrastructure, human resource development and training, investment and product development, and web-based marketing activity.

### **Sustainable Tourism Planning**

It is fundamental that all the stakeholders understand the role of tourism for the Ulithi community and the impact that this sector may generate. Therefore encouraging greater participation in planning and decision-making is a key recommendation for the tourism sector. Tourism strategies should be backed by action plans that set out specific activities over a given period and are revised annually. These should be agreed between the stakeholder bodies and indicate responsibilities for implementation. Including a commitment to sustainability within overall tourism policies is also a very important strategy and this has to be achieved by taking into account the various issues that are undermining the atoll. For instance, the happenings of Typhoon Maysak indicate that it is essential to have a disaster emergency plan in place and detailed Disaster Risk Management guidelines while training operators in implementation.

Regarding the environmental issues, measures that support sustainable tourism include the establishment of natural reserves and Marine Management Areas, which can be accessed by tourists only by permit. Fishing permits and Nature Fees for water-based activities represent other possible measures to support the preservation of the fragile ecosystem of Ulithi. Environmental impact assessments should also be mandatory for all tourism

sector investments. Furthermore, developing and disseminating environmental guidelines, with a particular attention on resource (especially freshwater and energy) and waste management for tourism operators and for tourists represent another beneficial proposition looking at the environmental sustainability of Ulithi.

The way to deal with sociocultural issues and support sustainable tourism is twofold. From one side the community needs to understand the impacts, both positive and negative, that tourism may bring to the atoll. Tourism planning must involve the participation of all the stakeholders who have to be consulted in the decision-making process. In addition, in order to preserve the local culture, some kinds of limitations and special permits could represent a feasible and efficient way to minimize the negative social impacts. For example, this might refer to permissions to access some specific areas or take photos, or regulations with the capacity to manage cultural aspects such as traditional attire. From the other side, it is important that visitors receive a preparation before getting to the destination. This means being aware of the traditional habits and cultural differences in order to avoid possible conflicts with the local community while in Ulithi. The government and the tourism operators play an important role in providing relevant information to potential visitors, primarily online.

Another way to build sustainable tourism in Ulithi and involve the role of the government is to ensure that when infrastructure projects are undertaken to support growth in tourism, the needs of the community are not overlooked. For example, if water systems are to be built, these should be connected to local houses as well as to hotels.

### **Research and Statistics**

This study revealed that data were poor and scarce with little research about tourism in Ulithi and, more broadly, in Yap and in all FSM. This causes significant difficulties at the moment of evaluating the performance of the industry, and making important decisions. Therefore, for Ulithi it is important that Yap improves its statistics, for example by implementing visitor surveys containing specific questions for the ones who visited the Atoll. At the same time, the method used to gather data at the national level could be reviewed and improved in order to guarantee higher standards of reliability.

In addition, a practical way to monitor the sustainability of tourism development of the atoll is the creation and implementation of a system of indicators of sustainable tourism at the destination level, in line with UNWTO recommendations (UNWTO, 2013). For instance, the Global Sustainable Tourism Council (GSTC) and the European ETIS system set guidelines that are concrete examples Ulithi could look at (European Commission, 2016; Global Sustainable Tourism Council, 2016).

### **Accessibility and Infrastructure**

Improvements on infrastructures and accessibility through better air links and boat transport services between islands are priorities in terms of future tourism development of the atoll. For instance, accessibility to Ulithi could be improved by offering the alternative to visitors to reach the atoll by boat, and by making available online the necessary information about schedules and costs. Moreover, improvement of air access should be a priority for the whole country primarily in terms of new and more frequent direct air services and better schedules both internationally and domestically. At the national level actions should also be undertaken aiming to develop infrastructure such as airports, roads, and accommodation, as well as crucial sectors like telecommunications, internet access and renewable energies. However, this development should be done in a rational manner, given the limited carrying capacity of the country.

### **Human Resource Development and Training**

A well-trained, motivated, and efficient workforce can improve employment levels, enhance product quality, increase visitor yields and support improved sustainable management of the sector (SPTO, 2014). The study highlights that human resources represent a constant problem in the development of tourism in FSM. In Ulithi, this aspect could be improved by including tourism related subjects to the school curriculum at the high school on Falalop. In addition, training opportunities could be offered to the students outside the classroom, for example through learning experiences at tourism related businesses. Furthermore, external support through the organization of workshops could be provided to local businesses and community members who are interested in working in the tourism sector.

### **Investment and Product Development**

The study indicates that opportunities for product development are seen in the exploitation of cultural and heritage assets of the atoll through the establishment of local markets, visitors' centres, tours, and the promotion of events such as Ulithi Culture Day. Local food is another source whose linkages with tourism could be heightened and the increased offer of water-based activities (mainly diving) is another clear way to boost the sector.

### **Web-based Marketing Activity**

It is important to enhance the online visibility of Ulithi and improve the quality of the web-based marketing activity. Particularly, strengthening the links between sites, keeping websites up-to-date and increasing levels of interactivity by encouraging User Generated Content are effective strategies that can open up opportunities for the small atoll. In addition, a good way to attract interest to Ulithi is to offer local content and stories provided by the

local community. This is also important for promoting activities linked to the aims of sustainable tourism, such as opportunities to visit host communities, buy local produce and experience natural areas in responsible ways.

## Conclusions

■ The results show that like many other small islands, the Micronesian atoll of Ulithi is on the front line of several pressing issues that concern its environmental and cultural integrity and threaten the future of the local community. At present, the major challenge is the recovery from disastrous Typhoon Maysak. Environmental problems related to climate change are seriously harming Ulithi, which is also threatened by the erosion of traditional knowledge and other sociocultural issues.

The tourism potential of the atoll, which mainly relies on its beautiful physical environment and authentic cultural heritage, is still largely untapped. Tourism development is very limited in terms of both supply and demand. The study suggests that tourism is a strategic tool for the development of Ulithi and that the small atoll can add great value to the nation as a whole. The way in which tourism is managed is crucial for the present and future of the Ulithi community and it is essential to build the tourism industry in a way that links to and support its culture and traditional knowledge, natural resources and way of life.

The research identifies voluntourism and ecotourism as key market opportunities for the destination. These niche markets are regarded to provide significant benefits to the atoll, particularly at the critical present moment of recovery from Typhoon Maysak. Interesting potential for the future is also seen in the diving market and in cultural tourism, especially through the enhancement of local events.

Sustainable tourism management requires that all the stakeholders understand the role of tourism for the destination and the impact that this sector may generate. Therefore, encouraging greater participation in planning and decision-making is a key recommendation. Including a commitment to sustainability within overall tourism policies and strategies is also a fundamental strategy. It is important to note that tourism planning (and promotion) of Ulithi has to be in accordance with the guidelines of Yap State as well as the all FSM. Moreover, it is relevant to highlight that important actions should be undertaken first at the national level and at the State level in order to enhance the tourism competitiveness of the whole country and, consequently, of the small atoll.

Reducing economic leakages and maximizing multiplier effects should be a major goal of the policy makers of Ulithi, and the FSM in general. To do this, it is important

that they ensure that development plans heighten linkages between tourism and other economic sectors such as agriculture, fisheries and transportation. By encouraging the use of local supplies and ensuring provision of training and credit to small-scale entrepreneurs, governments can assist even small businesses to make a significant contribution to the local economy. The successful case of the community-based ecotourism project run by Oceanic Society in the atoll supports the idea that the establishment of small local enterprises is a sustainable approach of tourism development in Ulithi, especially with external support, for example from NGOs.

Looking back, we can argue that the data sources used for this study have been sufficient to answer the research questions, although some limitations exist. The lack of robust data about the tourism industry in the region represented the major constraint in the development of this study. Particularly, in several cases the information gathered was not recent and therefore it had to be treated carefully. Besides, the impossibility of realizing an on-site survey and the fact that no primary data was collected represent considerable limitations to this research. However the study offers valuable contributions in respect of the destination tourism planning and management. It can be seen as a solid basis and starting point for further investigation, especially within the aim of developing a tourism strategy for Ulithi. As this regard, a consultation process with relevant industry stakeholders is suggested, including government representatives, NGOs such as Oceanic Society and Pacific Missionary Aviation, local businesses and members of Ulithi community. Furthermore, to the academic world this research provides a case study that can be of reference for future investigation, especially in the field of sustainable tourism development and in the context of Small Island Developing States.

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