



TOURIST VILLAGE REJUVENATION AND OVER-TOURISM MANAGEMENT: THE DESA WISATA NGLANGGERAN LIFECYCLE EXPERIENCE, YOGYAKARTA, INDONESIA

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Abstract

Purpose of the Study: Overtourism is an issue that is being experienced by many well-known destinations in the world, both in urban and rural areas. The purpose of this research is to find out how the experience of developing a Tourist village is seen from the tourism lifecycle approach. This study also explores the sensitivity of managers to the phenomenon of over-tourism in their village, to design strategies for product rejuvenation.

Methodology: This research adopts a historical qualitative research approach. This method is exercised through two data sources. Primary data was carried out through non-participant observation (for four months) in the Nglanggeran tourist village, Yogyakarta to observe and interview tourist village managers, tourism entrepreneurs, workers, and local communities. Meanwhile, Secondary data used include online media articles, scientific writings, and promotional media.

Main Findings: The study found that in the tourism area life cycle model approach, tourist villages' growth can be grouped into 6 phases. The exploration phase and stagnation were marked by the start of the Nglanggeran tourist village and massive growth that had environmental, social, and cultural impacts. The management adopts several strategies, including price management, visitor management, and length of stay management.

Implication/Applications: This experience is very important to be learned and known by tourism stakeholders, especially tourist village managers and the government which is developing similar tourism products massively throughout Indonesia.

The originality of the study: This research is original, and this is the first study that finds out how the experience of developing a tourist village is seen from the tourism lifecycle approach and explores how managers are sensitive to the phenomenon of over-tourism in their village. Thus, this scope is expected to be developed in other tourist villages in Indonesia to get generalizations about the development of tourist villages.

Keywords: *Tourist Village, Overtourism, Carrying Capacity, Tourism Area Life Cycle, Desa Wisata.*

INTRODUCTION

Since the colonial era or before the independence era, the tourism industry in Indonesia has grown consistently and dramatically (Spillane, 1991; Sunjayadi, 2017). From the demand side, this phenomenon is at least shown by statistical data on foreign tourist visits to Indonesia (formerly the Dutch East Indies), since 1969 (REPELITA I) numbered 86.000 tourists, to 16.110.000 tourists in 2019 (BPS, 2020). On average, this growth reached 10% annually, or the same average as the growth in foreign exchange tourism from 2008 to 2019 (Karyatun et al., 2021).

This growth is believed to be influenced by the growth of international tourists in the world, which has an average growth of 25% from 1969 (1.431.4 million tourists) to 2019 (14.420 million tourists) (bps.go.id, 2020).

From the supply side, the development of the tourism industry in Indonesia also continues to expand, from urban to rural areas (Arcana & Wiweka, 2015b, 2016; Demolingo et al., 2020; Kemenpar, 2019; Parantika et al., 2020; Sunarta & Arida, 2017). Indonesian tourism, which used to only offer natural resource-based attractions and socio-cultural life, has now evolved by providing diverse accessibility and offering a variety of activities that can attract tourists.

As experienced by several tourist destinations in the world, the massive growth and development of tourism have begun to receive the spotlight from tourism stakeholders and academics. They began to question the benefits of this industry for local communities, which are considered not worth the impact received. In Indonesia, several destinations are considered to have exceeded their carrying capacity, including southern Bali, Yogyakarta City, Puncak area (Bogor), and Bandung City, to several destinations that are famous for their crowds during the holidays. Meanwhile, some of the world's leading destinations, such as Budapest, Barcelona, Amsterdam, Paris (Butler, 2019; Smith, 2009), Venice, Prague, Rome, Bangkok, and New York (Dodds & Butler, 2008), this phenomenon is described as a symptom of Airbnb syndrome, anti-tourism, "tourismphobia", overcrowded locations, visitor pressure, or overtourism (Adie et al., 2020; Dodds & Butler, 2008; Koens et al., 2018; Kuščer & Mihalič, 2019; Milano et al., 2019a; Oklevik et al., 2019; Phi, 2020).



This terminology is often associated with reactions or criticisms ([Butler, 1980](#); [Butler, 2019](#)) on the increasingly uncontrolled development and growth of tourism and is starting to worry, both in urban and rural areas. Rural areas and local communities are considered highly vulnerable resources to the commercialization of tourism ([Mansfeld & Jonas, 2006](#)). From a geographic perspective, tourists often consume space and time at the same time as indigenous people ([Kuščer & Mihalič, 2019](#); [Phi, 2020](#); [Smith et al., 2019](#)). As a result, when tourism exploits the space normally used by local communities, at the same time, especially with high intensity, its presence tends to be seen as a nuisance. This phenomenon is marked by conflict or rejection from the community, environmental damage, higher prices, noise pollution, congestion, marginalization, visitor dissatisfaction, to changes in local community behavior ([Adie et al., 2020](#); [Capocchi et al., 2019, 2020](#); [Oklevik et al., 2019](#); [Smith et al., 2019](#)).

This issue then urges tourism to be managed ([Kuščer & Mihalič, 2019](#)) more responsibly, otherwise known as sustainable tourism. Since becoming part of the political agenda of the World Conservation Strategy in 1980 (IUCN, 1980 ([Kuščer & Mihalič, 2019](#); [Weaver, 2006](#))), this issue has been agreed upon and campaigned for by countries around the world. Even UNWTO has designed guidelines known as the WTO's Global Code of Ethics for Tourism ([Miller & Twining-Ward, 2005](#)). As one of the countries that support the Movement, Indonesia initiated "new tourism" through the declaration of the Sustainable Tourism Charter in 1995. This step encourages "tourism development based on sustainability criteria that must be managed ecologically in the long term, while still paying attention to economic, ethical aspects, and social community" ([Ardiwidjaja, 2020](#); [Gunawan, 2000](#); [Haryanto, 2014](#); [Sudiarta, 2017](#); [Sunarta & Arida, 2017](#)). In addition, the government through the Ministry of Tourism and Creative Economy since 2017 has given appreciation to tourism actors who care about sustainability issues, by holding ISTA (Indonesia Sustainable Tourism Awards) ([CNN, 2017](#)). Even now, since September 2020, the government is campaigning and trying to massively implement its first certification related to the issue of sustainable tourism, known as CHSE (Cleanliness, Health, Safety, and Environment).

This certification is also used as a tool to monitor the growth of the tourism industry, such as hotels, restaurants, MICE, tourist attractions, travel agents, SPAs, homestays, and tourist villages ([Kemenparekraf, 2020](#)). One of the goals is to assist ([Amaliatulwalidain, 2019](#); [Torre & Wallet, 2016](#)) so that tourism stakeholders are actively involved in the implementation of SDGs (Sustainable Development Goals) contained in the RPJPN 2005-2024, with the main vision of shifting the quantity-oriented paradigm with quality ([UNWTO & UNDP, 2018](#)). Simply put, the goal of sustainable tourism is to offer tourists a different experience through products that care about environmental issues and people's welfare. The hope is that local people can experience the optimal benefits of tourism.

Tourism managers, currently, are required not only to prioritize the number of visits but also to maximize the value that tourists can provide ([Dodds & Butler, 2008](#); [Oklevik et al., 2019](#)). For some industry players, this idea seems difficult, unrealistic, and too theoretical to apply. However, several sectors have proven that this strategy is very likely to be implemented, especially for destinations that have limited carrying capacity ([Capocchi et al., 2019](#)) and have experienced "stagnation" in their growth phase. Therefore, the tourism lifecycle has become an issue that is being considered again in the planning, management, and supervision of a tourist destination.

One industrial sector that is quite successful in managing the life cycle of its products is the Nglanggeran tourist village. This village is starting to be recognized and used as a role model for the development of a sustainable tourist village, thanks to their strategy of rejuvenating the tourist village so that it avoids decline or damage. In practice, managers have succeeded in shifting their targets, which were initially oriented to quantity or the number of visitors, into quality tourists ([Oklevik et al., 2019](#)). The awareness of managers and the community towards village carrying capacity has been appreciated by various institutions through several events including ITSA 2017 in Indonesia, the ASEAN Community Based Tourism (CBT) Award in Singapore, and the 2018 ASEAN Sustainable Tourism Award in Thailand ([Kompas, 2019](#)). This recognition encourages researchers to study how the experiences of Indonesian tourist villages, especially the Nglanggeran-Yogyakarta tourist village, manage their lifecycle so that they can avoid over-tourism as has occurred in several leading destinations ([Arcana & Wiweka, 2015b, 2016](#); [Demolingo et al., 2020](#); [Kemenpar, 2019](#); [Parantika et al., 2020](#); [Sunarta & Arida, 2017](#)). Their experiences raise several questions to be discussed and studied, including, how is the growth of Nglanggeran tourist village seen from the tourism lifecycle approach. What are the indications or how do they rate their product as having overtourism? What is the manager's strategy for maximizing their product? and What are the implications for local communities?

The purpose of this research is to find out how the experience of developing a tourist village is seen from the tourism lifecycle approach. In addition, this study explores how managers are sensitive to the phenomenon of overtourism in their village so that they design strategies for product diversification. This experience is essential to be learned and understood by tourism stakeholders ([O'Reilly, 1986](#)), especially tourist village managers ([Lindberg et al., 1997](#)) and the government which is developing mass-type tourism products throughout Indonesia ([Putra, 2001](#); [Spillane, 1991](#); [Sunjayadi, 2017](#)). In terms of literature, this study can strengthen the argument that tourism products can be developed oriented towards local communities and environmental sustainability. This study has limitations on the sample area used. Therefore, researchers hope that there will be further research in the future related to similar issues in other tourism sectors or villages.



LITERATURE REVIEW

Mathieson and Wall noted that overtourism and carrying capacity are the basis of the Tourism Area Life Cycle approach which is interrelated (Butler, 2019; Martin & Uysal, 1990). Overtourism and tourism carrying capacity can be best understood through understanding the tourism life cycle. Therefore, to answer several research objectives, in addition to using the village tourism literature and sustainable tourism, this study also discusses the relationship between these three issues.

Rural Tourism and Tourist Village

Rural tourism and tourist village are terms that are often used to illustrate tourist activities in rural areas. Although there are rarely studies that differentiate the two, historically the emergence of tourist villages has been inspired by the phenomenon of rural tourism. (Andayani et al., 2017) argues that rural tourism offers an attraction in the form of culture and traditional community life (Chan et al., 2016; Whitney-Squire, 2016). This potential is believed to be able to attract tourists to visit (Fletcher et al., 2016). Meanwhile, tourist village is the Indonesian terminology for the program initiated by the Ministry of Culture and Tourism in developing rural tourism. A tourist village is defined as a form of integration between attractions, accommodations, and supporting facilities that are presented in a structure of community life that integrates with the prevailing procedures and traditions. While the constituent elements are villages and communities that have a direct, indirect, or direct relationship or impact with tourism activities in an area / destination (Nuryanti, Wiendu, 1993: 2 in (Kemenpar, 2019). Currently, tourist village is considered as one of the tourism products that represent sustainable development to accelerate economic, social, cultural and environmental growth in rural areas by involving local communities (Arcana & Wiweka, 2015b, 2016; Kemenpar, 2019; Kementerian Keuangan, 2019; Parantika et al., 2020; Pickel-Chevalier, 2018a; Pickel-Chevalier et al., 2019; Sunarta & Arida, 2017).

Sustainable Tourism

Sustainable development is a development concept that involves local communities in campaigning for environmental awareness, as well as providing positive experiences for tourists (Arcana & Wiweka, 2015a; Pickel-Chevalier, 2013, 2015, 2018a, 2018b; Wiweka et al., 2019). The main focus of this concept includes social sustainability, economic sustainability, and environmental sustainability (Hall et al., 2015; Mansfeld & Jonas, 2006). UNWTO defines sustainable tourism as "tourism that meets the needs of present tourists and host regions while protecting and enhancing opportunity for the future" (UNWTO & UNDP, 2018; UNWTO, 1996). Currently, sustainable tourism has been defined so variously, but some ideas emphasize the ability of a product or tourism development concept to maximize its positive impact and at the same time minimize the negative impact of tourism (Bramwell & Sharman, 2002; Harris et al., 2012; McCool & Moisey, 2008; Miller & Twining-Ward, 2005; Weaver, 2006). The increasing interest and initiative in sustainable development have sparked concerns about the ability of tourist destinations to accommodate the needs and desires of tourists, known as carrying capacity (McCool & Lime, 2001).

Overtourism vs. Tourism Carrying Capacity

In the early 2000s, the concept of overtourism has become an issue that is often debated, although until now it is still not clearly defined or even interpreted variously (Koens et al., 2018). Is overtourism a new issue in tourism, or is it just a new term to refer to an old phenomenon? (Capocchi et al., 2019). Overtourism is a new term for a contemporary phenomenon that is growing rapidly as the number of visits is excessive. This phenomenon began to be discussed in the early 70s and was clearly seen in popular destinations, especially urban areas that became tourism commodities, where growth seemed unplanned and uncontrolled (Dodds & Butler, 2008; Milano et al., 2019a, 2019b). Meanwhile, UNWTO defines overtourism as "the impact of tourism on a destination, or parts thereof, that excessively influences the perceived quality of life of citizens and/or quality of visitors' experiences negatively" (Koens et al., 2018).

(Koens et al., 2018) noted that there are at least seven myths related to overtourism, including overtourism is not a recent phenomenon, overtourism is not the same as mass tourism, overtourism impacts are not city-wide, overtourism is not a tourism-only problem, technological or smart solutions alone will not solve overtourism, There is no one-size-fits-all solution for overtourism, and overtourism is not just an issue in cities. (Capocchi et al., 2019) argue that this concept is driven by two reasons, technological advances, and high demand. He added that technological advances in low-cost air transportation have increased the mobility of tourists, even in developing countries. Meanwhile, uncontrolled demand has resulted in the concentration of tourism in certain destinations or specific areas (Butler, 1980; Butler, 2019; Dodds & Butler, 2008), causing problems with carrying capacity and environmental sustainability.

Since tourism uses this terminology in the 16th century (Butler, 1980; Butler, 2019), the tourism carrying capacity itself is interpreted as the ability of an area or area to accommodate the maximum number of tourists. (World Tourism Organization (UNWTO) et al., 2018) notes that tourism carrying capacity is defined as "the maximum number of people that may visit a tourist destination at the same time, without destroying the physical, economic, socio-cultural environment and an unacceptable decrease in the quality of visitors' satisfaction" (Zhang et al., 2017). The maximum number itself is still being debated, especially the difficulty in determining specific numbers in certain areas and periods (Martin & Uysal, 1990; McCool & Lime, 2001). Therefore, some academics tend to use the word optimal rather than maximum. Although sometimes still considered an illusion (McCool & Lime, 2001), determining the carrying capacity of a destination is essential, especially for planning, developing, and managing sustainable tourism in the long term



(Marsiglio, 2017; Martin & Uysal, 1990). (Wang et al., 2020) noted that there are at least four types of carrying capacity, including ecological carrying capacity, economic carrying capacity, social carrying capacity, and comprehensive carrying capacity.

From a tourism point of view, this concept is still being debated, especially concerning some of its weaknesses, such as criteria that look objective but still subjective, definitions without impact are also considered unrealistic, or even management problems are considered more appropriate than just focusing on the number of visitors (Lindberg et al., 1997; Martin & Uysal, 1990). Therefore, in studying the phenomena of overtourism and tourism carrying capacity in Nglanggeran tourist village, this study uses a simple qualitative approach that is more realistic without reducing the essence of these phenomena. One method that is used is to look at local people's response to how many tourists they want, not how many the destinations can attract (O'Reilly, 1986). This approach is believed to be quite effective in describing the ability of a tourist village to accommodate the number of tourists in a certain area and period, especially since capacity cannot be used as an absolute limit.

Tourism Area Life Cycle

Lifecycle is a social science concept most often used, especially in tourism (Collins-Kreiner, 2016; Perkins & Khoo-Lattimore, 2020; Zehrer & Raich, 2010).

One popular model is Butler's (Butler, 1980) tourist destination evolution model. He suggests a model with an S-shaped curve that illustrates the development phase of a destination from exploration to involvement, development, consolidation, stagnation, and either decline or rejuvenation. These phases are a description of the instability of the relationship between tourism stakeholders and tourists (Moore & Whitehall, 2005; Russell & Faulkner, 2004). Each of these phases can be described as follows:

- a. Exploration is the embryo of the development of a tourism product. At this stage, it is marked by the minimum number of visitors, most of whom are classified as visitors who want to enjoy the adventure (adventurous visitors). This is because there is no development of accessibility and tourism support facilities.
- b. Involvement is the phase after tourists start to visit it for the first time, of course, the next hope is that these tourists will come back again on another occasion. At least, tourists who have visited a destination will tell their experiences (or in a promotional strategy known as Word of Mouth) to others. With the increase in the number of visits, the community has begun to become involved in providing necessities needed by tourists such as temporary housing and eating and drinking facilities.
- c. The Development phase is marked by an increase in the number of large visits and the existence of a clear market or market at a destination. Promotional activities have also occurred in tourist-generating areas. In addition, the involvement of local communities tends to decrease. This is because most of the facilities provided by the local community are gradually disappearing and being replaced by larger companies. This phenomenon makes some facilities tend to be more up-to-date and more modern, especially in the aspects of accommodation and tourist transportation.
- d. Consolidation is a symptom that can be seen from a decrease in the "price" or "value" of a destination. The point is, although the increase in the number of tourists continues to increase, even exceeding the number of local people. However, there is a decrease in "value", which can be seen from the increasingly competitive price competition, so tourists tend to have lower expenditure. Destinations at this stage begin to fill with franchise companies and chains from various countries, which is an indication that the destination has become an attractive business center.
- e. Stagnation is indicated by the number of tourist visits that have reached their peak and destinations that are getting outdated, as well as the emergence of several impacts such as environmental, social, and economic. From a business point of view, destinations at this stage only rely on tourist repeaters and focus on maintaining the number of tourist arrivals. At this stage, innovation is needed so that a tourist destination can continue to exist, or vice versa, it will decline.
- f. The decline is due to the absence of anything new to offer tourists from a destination, both attractions and activities. In addition, these destinations are no longer used for holidays in the long term but are used as a means of vacation on weekends or even daily. As a result, the turnover in the use of infrastructure and accommodation is getting higher, and there is even a tendency for the use of tourist infrastructure not for tourism purposes. In general, these symptoms will make various tourist facilities disappear or stop operating, and various accommodation changes function. For example, hotels that change functions into apartments, or other forms with a long-term contract system.
- g. Rejuvenation is a strategy or innovation in destinations that are stagnating. Various adjustments need to be made, such as renewing usage, determining new target markets, adjusting prices, evaluating the distribution channels used, and starting to determine a new image (positioning strategy). This strategy will revitalize (revitalize) and extend the life of a tourist destination so that it can be competitive again.

METHODOLOGY



By considering the complexity of the issues to be studied in this study, the approach used is a qualitative research approach with historical methods, which are the basic approaches to social science (Hall, 2005; Mohajan, 2018). This method is carried out by the process of collecting data systematically from the past through two sources. Secondary data used include online media articles, scientific writings, and promotional media for the Nglanggeran tourist village. Meanwhile, to collect primary data, researchers conducted non-participant observations (for four months) in the Nglanggeran tourist village located in Patuk District, Gunungkidul Regency, Yogyakarta to observe and interview tourist village managers, business people related to tourism, workers, and the community local (Sugiono, 2010). Some of the key informants include.

Table 1: Pokdarwis Nglanggeran Tourist Village Key Informants

No.	Initial	Role in Tourist Village
1	X	Leader
2	Y	Secretary
3	Z	Staff Administration Pokdarwis
4	X	Staff Administration Pokdarwis

Source: Primary Data, 2019

Furthermore, this study examines, classifies, clarifies, synthesizes, and elaborates integratively with interpretative principles and logical explanations from the experiences of Nglanggeran tourist villages managing the issues of overtourism and rejuvenation (Mohajan, 2018). This approach offers a complete event, the development of a tourist village from the past (exploration phase) and present (rejuvenation phase). The data used in this research include primary sources (these are original documents found in archives), secondary sources (works by other authors writing about history), official records (official records from various institutions, case reports), and private materials (Chronicles, autobiographies, diaries, memoirs, records of oral history) (Mohajan, 2018).

This data is then evaluated through two approaches, external criticism, and internal criticism evaluation. External criticism is carried out by paying attention to the authenticity of the data (data validation) that has been obtained, while internal criticism is carried out to check the accuracy of the data (data reliability). These two evaluation approaches are used to find facts and answer unanswered questions, especially related to the experience of the Nglanggeran tourist village in managing the issue of over-tourism and rejuvenation.

RESULTS AND DISCUSSION

RESULTS

Profile of Nglanggeran Tourist Village

Administratively, Nglanggeran Village is located in Patuk Subdistrict, Gunungkidul Regency, Yogyakarta, with an area of 762.79 hectares, most of which are owned by indigenous people and used as agricultural land, plantations, fields, and yards. The topography of the Nglanggeran area consists of low, high, and artificial lakes.

Nglanggeran Village also has an Ancient Volcano Ecotourism area with an area of 48 hectares. Satyana, an Indonesian geologist stated that based on the study of Verbeek and Fennema (1896, researched again by Bothe (1929 & 1934), and compiled by Van Bemmelen (1949)), Nglanggeran Ancient Volcano is an area of Oligo-Miocene volcanism known as OAF (Oud Andesiet Formatie - Old Andesite Formation) or known as submarine volcanism (Van Bemmelen, 1949) which is turbid. The village area consists of 5 hamlets or hamlets, namely Dusun Karang Sari, Doga (center of government), Nglanggeran Kulon, Nglanggeran Wetan, and Gunungbutak Hamlet.

The population monograph data of Nglanggeran Village (2018) shows that the population in Nglanggeran Village (east and west) is around 2.641 people, consisting of 1.331 men and 1.330 women consisting of 243 heads of families. Based on the age group of the population aged 45-49 years has the largest proportion of the total population. Meanwhile, based on the livelihood category, the population with livelihoods as farmers have the largest proportion.

Table 2: Nglanggeran Village Population Profile Based on Age and Occupation in 2018

Age	Percentage (%)	Occupation	Percentage (%)
<1	1.25	Farmer	30.67
2 – 4	3.79	Not working	19.58
5 – 9	6.21	Student	13.03
10 – 14	7.00	Housewife	10.19
15 – 19	6.93	Private worker	9.31
20 – 24	6.85	Entrepreneur	6.97
25 – 29	8.03	Laborer	6.93
30 – 34	5.72	Government employee	1.14
35 – 39	7.23	Village apparatus	0.49



40 – 44	6.97	Driver	0.38
45 – 49	8.37	Retired	0.30
50 – 54	7.76	Farm worker	0.23
55 – 59	6.06	Honorary employee	0.19
60 – 64	5.57	Trading	0.11
65 – 69	3.82	Teacher	0.08
70 – 74	2.69	Merchant	0.08
≥75	5.76	Police (POLRI)	0.08
		Army	0.08
		Transportation	0.04
		Village head	0.04
		Pharmacist	0.04
		Lecturer	0.04
		Artist	0.04
		Electrician	0.04
		Others	0.04

Source: Population Data of Nglanggeran Village, 2018

This Tourist village has several excellent products such as Embung Nglanggeran, Kedung Kandang Waterfall, and Purba Volcano. In addition, the community is also involved in the management of tourist villages through the Pokdarwis organization which assists several community groups to support tourism activities (Livestock groups, culinary supply groups, Cocoa Management groups, farmer groups, homestay groups, merchants' groups, craftsmen groups, and Indonesian Manpower groups (TKI). Since 2016, they have developed several products with the majority of chocolate-based ingredients, especially because this village is a producer of chocolate. Products produced include chocolate *bakpia*, chocolate banana chips, chocolate *dodol*, chocolate sticks, chocolate dumplings, ingredients powder made from chocolate, chocolate bars, cocoa powder, various kinds of chocolate powder drinks, and Etawa goat milk powder, *batik* crafts, and masks.

DISCUSSION

This section will explain the history of the development of Nglanggeran tourist village, from the initiation or planning stage to becoming a leading tourist attraction in Indonesia. The data used were collected through secondary sources in the form of statistical data and articles related to the history of Nglanggeran tourist village, and primary sources through in-depth interviews with key informants W, X, Y, and Z, all of which were part of the tourism awareness group or organization that manages the village. travel. The information is then analyzed and interpreted using the Tourism Area Life Cycle Model approach and indicators. This analysis is grouped into three parts, where the first part consists of the exploration phase to the consolidation phase, the second part will focus on the stagnation phase, and the third part will discuss the rejuvenation phase.

Nglanggeran Tourist Village Development Based on The Tourism Area Life Cycle Model

In this first part, researchers collect information related to the development of Nglanggeran Tourist Village from the beginning of the planning period (exploration) to when the business conditions are very advanced (consolidation).

Exploration

Nglanggeran Tourist Village was formed by the leaders of the Bukit Putra Mandiri Youth Organization in 1999 through environmental conservation activities that were packaged as ecotourism products with the main attraction of Mount Nglanggeran or Mount Wayang, which later, through academic studies, was changed to Nglanggeran Ancient Volcano. This phase is categorized as the exploration stage which was the initial period when tourism activities began to appear in this village. This argument was confirmed by the results of an interview (June 2019) with Y which stated that:

"[...]We don't officially declare or set an anniversary[...]Our main magnet was originally Mount Nglanggeran which is currently called the Nglanggeran Purba Volcano. Initially only limited to people going up the mountain, then sometimes there are camping, trekking, taking photos, then now it is more varied if in the past they were more interested in nature [...] In the past there were almost no facilities, there was only one pavilion[...]others don't exist yet, at least they are limited to trekking paths[...]".

Meanwhile, Z, who is also on the *Pokdarwis* team, added that in terms of visit data, he stated:

"[...]In the beginning, at least we were only there on Saturday, and Sunday visitors. They are mostly students or college students, who want to track or camp. Initially, every week maybe around 20-50 people, so a month about 200-300. But even then, it still fluctuates, because maybe the children who love nature (school extracurriculars) are dominated[...]".

Based on interview data, in this phase, tourist interaction is still very high with the surrounding community, tourists actively ask about information, regulations, or road directions before trekking on the Purba Volcano. At the exploration stage, there are no tourism support facilities, such as information boards or directions around the Purba Volcano area.



The promotion strategy is still very conventional, namely relying on the Word of Mouth (WoM) of tourists who have previously visited.

Empowerment / Involvement

This phase is marked by several development indicators, especially those related to tourism activities. In 2006, after the earthquake in Yogyakarta and its surroundings, *Karang Taruna* regenerated members of the organization who were increasingly active in tourism activities. In 2007, with the support of the regional and central government, they restructured their organization by transforming it into the Nglanggeran tourist village Management Agency (BPDW). Based on the manager's statistical data, in the same year, there was also an increase in the number of visits with a total of 1.450 tourists, including 13 foreign tourists and 1.437 domestic tourists. This information was validated by X as the chairman of Pokdarwis and Z. They stated that:

"[...]In 1999-2006 the village of Nglanggeran was formed by Karang Taruna, which in 2007 was changed to BPDW [...]" (X, 2019).

"[...]Coordination with local governments started around 2007, [...]from the Ministry of Tourism[...]" (Z, 2019).

At the same time, in 2007, the community also started to carry out several developments. Meanwhile, several business actors in Nglanggeran Tourist Village are still selling factory-produced products. Y stated that:

"[...]In the past (2007), community development was mostly carried out by the community, such as community service, building trekking routes, pavilions, gazebos, then toilets and other facilities [...] Business people here used to only sell packaging food and beverage products such as mineral water and noodles[...]"

Development

In 2008, the Ministry of Tourism was again involved in the development of this tourist village, by changing the BPDW to the Tourism Awareness Group (Pokdarwis), following the government's program at that time. *Pokdarwis* was formed by involving elements of the village government, community leaders, *PKK*, farmer groups, homestays, merchants, and youth elements as the main movers. This village organization was created to increase local community awareness of tourism activities, or in a government program it is called "Tourism Awareness". Since 2008 until now, *Pokdarwis* is chaired by X. In the July 2019 interview, he stated that:

"[...]It has been 10 years since I was the head of *Pokdarwis* here, from the beginning the tourist village was inaugurated and formed by *Pokdarwis* (2008) [...] Then in 2008[...] BPDW was changed to POKDARWIS (Tourism Awareness Group) following the regulations of the ministry of tourism an institution called the Tourism Awareness Group [...]"

The Tourism Awareness Group (Pokdarwis) has opened job opportunities for youth in the Nglanggeran Village area who previously mostly became immigrants or worked outside the Province. Y stated that:

"[...]There is almost no urbanization in our village. Previously, many young people left their village, now they are involved (working) here and are prouder to be able to manage their potential[...]"

At the same time, local people have not only become employees, but many have also started to become tourism entrepreneurs. Z confirmed that:

"[...]At Purba Volcano, [...]about 5 stalls, if you don't have 11 people[...] in the Embung there are 5 or 6[...] one management is the same [...] For a place to eat, we empower *PKK* women, we rotate each hamlet[...]RT in one hamlet, there is a coordinator, so you can go around. We often take souvenirs from Bobung Tourist village in the form of mask crafts[...]"

He also explained the development of admission prices as follows:

"[...]Apart from the entrance ticket, we have services. So indirectly what tourists pay to us is the service that the manager provides. The service ticket here is IDR 5.000, then the district government retribution is IDR 2.000, this fee is mandatory per person[...]the total is IDR 7.000 [...]"

In 2008, the number of tourist visits reached 1.536 tourists, or an increase of 6.67% from 2007, consisting of 15 foreign tourists and 1.521 domestic tourists.

Consolidation

The increasing growth of Nglanggeran tourist village has attracted stakeholders to support it, especially the government (regional and central). In this phase, from 2011 to 2013, they received several supports, such as the National Tourism Community Empowerment Program (PNPM) assistance from the Ministry of Tourism (Eko et al., 2014) Y said that:

"[...]Initially, support from the government did not go directly to infrastructure... (previously) we have been involved in training (Human capital), outside promotion (Gunungkidul Regency), mentoring and other activities[...] Guidance training, homestay training, culinary groups, product processing training, we facilitate outbound (flying fox), traditional arts from these activities (PNPM), including (training) in English and making tour packages[...]"



Z added that, in 2011 the manager designed the development strategy for Nglanggeran tourist village:

In the past we only sold natural potential, that year (2011) we also started doing Live In activities [...] Tourists stayed at our place (homestay), then there were several tour package activities such as livestock, farming, arts [...] All activities were covered by *Pokdarwis*, coordinate with each sub-unit[...]

In this phase, the manager has diversified the product as a response to the increasing number of tourist visits. At that time, they not only relied on the Purba Volcano as an attraction, but also developed several facilities and activities that could increase the length of stay of tourists, such as providing homestays and offering various activities such as planting rice, plowing fields, raising livestock, and processing cocoa. Z noted that, in 2013, this village received funds from the government through the State Receivables Business Entity to improve access to the main road of Nglanggeran Tourist Village. In the same year, on February 13 to be precise, the manager also developed a new main attraction, namely the Nglanggeran Embung, which is the First Embung in Yogyakarta. The attraction, which was inaugurated by the Governor of the Special Region of Yogyakarta, Sri Sultan Hamengkubuwono X, is a reservoir that holds 0.34 hectares of water and is located at an altitude of 495 masl.

The various strategies that have been implemented have resulted in a significant increase in the number of tourist visits from 2011 to 2013. In 2012, tourist visits increased by 68.1% from 2011 (16.582 tourists) with 27.875 people consisting of 200 foreign tourists and 27.675 domestic tourists. Meanwhile, in 2013 the number of visits also increased dramatically from the previous year amounting to 207.29% with a total of 85.658 people consisting of 234 foreign tourists and 85.424 domestic tourists.

Nglanggeran Tourist Village Overtourism Management

In theory, the dramatic growth between 2011 and 2013 is like a two-sided coin, it can be positive or vice versa, mainly because the capacity of the tourist village of Nglanggeran is confirmed to be static or unchanged (despite the development of some attractions). The carrying capacity of this tourist village is often a question, there are even concerns about the phenomenon of overtourism or stagnation. This assumption is supported by data on visits in 2014 which increased by 279.7% from the previous year or had reached its peak with a total of 325.303 tourists, consisting of 476 foreign tourists and 324.827 domestic tourists. This figure is the highest since the Nglanggeran Tourist village was founded. The phenomenon of overtourism is also indicated by several indicators which are also validated by Y, that:

“[...]If the first negative is management in tourists, because not all tourists have good intentions (motivation) [...]They (tourists) may not know local wisdom and (behave) arbitrarily, waste becomes a challenge [...] Second is that our security system is a bit vulnerable because first (before the massive tourist activity), let's say at 8 that night (the people) were already sleeping and there was no activity. We are currently open 7x24 hours, so anyone can enter our village at any time [...] After an evaluation, the community formed an internal security system [...] The system is night patrolling (guarding alternately) by donating rice, now coins are IDR 200, which was not before there, and now it's so active. Because of the awareness regarding security vulnerabilities in our village [...] Third, related to culture, actually in the past, people never met other people with different cultures. There are positive and negative (impacts). The negative impact may be visible to foreign tourists who come here with their culture, modest clothes [...] Therefore, we inform you before they come to the place that we have to adjust, the clothes must be polite, not too vulgar”.

Meanwhile, X, which focuses more on environmental impacts, states that:

“[...] The impact of visiting many people has a negative impact which is related to natural damage, such as the extraordinary amount of garbage on the mountain, the total plastic waste from 2014 to 2015 was 1.7 tons. Then the other impact, of course, is the high level of erosion”.

As for Z, he shared the technical impact of tourism activities, saying:

“[...]We have a limited parking area, so tourists park up to the sides of the road, and what is more highlighted is rubbish. Damage to the hiking trail is possibly due to the large number of visitors (although alternative routes have been provided). Many visitors make their paths and cut down vegetation (small trees) for camping. It's hard for big trees, so a lot of them are chopping down the bushes. The impact is that some endemic or unique varieties discovered by academic research can no longer be found[...] The waste is also good, dominated by plastic waste. Meanwhile, the impact on the community, when there are too many visitors, cannot interact with the community (only passing through), it is different when there are only a few visitors[...]

Although the issue of carrying capacity in the tourist village of Nglanggeran is still a debate. However, indications of the phenomenon of overtourism have started to emerge, even though the approach used in assessing or measuring is still traditional or simple. Several studies have also highlighted gaps or gaps between the assessment indicators and their implementation. Most of the instruments (indicators) seem so theoretical that they are often difficult to understand, or even apply to the practical realm ([Lindberg et al., 1997](#)) or by traditional societies. Therefore, this study assesses that data and information from the experience of tourist village managers are very valid for analyzing indications of the overtourism phenomenon in Nglanggeran, even though they have not used an assessment instrument that is quite complex or complicated, which is not necessarily appropriate for the characteristics of a traditional village.

Based on data and information from key informants, Nglanggeran tourist village has experienced several indications of overtourism with several indicators. The first is the environmental impact, which consists of a high rate of erosion resulting in many hiking routes and damaged endemic plants. In addition, waste pollution, especially plastic waste in the Ancient Volcano, amounted to 1.7 tons only from the 2014-2015 period. The limited parking area also causes the main road of Nglanggeran to close and causes congestion. Second, is social impact, where security in Nglanggeran tourist village is vulnerable. Third, cultural impacts, which are caused by differences in habits and behavior between tourists and local communities, especially the way foreign tourists dress are considered open or impolite and contrary to the norms and regulations in Nglanggeran tourist village.

However, apart from the negative impact, the significant growth in tourist arrivals also had a positive impact, especially in the economic aspect. In theory, economic benefits often succeed in increasing people's tolerance for the negative impacts of tourism (Dodds & Butler, 2008). This means that local people tend to receive the negative impact they receive. Y stated, several positive impacts felt by the community, including:

"[...]The positive impact is quite a lot. First, related to better environmental awareness, by protecting the mountain area so that new springs appear, the water discharge also increases. Second, there is almost no urbanization in our village. Previously, many young people left their village, now they are involved here (tourist village) and are prouder to be able to manage their potential. Third, the recognition of local wisdom in our village. Previously, it might not be an attraction, it didn't boast about it, and it didn't have economic value. But when it was developed and it had a positive impact, the community became more active (preserving). Fourth, the emergence of a new productive economy (entrepreneur) that did not exist in our village before, for example, such as homestays, culinary groups, spa groups, and chocolate processing groups, those that did not exist before, but now exist and develop [...]"

In 2014, the management of a tourist village began to transform and adapt to technological developments. At that time, the facilities at Nglanggeran tourist village had grown with the addition of a pavilion and toilets at the Ancient Volcano. In addition, the various products produced by each business group are also increasingly varied, technology and information systems are increasingly sophisticated (including marketing strategies via the internet or digital-based), and accessibility is increasingly easy to reach (30 minutes from Candi Prambanan), making this tourist village a lot visited by tourists. This data confirms that during this period the Nglanggeran tourist village could be categorized as a stagnation phase. Although industrially, this tourism product is experiencing growth. However, several indicators, such as negative impacts and a massive increase in the number of visits, are believed to have passed its carrying capacity and indicate the phenomenon of overtourism. The development indicators for Nglanggeran tourist village from the exploration phase to stagnation can be illustrated as follows (Zehrer & Raich, 2010).

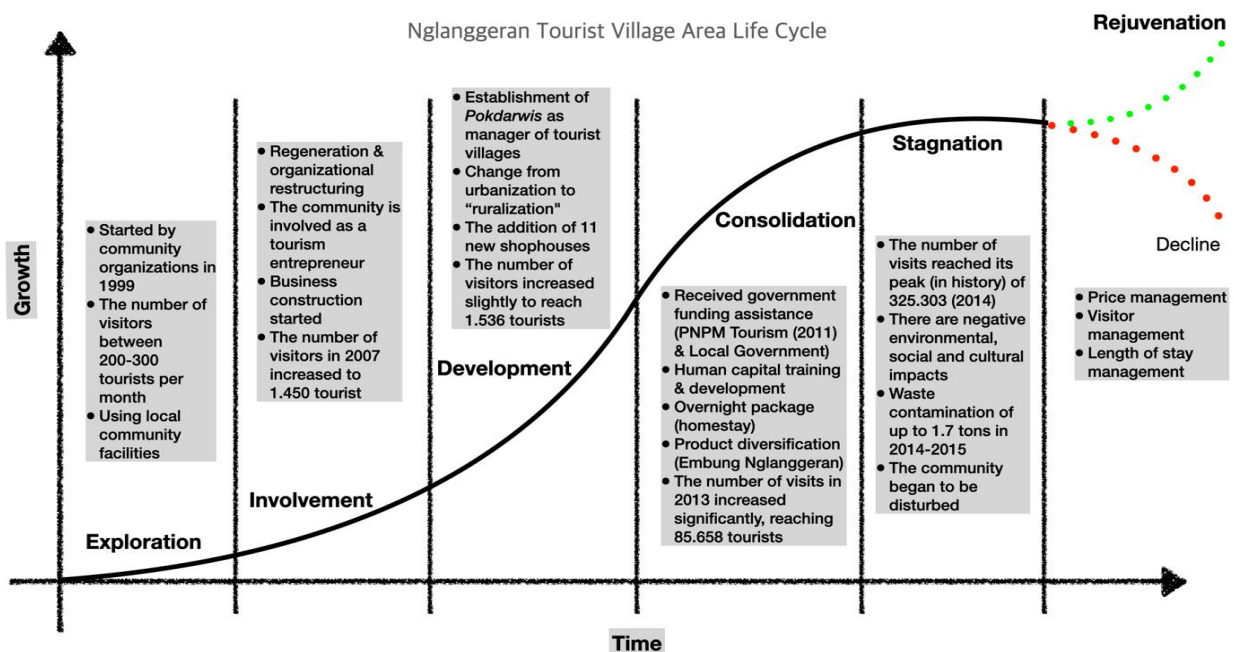


Figure 1: Nglanggeran Tourist Village Area Life Cycle
Source: Primary Data, 2019

Although the approach to understanding these indicators is still quite simple and traditional. However, this study believes that this method is quite effective in understanding the lifecycle of a tourist village. Especially because of all the limitations that the village has, including in terms of resources and data (Marsiglio, 2017). Based on the results of data analysis, the current phase can bring Nglanggeran tourist village to stagnation or even decline, if the manager does not prepare a strategy to compensate for this product.



Traditional Approach of Tourist Village Rejuvenation Strategy

Although the significant growth that occurred until 2014 was not realized by the management of the tourist village as an indication of the phenomenon of overtourism or a symptom of stagnation. However, several negative impacts have begun to emerge and the response of the community who are starting to feel uncomfortable with tourism activities has encouraged the manager (*Pokdarwis*) to evaluate the development of the Nglanggeran tourist village. Based on data from key informants, in 2015, they designed several strategies to address several emerging problems. Y (June 2019) stated that:

“[...]There are several ways that we do, the first is to increase the entrance ticket price. In the past (2014) was more dominated by “*alay*” (a term used to refer to a style that is considered excessive and always tries to attract attention) who like taking photos, painting mountains, then littering, and at that time still to be the toughest challenge. The second is the reservation system that we developed. So, we have a reason to say, “The day is full”, then we can switch it to another time so that it doesn't get too pile up at certain times. We have not been able to measure the limit of tourists, because actually, we are quite large (village area). They (tourists) can be rotated, then the arrival is not at the same time. We have a commitment or agreement (with fellow managers and the community), the maximum group that comes here (Nglanggeran Tourist Village) is three groups at the same time, especially those who use large-scale activity facilities. Then for the program (activity), because there are only 4 of our *pendopo* and our team is also limited, the hope is that the three (groups) can be rotated (alternately). Suppose the one here (Ancient Volcano) with tracking activities, after that can go to Embung, rotated to chocolate (manufacture). So that's what we're trying to do. Third, we are targeting more precise market segments. In the past, the important thing was that everyone knew and wanted to go to Nglanggeran, now we arrange it (the tourist segment). The target is people who have a strong desire to learn, respect the environment more, and in that program, they choose programs that stay overnight and have a lot of activity (interacting) with us[...]”.

While Z, more specifically strengthens the argument, that:

“[...]In 2014, the service ticket here is IDR 5.000, then the local government retribution (mandatory) is IDR 2.000 per visitor, and the total is IDR 7.000. Then on July 1, 2016, we increase the (entrance ticket price) to IDR 15.000, consisting of IDR 13.000 for management fees (services), and the fee is still IDR 2.000. In addition to increasing the entrance ticket price, we are also developing tour packages. So we don't only get (benefit) from daily visitors, because they only spend 1-2 hours after it's finished, and only shop for snacks and drinks (mineral water). After we have promoted the tour package, in addition to on-the-spot visits with the duration of the activity maybe only 1-2 hours of trekking, there is also half a day with exposure activities (field studies). They usually go directly to tour groups, such as livestock groups, and then processed (cocoa). They are mostly students. Then we also have the longest package, which is 7 days, and actually, we can custom (tailor-made package) as well for the package[...]”.

In-depth interview information shows that the managers of the Nglanggeran tourist village have designed and implemented at least three strategies to combine their products, including:

Price Management: Increase the Ticket Price vs. Degrowth Tourist Number

Price Management is the process of integrating all perspectives and information needed to consistently determine the optimal price ([Brandon, 2020](#)). This strategy is implemented by the Nglanggeran tourist village manager by agreeing to limit the number of visits by increasing the entrance ticket price for domestic tourists from IDR 7.000 to IDR 15.000 and for foreign tourists from IDR 15.000 to IDR 20.000. Statistics of tourist visits (chart 1.) show that this strategy has succeeded in reducing the number of visits ([Dodds & Butler, 2008](#); [Milano et al., 2019a](#)) and at the same time increasing the amount of economic income the tourist village of Nglanggeran.

Visitor Management: Developing a Technology-Based Reservation and Management System

Visitor Management is a strategy used to monitor visitors by recording facility usage and visitor information ([PATA, 2021](#)). Managers apply this strategy by committing or agreeing to the maximum number of groups that can be accommodated by the tourist village at the same time ([Dodds & Butler, 2008](#)). They determine the maximum limit for visitors with group types of 3 groups (min 25 pax) or around 75 tourists. To monitor the number of visits, the manager has implemented a technology-based reservation system that will provide an early warning if the number of visitors has passed a predetermined limit.

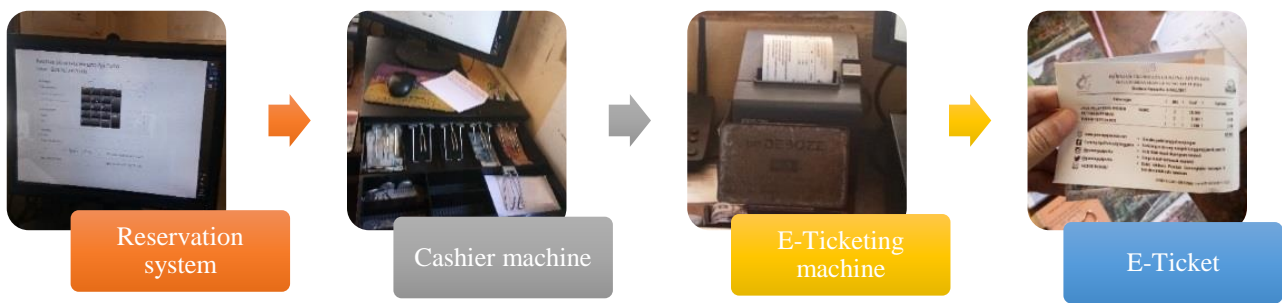


Figure 2: E-Ticketing Reservation System in Nglanggeran Tourist Village

Source: Primary Data, 2019

In theory, overtourism is generally caused by the concentration of tourists in a specific place and at the same period. Some conflicts occur because of the high intensity between the interests of tourists and local communities ([Smith et al., 2019](#)). Managers also play a role in determining which homestays tourists will use, with a mechanism of alternating (taking turns) between homestays, which has an impact on the equal distribution of occupancy among accommodation owners. This approach is quite effective in avoiding the phenomenon of "Airbnb syndrome", or a situation where all accommodation owners compete to sell their facilities with intense price competition.

The experience of the Nglanggeran tourist village provides an understanding that a destination or attraction, especially on a small and traditional scale, may be able to use a simple and effective method in determining (assessing) its carrying capacity, rather than choosing a complicated and expensive method. In fact, in some attractions, the duration and length of tourist queues are valuable data and information in determining the ideal capacity ([Adie et al., 2020](#)). Nglanggeran tourist village, with its local wisdom, determines carrying capacity limits based on an agreement between the manager and the local community. This means that instead of choosing quantitative calculations or formulas that are academically considered more valid, they rely more on people's sensitivity to tourism developments in their regions. They use the "comfort" of the local community as a simple indicator that can be implemented by many tourist villages. Indirectly, the manager has realized one of the goals of rural tourism development, which in theory is known as Community Based Tourism ([Arcana & Wiweka, 2015b, 2016](#); [Arief et al., 2020](#); [Demolinggo et al., 2020](#); [Parantika et al., 2020](#)), namely the community itself.

Length of Stay Management: from quantity to quality

Length of Stay Management is the duration of a visitor's stay obtained by dividing the number of rooms per night by the number of bookings ([Landman, 2020](#)). This strategy is implemented by managers by diversifying the target market according to tour packages or tourist village products. They determine the main market criteria that support tourism development goals in Nglanggeran village, such as conservation and education. Although not necessarily leaving the previous market segment, statistics show that most tourists today come from groups of students or workers who want to organize activities in rural areas and learn about the life of rural communities. The characteristics of these tourists also increase the length of stay in Nglanggeran village which results in higher tourist spending. With a longer duration (>1 day), the opportunities for tourists to interact with local communities, especially various community businesses, will be even higher. ([Karyatun et al., 2021](#)) states that the shift in market strategy has affected the economic income of local communities, both directly, indirectly, and induced. This strategy proves that there is a change in the direction of development from quantity to quality.

The Implication to Local Community

Even though it looks simple, the implementation of the three strategies, which began in 2015, has shown results. The manager has succeeded in combining the Nglanggeran tourist village with new product concepts and market segments, following the principles of conservation and education. In addition to being able to manage the risk of community saturation in tourism activities, the manager is even able to increase the benefits of local communities, both those involved as workers and village entrepreneurs. Currently, people feel comfortable with tourism activities in their village and tend to support village commercialization through tourism ([Séraphin et al., 2019](#)). The strategy is proven to be able to avoid the Nglanggeran tourist village going into a decline phase, at least as seen from the increasingly high tourist value.

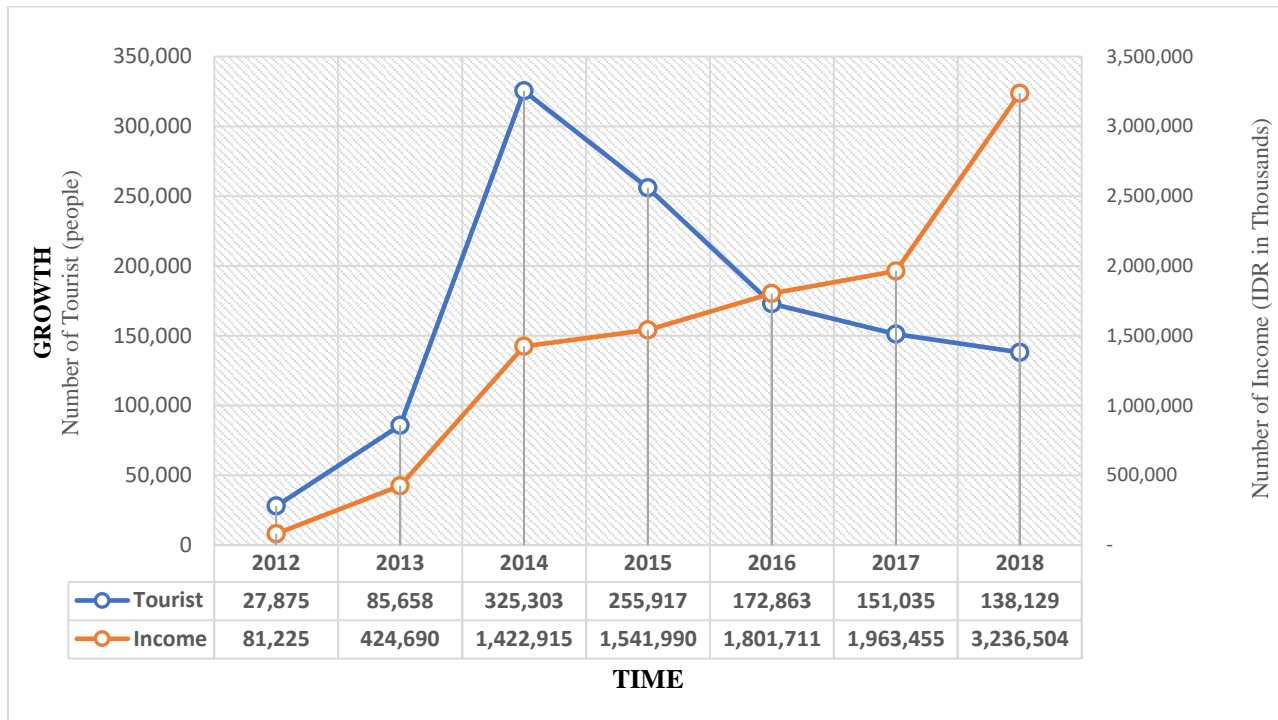


Chart 1: Comparison of the Growth in the Number of Tourist Visits and the Income of the Nglanggeran Tourist Village in 2012-2018 (Source: Primary Data Analysis, 2019)

The graph above shows that the number of tourist arrivals increased significantly from 2012 to 2014, with a growth percentage of 329.4%. After the manager evaluates and implements the new strategy, the growth in tourist visits has consistently decreased which is also quite dramatic, with an average percentage of 23.96%. On the other hand, they have proven successful in increasing the tourist value, where the amount of income continues to increase consistently every year. The highest increase in income was from 2012 to 2013 with an increase in the percentage of 422.86%, then in the following year, the average increase in income was 66.81% each year. If both quantitative and qualitative data are analyzed, the manager of the Nglanggeran tourist village is considered successful in realizing the principles of sustainable tourism that pay attention to environmental sustainability, social life, and at the same time increasing the economic income of local communities. This experience is a good example of how a village manages a tourism business in a responsible or balanced manner (Marsiglio, 2017).

CONCLUSION AND RECOMMENDATIONS

This study concludes that in the tourism area life cycle model approach, the growth of tourist villages can be grouped into 6 phases. The exploration to consolidation phase, marked by the start of the Nglanggeran tourist village by community organizations in 1999, began to significantly increase the number of tourist visits and the growth of local community businesses in 2013. Between these periods, this tourist village has also passed two other phases, involvement, and development. This phase was marked by restructuring and organizational regeneration, product diversification, the development of cooperative networks, and community involvement. The massive growth continued until 2014 when the number of visits had reached its peak, as many as 325.303 tourists. This phase is categorized as a period of stagnation and an indication of the phenomenon of overtourism with three main indicators (negative impact). First, the environmental impact consists of high levels of erosion so that many hiking trails and endemic plants are damaged, massive pollution through plastic waste in the Purba Volcano up to a total of 1.7 tons, and congestion caused by limited parking space. Second, social impacts have affected the comfort and safety of local communities. The third is cultural impact, which is due to differences in characteristics between tourists and local communities, especially from the aspect of how to dress foreign tourists which is considered to be contrary to the norms and regulations in Nglanggeran tourist village.

To overcome some of these impacts, the manager designs and implements several product rejuvenation strategies, including Price Management which is implemented by increasing the ticket price for domestic tourists from IDR 7.000 to IDR 15.000 then foreign tourists who previously amounted to IDR 15.000 to IDR 20.000. In addition, they also designed Visitor Management by limiting the number of tourist visits through an electronic ticket reservation system (e-ticketing) which can provide early warnings if tourist visits have exceeded the predetermined maximum limit. They also changed their previous business orientation based on quantity (number of visits) to quality (tourist value). This strategy is implemented with the idea of Length of Stay Management, or by prioritizing the length of stay of tourists. They determine the main market criteria that support tourism development goals in Nglanggeran village, such as conservation and education. In theory, these strategies can be categorized as Deseasonalization, Decongestion, Decentralization,



Diversification, and Deluxe tourism (Milano et al., 2019a, 2019b). This strategy is proven to be able to prevent tourist villages from the phenomenon of overtourism while still providing economic benefits to the local community, and at the same time also contributing to environmental preservation and community social life.

LIMITATIONS AND STUDY FORWARD

This study has several limitations, including the limited sample size in one tourist village. This scope is expected to be developed in other tourist villages in Indonesia to get generalizations about the development of tourist villages. Besides, this study only uses a qualitative approach, so further research is expected to combine two approaches or mix method approaches. This approach will provide an in-depth and comprehensive analysis, both quantitative and qualitative. This research hopes that the manager can consistently innovate to develop products and markets in the Nglanggeran tourist village that are following the village's vision and mission and are in line with the principles of sustainable tourism. The government, both local and central, is expected to continue to accompany the development of this tourist village so that managers and local communities are increasingly ready to face challenges and opportunities in the future tourism business.

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AUTHORS' CONTRIBUTION

This work was carried out in collaboration among all authors. Wiweka and Demolinggo designed the study, performed the statistical analysis, wrote the protocol, and wrote the first draft of the manuscript. Karyatun, Pramania Adnyana, and Iffatunnisa managed the analyses of the study and the literature searches. All authors read and approved the final manuscript.

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