

The Utilization of the Naga Sign in the Special Economic Zone of Mukdahan Province, Thailand¹

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Abstract

This article discusses the utilization of the Naga sign in the Special Economic Zone (SEZ) in Mukdahan province, Thailand based on the theory of Roland Barthes (1915-1980), French literary theorist philosopher, and semiotician. The study began using the qualitative approach in which data were collected from in-depth interviews with 36 informants. The informants were the creators of the Naga sign and those who benefited from it. Content analysis was used to analyze data in order to develop a questionnaire. Quantitative data were obtained from 384 participants and analyzed by descriptive statistics. The results showed that in many tourist attractions in this SEZ, the Naga was depicted as an iconic image through sculpture, architecture, amulets, and ceremonies. Benefits gained from the use of the Naga sign were in the following areas: the economy, society and culture, spirit beliefs, and natural resources and environment. The quantitative results indicated that overall, people in this economic zone received benefits from using the Naga sign at medium and high levels, which contributed to 65.4 percent and 19.8 percent, respectively. When looking at the province's earned income, it was found that economic benefits were the highest, while psychological benefits came in second. People also gained benefits in terms of society and culture, natural resources, and environment in descending order. Therefore, it is suggested that beliefs, tales, and myths are utilized to create a symbol that

represents local identity. This idea could be used as a strategic tourism policy in order to increase economic growth and bring about further development.

Keywords: Naga, utilization, sign, Special Economic Zone, Mukdahan

Introduction

The Naga in Thai beliefs is the patron of fertility. The Naga is also depicted as a powerful deity in paintings, architecture, sculpture, and a number of traditions that link the myths of the Naga to Buddhism. For example, the Naga figures on either side of the stairs of a temple building are believed to serve as the carriers that take people across the round of existence (*samsara*, or the cycle of rebirth) (Namgan, 2011). The Naga is a great supporter of Buddhism who sheltered the Buddha from the rain while he was meditating (Namgan, 2011). In ordination ceremonies and on the first day of Buddhist Lent, the sign is used to represent the Naga as a great supporter of Buddhism (Namgan, 2011). Furthermore, the sign is associated with the Hindu belief that the Naga, Phaya Anantanagaraja, was transformed into the throne of the god Vishnu, whose ninth avatar is Guatama Buddha. The iconography of the famous legend of Vishnu asleep on the Naga in the cosmic ocean reflects the strong relationship between Buddhism and Hinduism in Naga worship ceremonies (Pinyowanichaka, 2008).

Mukdahan province is located in the upper northeastern part of Thailand on the East-West Economic Corridor (EWEC), which links trade and culture in the sub-region among Thailand, Laos, Vietnam, and Myanmar. In 2014, it was announced that the province would be part of a Special Economic Zone (SEZ) as it shares a border with Savannakhet province in the Lao People's Democratic Republic. As a result, goods are delivered via the Second Thai-Lao Friendship Bridge (Mukdahan-Savannakhet) to Vietnam and countries in East Asia, such as southern China, Japan, South Korea, and Taiwan (Department of Business Development, 2018). The SEZ covers three districts in Mukdahan: Mueang, Wan Yai, and Don Tan. The area comprises a total of 361,542 *rai* (142,902 acres) (Mukdahan Provincial Office, 2018). Although the province's major development focuses on trade and the

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economy, there has been an attempt to use a strategy based on culture and beliefs to promote tourism. Because Mukdahan is adjacent to the Mekong River, the beliefs concerning the Naga depicted in Buddhist tales have considerable influence on people living near the river. Such beliefs are reflected in temple architecture, cultural attractions, and important places in the province; they are also presented through sculpture, Naga worship areas, and the ambiance created to resemble the stories related to the Naga. The Naga phenomenon first began to receive attention from people in Mukdahan when construction of the Second Thai-Lao Friendship Bridge began in 2004. A whirlpool appeared around the second pillar, and people believed that this area was the Naga's cave. Subsequently, a number of tragic incidents occurred that prevented the construction from going smoothly. Several officials and workers were reported to have died, been injured, or even disappeared. These incidents led to temporary suspension of the construction. Later, villagers and officers from the related organizations tried to find a solution to this problem and consulted a Naga clairvoyant or Sai Yaan Phaya Naga, a person who believes that he is descended from and is protected by the Naga. He can communicate with the Naga in dreams or sounds and he is in charge of ceremonies regarding the Naga (similar to a Brahmin in Hinduism). He suggested that a shrine be built for the Naga to dwell in, rather than under the construction site, and a ceremony to invite the Naga to the shrine was held. Subsequently, the bridge construction experienced no problems and was completed as scheduled (Puakkansi, 2017).

Because of this phenomenon, people living nearby became interested in the tales of the Naga. Attempts were made to create a Naga sign in the form of sculptures, amulets, and worship rituals, as well as to recreate the tales about the origin of the Naga in places around the province. Examples are the tales of Phaya Sisatta Nagaraja and Phaya Petchpattara Nagaraja at Wat Dan Pra-in in Nikhom Kham Soi district and Phaya Nagadhibodi Sri Sutto at Wat Woen Chai in Don Tan district. It is obvious that every place adopted the Naga sign to promote tourism. The more tourists it draws, the more service businesses and

the economy will grow, especially in the SEZ, where the focus is on investment and economic growth. Thus, this research aims to find out the extent to which the Naga sign benefits people, the extent to which they use it, and how they use it in the SEZ. The scope of this study includes the following three places in Mukdahan province: the Naga shrine at the Second Thai-Lao Friendship Bridge in Mueang district, Wat Roi Phra Phutthabat Phu Manorom in Mueang district, and Kaeng Kabao (the Kabao rapids) in Wan Yai district.

Semiology and the Creation of the Naga Sign

The term "semiology" is derived from Greek word "semeion," which refers to signs. Semiology deals with meanings and the ways in which meanings are created and passed along to others in order to study how representations create meanings as well as how they enable us to understand the processes in which meanings are given to things. Semiology relates to visual images and visual communication that is linked from identities to a wider extent of culture and society. Therefore, semiology is a tool that enables us to understand the process of meaning creation that affects its application and the application's output; in other words, different forms of signs show us the relations of things (Kaewthep, 2004).

This study has adopted the theory of Roland Barthes (1915-1980), French literary theorist, essayist, philosopher, critic, and semiotician. He was the first scholar who applied semiology to analyze "what is happening in society." Barthes stated that everything we perceive in society is created from signs. Every place is filled with middle-class mythical codes as shown in advertisements and other types of media. These ads not only show literal meanings, they also become channels for other, hidden meanings, which can be mythical. Barthes categorized meanings into two groups. The first is denotation or "literal meaning," that is, the signified that are created objectively. The denotation is directly understood and widely accepted by the majority of people. The second group is connotation or "signic meaning," which is interpreted according to an agreement of certain

groups, in other words, it is interpreted from personal experience. Connotation is subjective, it can be interpreted based on individuals and their personal experiences and feelings in the society which we usually call “social values.” Connotation sometimes can be viewed as interpretation based on social/cultural meanings. This signic meaning is the “second order of signification” (Kaewthep, 2004; Kaewthep and Hinviman, 2010).

Regarding the second order of signification, Barthes was particularly interested in signic meanings as he believed that only connotation deals with a myth. According to Barthes, myth is the conceptualization of a thing created by certain people in a society, or ideas or beliefs that most people accept without questioning. Such beliefs or ideas conform to the power existing in the society that time (Charoensinolarn, 2002) and the backgrounds of myths operate on different ideals.

In this study, the concept of myth is used to analyze how people’s ideals are hidden in the process of creating the Naga sign. The study also aims to explore how myth works in each place. For this reason, the theory of semeiotics was applied to explain the process of signs by which every meaning consists of the signifier and the signified. There are two types of “signifiers” in this study: concrete signifiers and abstract signifiers. Concrete signifiers include objects like sculptures, amulets, and offerings. Abstract signifiers include chants and ceremonies that have both literal and signic meanings. The research also examines how the Naga sign was created and how it created meaning.

Methodology

This article employed mixed methodology (Teddle and Tashakkori, 2009). The first half of the research was carried out qualitatively. The data were collected from the SEZ in Mukdahan province where the Naga sign is used at the following places: 1) the Naga shrine at the Second Thai-Lao Friendship Bridge in Mueang Mukdahan district, 2) Wat Roi Phra Phutthabat Phu Manorum in Mueang Mukdahan district, and 3) Kaeng Kabao in Wan Yai district. The data were obtained through

in-depth interviews with the creators of Naga signs in the community and the people who used them to negotiate for power. These people included community leaders, area managers, state officials, monks, and others in the community, who made up a total of 36 informants. Content analysis was then performed on the obtained data (Miles and Huberman, 1994) and the findings yielded from qualitative data were later synthesized to develop a questionnaire. This questionnaire was used to obtain quantitative data from 384 participants who used the Naga sign and those benefited from it in the SEZ in Mueang Mukdahan and Wan Yai districts. Stratified sampling was employed in this study and the data were analyzed using descriptive statistics (Creswell, 2009).

Findings

Creations of the Naga Sign in Mukdahan’s SEZ

The Naga signs created in the SEZ, which covers Mueang Mukdahan and Wan Yai districts, were used to promote development in the area. The locations of the signs are Wat Roi Phra Phutthabat Phu Manorum, the Naga shrine at the Second Thai-Lao Friendship Bridge, and Kaeng Kabao. The process of creating the Naga sign in each place is described below.

1. Wat Roi Phra Phutthabat Phu Manorum in Mueang Mukdahan district

As this is a religious place, there is a link between the Naga beliefs and Buddhism. Evidence can be observed in religious ceremonies, traditions, and architecture in the temple’s Naga sculptures and the Naga worship ceremony. The most notable example is Phaya Sri Mukda Mahamuni Nipalnagaraja, which first appeared in 2004 through a tale about the former abbot, Phra Rajamukdahanka or Luangta Yod Yodchato. According to the tale, the abbot led a group of villagers to renovate the temple. While they were building a dike, they found a black snake that was around 30 meters long. The snake had shiny skin and it was strangely beautiful. It turned its head toward the villagers once before slithering into a local cave known as Kam Makhue Thuen. This was shocking for everyone. According to the survey,

the villagers believed that the cave was connected to the Mekong River as the ruins of ancient boats were found alongside with valuable treasures, including a golden Buddha image, golden bamboo shoots, gold bars, glasses, rings, and coins. The tale also mentions that several villagers took some of these items home, but once they arrived home, everything they had taken turned into stone. Luangta Yod also had a dream about the Naga which highlighted the importance of the sign of Phaya Sri Mukda Mahamuni Nipalnagaraja, as seen in Figure 1.



Figure 1 The statue of Phaya Sri Mukda Mahamuni Nipalnagaraja

This Naga, who lived in a cave, asked to be ordained after being enlightened by the Buddha. However, in Buddhism, a Naga cannot be ordained as it is an animal, not a human. A Naga can only recite the requests for the Three Refuges (the Buddha, Dharma, and Sangha) and the Five Precepts to a monk and offer an alms bowl and a yellow robe. One day, a huge jambolan plum tree collapsed, blocking the entrance to the cave. The villagers believed that this was a sign of the Naga's strong determination to practice meditation without distraction from the outside world. Since then, people became devoted to the Naga, who was highly revered as the successor of the Buddhist principles and the patron of caves, which are a part of natural resources.

During the years 2012-2018, people in the area saw the opportunity to earn more income from tourism. As a result, Naga signs

were created in the form of sculptures, souvenirs, and Naga worship ceremonies. At Wat Roi Phra Phutthabat Phu Manorom, a sculpture was built to resemble Phaya Sri Mukda Mahamuni Nipalnagaraja. It is 20 meters high, 122 meters long and 0.50 meter in diameter. The sculpture represents the protector of Phra Chao Yai Keawmukda Sritairat (Phra Yai) and was created to draw people to the place to pay respect to the Naga with flowers, incense, and candles. If someone's wishes for success and luck are fulfilled, they will revisit to make votive offerings such as *baisii* (sculptures made from banana leaves) trays, fruit, and pieces of red cloth.

In the case of Wat Roi Phra Phutthabat Phu Manorom, the Naga figure was originally created from a tale that appeared in a dream of the former abbot, which was passed to his disciples, to those who believe in the Naga, and to people in general. The current abbot used the tale to create the sculpture in the form of a giant black serpent named Phaya Sri Mukda Mahamuni Nipalnagaraja. The sculpture is revered as "the protector of Buddhism and nature," and stories of the Naga, its sacredness, and good fortune have been told and retold in order to attract more visitors. One example is the story of a villager who won the first prize in the lottery, which went viral on social media. The lottery winner claimed that this happened because of the Naga's power. Since then, large numbers of visitors have gathered at this place to pray for good fortune. A special area to present offerings was provided to emphasize the sacredness of the Naga and devotees are asked to follow certain worship procedures. First, they should prepare a tray containing betel and areca, incense sticks, candles, and red ribbons. Next, they should pray while walking under the Naga's stomach, which is divided into small rooms for different purposes, e.g., luck, health, work, love. After that, they light candles and incense sticks at the Naga worship area and write their wishes on the red cloth, which they tie around trees or worship plates to emphasize the sacredness of this place.

2. The Naga shrine at the Second Thai-Lao Friendship Bridge in Mueang Mukdahan district

During the period 2004-2010 beliefs about the Naga again attracted attention. At that time, the Naga was perceived as an almighty

creature through the myth that the Naga in the Mekong River was angry that the bridge was being constructed over its dwelling. The construction project mysteriously faced many obstacles, including an accident in which one worker was reported to have died, 14 were injured, and nine were missing (Kyodo, 2005). To allow the construction to continue, a Naga shrine was built near the bridge entrance as advised by the Naga clairvoyant or Sai Yaan Phaya Naga. A Naga sign was built to represent Phaya Anantanagaraja, as seen in Figure 2, in the form of a shiny black serpent curling its body around a golden post with its head turned towards the Mekong River. A ceremony to ask for forgiveness from the Naga was also organized in the area. After that, the construction was completed without any problems. Not long afterwards, a sculpture of Phaya Sri Suttho, as seen in Figure 3, in the form of a green serpent curled around a black post was built. Phaya Sri Suttho represents the patron of the Mekong area. People usually bring flowers, incense, and candles to pay homage to the Naga and other sacred spirits at the shrine. Sacred objects such as Buddha coins, rings, and bracelets are also available there for believers to purchase when they worship and pray for their wishes to be granted.



Figure 2 The statue of
Phaya Anantanagaraja



Figure 3 The statue of
Phaya Sri Suttho

In creating the sculptures of Phaya Anantanagaraja and Phaya Sri Suttho, the artisans relied on the myths about Phaya Anantanagaraja being the king of the Nagas and Phaya Sri Suttho having created the Mekong River. The signic meanings created by the locals in the Naga shrine area concerned supernatural beliefs. Since the Naga is believed to have the power to cause disasters, local people worked together to protect the area.

Along with the construction of the Naga shrine and sculptures in the area, a Naga worship ceremony combining Buddhist and Hindu beliefs was introduced. The ceremony has become an annual festival that takes place on June 8-9, co-hosted by public and private organizations. On the first day, activities consist of the chanting of sacred texts and worshipping the Naga. People bring offerings and a Naga-shaped *baisii* to the ceremony. The following day people make merit by offering food to the monks and by floating lotuses on the river to pay homage to the Nagas and the Mekong. The process of creating signs in the area of the Naga shrine began by adopting the myths of the Nagas' supernatural powers as motivation for the shrine construction to send the message that it was sacred. Worship areas were provided for people to place flower garlands, and the staff were present to give out information about the worship procedures and the history of the shrine. These activities promoted the aura of the place's sacredness and the Naga beliefs were reproduced through myths about Phaya Anantanagaraja and Phaya Sri Suttho. A grand worship ceremony co-hosted by the public and private sectors in Mukdahan province attracts visitors to the shrine. The ceremony has become an annual event, in which people take part in creating the Naga signs and giving definitions to them. While the Naga clairvoyant or Sai Yaan Phaya Naga was the first to claim the existence of the Naga, this idea was reproduced by people in the form of oral stories, beliefs, and personal experiences. As the public sector began to realize the importance of Naga beliefs, considerable support was given to the worship ceremony to create a sacred image in the area.

3. Kaeng Kabao in Wan Yai district

Kaeng Kabao (the Kabao rapids) in the Mekong River has long been a tourist site because of the large slabs of rock that appear during the dry season when the river is at its lowest. After this site experienced economic regression, Wan Yai district, a public organization, sponsored the creation of Thailand's largest granite Naga sculpture and named it "Phaya Sipuchong Mukdanagaraja," as seen in Figure 4. The sculpture is 51.40 meters long, 11.11 meters high and 1.50 meters in diameter and is white in color (in Hinduism, white represents purity) with granite scales. After the sculpture was placed in the area, more people began to visit. The area received some help from the district office in managing the worship area. The sculpture serves as a sign of auspiciousness, happiness, and prosperity. The ritual of walking past three points of the Naga's belly—representing luck, wealth, and health—is believed to help ward off bad luck. The community later joined this development by forming a group of housewives who sell trays holding betel and areca and decorated with candles and incense to visitors coming to pay respect to the sculpture. Various beliefs were also reproduced through various magical stories, including "the Naga helping catch the thief," an incident that is said to have occurred on November 26, 2018. According to the story, a thief tried to steal money from a donation box, but was unable to escape. He was found lying on the ground in front of the Naga sculpture, saying that something was strangling him, causing him to feel suffocated and collapse before the police came to arrest him. The villagers believed that it was Phaya Sripuchong Mukdanakaraja's sacred power that helped deter the thief. In addition, one of the housewives claimed that the Naga told her in a dream that he did not intend to harm the thief, but only used his power to catch him (Nuan [Pseudonym], 2019).



Figure 4 A statue of Phaya Sripuchong Mukdanakaraja

The effort to create the Naga sign in this area initially came from the public sector, Wan Yai district, which initiated the construction of the sculpture following the Naga trend that became famous in 2017. Since then, the idea of sacredness has been reinforced by the increased number of people coming to pay respect with sweet drinks, flowers, and garlands. As more and more people visited this place, stories of local people witnessing the Naga were created and passed along to visitors. The Naga sign itself also represents purity and a cessation of suffering. Beliefs about the Naga were enhanced by the story of the thief who was deterred by the Naga, thereby attracting even more tourists and believers.

The Process of Creating the Naga Sign

The process of creating the Naga sign includes signifiers and the signified. The term, "signifiers," refers to the signs that are tangible,

such as sculptures, amulets, and sacred objects. “Signified” refers to abstract or intangible signs, such as chants and ceremonies. Signs can produce both literal and sign meanings. Signs of the Naga were created in three areas. The process of creating meanings for the Naga began with myths or the dreams of the former abbot, the Naga clairvoyant, and public organizations. These factors have contributed greatly to the creation of the sculptures portraying the Naga as a giant serpent covered with different patterns with a single crest on the head. According to the local myth, the Naga is believed to be “the patron of Buddhism, nature, good fortune, auspiciousness, and greatness” (Table 1). The Naga’s power to bestow good fortune has also been highlighted in each area through magical stories. The story of the villager who visited the Naga sculpture and won the first prize in the lottery was shared widely on social media. The fact that the story was told again and again could be seen as tourism promotion. As a result, more tourists arrived to seek good fortune.

The signifiers, which are objective, include sculptures of the Naga. They are used to convey the meaning of sacredness and can be interpreted on two levels. The meaning of the first level can be understood by everyone and that of the second involves cultural meaning. After signs are affected by feelings and emotions, cultural value arises. Moreover, the Naga is defined in different ways, for instance, Phaya Sri Mukda Mahamuni Ninpalnagaraja is associated with Buddhist beliefs, Phaya Anantanagaraja and Phaya Sri Suttho reflect greatness, and Phaya Sripuchong Mukdanagaraja signifies purity. Such ideas are held in deep respect and they confirm the belief that Nagas are great devotees of Buddhism. Therefore, attempts were made to reproduce the beliefs so they can remain in Thai society for a long time. From the Naga beliefs in the SEZ, key points regarding Naga signs and their meanings can be concluded as seen in Table 1.

Table 1 Signs and their significations in the area

Sign creators	Sign	Signifier	Signified	Signification
Former abbot of Wat Roi Phra Phutthabat Phu Manorom	Phaya Sri Mukda Mahamuni Ninpalnagaraja	Story of a black snake and Kham Makhue Thuen cave	Protector of Buddhism, Patron of caves (natural resources)	Myths, Stories of good luck told by the locals
The current abbot of Wat Roi Phra Phutthabat Phu Manorom		Naga sculpture 122 meters long, 20 meters high, 0.50 meter in diameter	The belief that the Naga protects the Buddha	Myths, Provision of the worship place
Naga clairvoyant	Naga shrine	Stories from dreams and mysterious powers of the Naga	Location at the entrance of the Naga’s dwelling place in a cave leading to the Mekong	Myths, Provision of the worship place
Public sector	Phaya Anantanagaraja	Sculpture of a black serpent curling the body around a golden post, gracefully raising the head and looking toward to the Mekong River	A powerful being that uses extraordinary powers to frighten people	Reproduced by stories about the Naga’s supernatural powers combined with traditional tales
Public sector	Phaya Sri Suttho	A sculpture of a green serpent curling around a black post	Patron of the land around the Mekong River	Sacralized by magical stories combined with traditional tales linking to the tale of Kham Chanod
Public and private sectors	Worship ceremonies	Ceremonies combining Buddhism and Hinduism	Deities who bestow auspiciousness, happiness and success upon prayers	Co-host worship ceremonies
Shrine manager	Betel and areca tray	A tray of flowers decorated with candles and incense	Offerings (to pay homage)	Sacralized through worship
Government	Phaya Sripuchong Mukdanagaraja	A sculpture of white serpent with granite scales which is 51.40 meters in length, 11.11 meters in height and 1.5 meters in diameter	The deity who bestows auspiciousness and happiness; grants wishes for success, health, wealth, and good fortune	Sacralized through worship, the story of Naga helping catch thief
Community	Betel and areca tray	A tray of flowers decorated with candles and incense	Offerings (to pay homage)	Sacralized through worship

The signs of the Naga in three areas were created as single-headed serpents with unique features and colors based on the story of each place narrated by the spirit communicators or the dreams that people had. An example is the story of the black snake at Kham Makhue Tuen cave, recounted by the former abbot of Wat Roi Phra Phutthabat Phu Manorom. The current abbot decided to create a Naga sculpture with colors similar to those described in the story. To attract visitors, sacralization was done by utilizing the stories of supernatural powers and extraordinary stories from people in the community. An example is the story of the Naga helping to catch the thief at Kaeng Kabao and the granting of wishes by worship, prayer, etc. When someone's wish was fulfilled, especially for wealth and good fortune, the news spread widely by word of mouth and social media. These stories emphasized the sacredness of the sculptures and an increasing number of people visited the areas. Thus, the income earned from sign utilization has been generated to the local people who benefit from the existence of the Naga sculpture. Betel and areca trays and flower trays decorated with candles and incense sticks are available near the sculptures for those who come to pray to the Naga. Once this site became crowded, the public sector had to cooperate with the private sector and the community to help manage it in ways such as setting rules, collecting fees from shops around, establishing funds, etc. They also co-managed worship ceremonies in the area.

The Utilization of the Naga Sign in the SEZ of Mukdahan Province

Creation of the three Naga signs has contributed to growth in tourism and local economies in the SEZ of Mukdahan as can be seen in the amount of money spent on offerings by people who believe in the myths of the Naga. To worship the Naga, one needs to prepare flowers, incense, candles, pieces of red cloth, a *baisii* tray, as well as different kinds of fruits which are placed in front of the sculpture. The ceremony also includes the wearing of white clothing and the purchase of amulets and souvenirs. The annual worship ceremony is hosted by the Tourism Authority of Thailand (TAT) and public organizations. Service

businesses like hotels and restaurants also benefit from this event. According to the statistics of foreign investments in Mukdahan, 99.38 percent of provincial investments are in services, properties, hotels, and resorts (Department of Business Development, 2018).

The creation of the Naga sculptures has been beneficial to local people—to sign creators such as government agencies, the community, temples, and those interested in Nagas. The quantitative results show that 65.4 percent of local people gained benefits from the creation of the Naga sign at a moderate level, 19.8 percent benefited at high level, and 14.8 percent benefitted at a low level (Table 2), with 83.8 percent on average (Table 3).

Table 2 Percentage of people living in Mukdahan province who benefited from the utilization of the Naga sign for provincial development - overall

Overall results on the utilization of the Naga sign	Percentage
Low (39 - 67 points)	14.8
Medium (68 - 96 points)	65.4
High (97 points or more)	19.8
Total	100 (384)

Table 3 Percentage of mean per full score and basic statistical data, categorized by benefits gained from the utilization of the Naga sign - development

Benefits of the Naga sign in terms of development	Mean	S.D.	Max	Min	Full score	Percentage of mean per full score
Overall	83.8	14.7	123.0	39.0	132	63.5
Economy	22.2	3.3	32.0	14.0	32	69.4
Society and culture	20.5	5.4	32.0	8.0	32	64.2
Spirit beliefs	23.2	6.2	36.0	9.0	36	64.3
Natural resources and environment	17.9	6.0	32.0	8.0	32	55.9

However, when looking at percentage and percentage of mean per full score, we can see that the kinds of benefits received were primarily economic. Spiritual, social, and cultural benefits came in second. The environment and natural resources are the areas in which people benefited the least. The utilization can be explained as follows.

1. Economic benefits

The adoption of the Naga phenomenon to create tourist attractions has promoted the distribution of economic benefits throughout the province. This can be noticed in three tourist sites where people spent money on the sets of offerings described above to pay respect to the Naga sculptures. The worship procedure also includes white clothing, amulets, souvenirs, and an annual worship ceremony. With constant support from the TAT and public organizations, hotels and restaurants also benefit. The data is consistent with statistics indicating the number of Thai tourists visiting Mukdahan. In 2008, the number of tourists was 264,873, while in 2015 it more than doubled to 597,873. This increase in numbers has contributed to an increase in average expenditures, from 923.6 baht per person in 2008 to 1,141.18 baht per person in 2015. Moreover, many activities and events have been actively promoted (Mukdahan Provincial Statistical Office, 2015). One of the area managers explained:

We have all kinds of people coming here. For example, some come here to pray. If their wishes are fulfilled, they will come back and donate money. Most of the visitors come here to make a vow because of their beliefs. The busiest time would be on weekends, and during the Songkran festival and the Buddha relic worship fair. The majority of tourists are from the northeast, others are from the northern and central regions. They really believe that the Naga has the power to grant their wishes. In addition to Thai tourists, foreign visitors like Chinese, Vietnamese, and Europeans can also be seen at this place (Tantai [Pseudonym], 2019).

The results also revealed that 64.3 percent of samples received economic benefits from the utilization of the Naga sign at a medium level, while 14.3 percent did so at a high level (Table 4).

Table 4 Percentage of people in Mukdahan, categorized by developmental benefits received from the utilization of the Naga sign - economic development

Levels of benefits from the utilization of the Naga sign in economic benefits	Percentage
Low (14 - 19 points)	21.4
Medium (20 - 25 points)	64.3
High (26 points or more)	14.3
Total	100 (384)
Mean = 22.2, S.D. = 3.3, Min = 14.0, Max = 32.0	

The findings elicited from the qualitative approach are consistent with quantitative findings that the utilization of the Naga sign to develop Mukdahan's economy affected the development of the SEZ on a moderate level. This might result from the people living around the areas who benefited from tourism. For example, there are a number of shops selling local products, souvenirs, sacred objects, and offerings. Restaurants and accommodations also benefited indirectly from the development of infrastructure, such as public transportation and facilities, and Mukdahan's image became that of "the city of trade, agriculture, Mekong tourism, and ASEAN connectivity." The province aims to increase its economic growth by adding more value to the agricultural sector and by supporting border trade, industries, and tourism. Such actions are in accordance with the mission of the Tourism and Sports Office.

2. Social and cultural benefits

It can be noticed that Buddhist chants are included in the Naga worship ceremony. The chants are believed to have existed since the time of the Buddha and their purpose is for people to remember and reflect upon the lessons given by the Buddha. The phrase, "*Namo tassa*

bhagavato arahato samma sambuddhassa,” means “Homage to the blessed one, the worthy one, the perfectly self-awakened one.” To worship the Naga, this phrase will be chanted before other specific chants. In order to perform the Naga worship, those who have strong beliefs in the Naga must observe the Five Precepts (Phan [Pseudonym], 2018). The first precept is to refrain from taking life, which will allow people to have a long life and good health. The second is to refrain from taking what is not ours, which ensures that people’s belongings are safe. The third precept is to refrain from sexual misconduct, which enables children, grandchildren, and spouses to live happily and prevents people from doing any harm. The fourth precept is to refrain from harmful speech, swear words, lies, and sarcasm. People who practice this precept will be respected. Finally, the fifth precept is to refrain from taking intoxicants. Those who practice this precept will be blessed with intelligence and credibility. The Five Precepts are associated with the myths of Nagas, who are viewed as genuine believers in Buddhism who meditated and practiced the precepts with the hope of being liberated from suffering as an animal and being reborn as a human.

The Naga is usually worshipped in two ways (Phra Thamkittiwong, 2005). The first is by practicing the Five Precepts. Those who believe in the Naga and wish to have success must keep their word and must not make promises that they cannot keep. If they fail to keep their promises, they will accrue bad karma. They must constantly practice the Five Precepts or any one precept they have intended to follow. They have to continually make merit by donations, by observing the precepts, and praying before they can ask for Naga’s help. The second way is by object worship, which refers to the making of offerings such as a pair of *baisii*, a bunch of bananas, a glass of water, sticky rice mixed with sugar and sesame, and raw eggs. The number of sets of offerings depends on the worshipper’s preference, which can be 3, 5, 7 or 9 sets. Once the incense sticks are completely burned, a hard-boiled egg is cracked and put on the ground. The rest of the food will be eaten by people participating in the ceremony. Seven or nine incense sticks are lit and the devotee turns to the west.

It is likely that the requirement that believers behave properly was invented to control society, as those who created the signs tried to emphasize the idea of sacredness in the area. In addition to tourist attractions, there has also been an attempt to use magical stories to promote ideas about the Naga’s sacredness, such as the story about the Naga helping to catch the thief at Kaeng Kabao. This story has highlighted the importance of the Naga’s magical power so that people would not dare to misbehave for fear that something bad would happen to them. When looking at the results yielded from the quantitative approach, 53.1 percent benefited from the utilization of the Naga sign in terms of social and cultural development at a medium level. Around 30 percent reported having benefited at a high level (Table 5). Thus, the findings of qualitative data are consistent with the quantitative findings that the utilization of the Naga sign to develop Mukdahan province in terms of society and culture has affected most of the people in the SEZ at a medium level. The reason might be that people took part in the worship ceremonies or other events in the area. There were also attempts to incorporate beliefs about the Naga into everyday practices, such as through strict observance of the precepts. In this way, beliefs about the Naga are influencing the behavior of people in the community.

Table 5 Percentage of people in Mukdahan province categorized by level of benefits gained from the utilization of the Naga sign - social and cultural development

Levels of benefits from the utilization of the Naga sign in social and cultural benefits	Percentage
Low (8 - 15 points)	16.9
Medium (16 - 23 points)	53.1
High (24 points or more)	30.0
Total	100 (384)
Mean = 20.5, S.D. = 5.4, Min = 8.0, Max = 32.0	

3. Spiritual benefits

Thai Buddhists view Nagas as semi-deities with supernatural powers, including the ability to transform themselves into humans. The Naga is the patron of nature, representing water and fertility, and maintaining peace and harmony within the community (Empan, 2002). These beliefs are represented in Thai architecture and art forms such as sculpture, and they facilitate feelings of tranquility among the people (Yasopa, 2017). Beliefs about Nagas are also used to explain certain Buddhist works of art. For example, the Naga sculptures on banisters at temple buildings serve as symbolic vehicles taking people across the cycle of rebirth, and the buildings represent the *Sampao Thong* or golden boat that enables people to escape from the cycle of rebirth (Namgan, 2011). The Naga signs were used to create tourist attractions for people to pay respect and pray for success, wealth, health, good fortune, etc. People also feel calm and optimistic when joining the worship ceremony. What is more, Naga worship also incorporates Buddhist chants, mantras, and rituals to sacralize the ceremony. Many people believe that these practices are good for their health (Phan [Pseudonym], 2018). For example, if they practice the Fifth Precept by refraining from alcohol, their health will improve. The practice is also believed to help reduce the risk of serious illnesses and it enables people to be conscious of their feelings and to monitor their actions. We can use our strength to help others, as one believer pointed out, "...if you worship the Naga, you need to keep your word, because the Naga favors people who do exactly what they say and who follow the Five Precepts strictly. If you can do all of that, your wish will be granted, whether it is for children, good luck, all of it..." (Aumpan [Pseudonym], 2018). The statement is similar to that of another person who explained, "To worship the Naga you have to observe the religious precepts strictly as the Naga was a faithful supporter of Buddhism and wished to be ordained. Therefore, the Naga had to observe the religious precepts, as did his followers" (Maha [Pseudonym], 2019).

In looking at the findings, we can see that 49.7 percent received spiritual benefits from the utilization of the Naga sign in developing the

province at a medium level, while 31.5 percent gained benefits at a high level (Table 6).

Table 6 Percentage of people in Mukdahan, categorized by levels of benefits gained from the utilization of Naga's sign in developing the province - spiritual benefits

Levels of benefits from the utilization of Naga's sign in spiritual benefits	Percentage
Low (9 - 17 points)	18.8
Medium (18 - 26 points)	49.7
High (27 points or more)	31.5
Total	100 (384)
Mean = 23.2, S.D. = 6.2, Min = 9.0, Max = 36.0	

The quantitative findings are consistent with the findings yielded from the qualitative method—that the utilization of the Naga sign in the province's development (spiritual dimension) has affected economic development at a medium level, possibly because people worship the Naga in order to feel they have something to cling to, and thus become happier and more optimistic.

4. Natural and environmental benefits

In the past, the area around the Second Thai-Lao Friendship Bridge was deserted and no one wanted to go there at night. It became a hangout place where teenagers often got together for unlawful activities. However, after the Naga shrine was built and improvements were made to the landscape, the community was able to gain benefits in terms of natural resources and the environment. Such changes enabled the community to be cleaner and safer because people believe the area is a sacred place that should be kept clean to prevent it from becoming a place of crime as before. One of the believers recounted, "Before the construction of the Naga shrine, teenagers would gather here to hang out with friends, drink alcohol, smash bottles, and have sex. But after the shrine was built, such things disappeared. Nowadays nobody would dare to do any harm or litter..." (Bundan [Pseudonym], 2019).

Regarding the results from quantitative analysis, 52.9 percent in the province were reported to have gained natural and environmental benefits from the utilization of the Naga sign at a medium level. Up to 28.9 percent belonged to the low-level group (Table 7).

Table 7 Percentage of people in Mukdahan, categorized by levels of benefits gained from the Naga sign utilization - natural resources and environment

Levels of benefits from the utilization of the Naga sign in natural resources and environment benefits	Percentage
Low (8 - 15 points)	28.9
Medium (16 - 23 points)	52.9
High (24 points or more)	18.2
Total	100 (384)
Mean = 17.9, S.D. = 6.0, Min = 8.0, Max = 32.0	

The qualitative findings support the quantitative findings that the use of the Naga sign in developing the province in terms of natural resources and environment has moderately affected the development of the SEZ. This could be explained by the fact that the locals benefited from the landscape improvements and the construction of the sacred places in the area. Such changes enabled the community to be cleaner and safer. However, there was little participation from people in administering or managing the site.

Conclusion and Discussion

This study explored the use of the Naga sign in Mukdahan's Special Economic Zone. The signs in each area were signified by denotation, which is constructed objectively, such as the Naga sculptures that are widely recognized as giant serpents. Sculpture techniques and color patterns of the Naga differ according to the connotation agreed by a group or the community. This study of signs was based on Barthes's perspective (Kaewthep, 2004; Kaewthep and Hinviman, 2010).

Sculptures of a giant serpent (denotation) were designed according to the Naga's characteristics, skin, size, and decorations described in each specific area. There was also consideration of what aspect of the Naga should be used to emphasize its sacredness and make it remarkable (connotation). For example, the story of Phaya Sri Mukda Mahamuni Ninpalnagaraja reflects faith in Buddhism, Phaya Anantanagaraja is portrayed as a deity with destructive power, while Phaya Sripuchong Mukda Nagaraja represents purity. In order to increase the number of tourists, the community also created the belief that the three Nagas bestow good fortune upon people.

When the Naga signs were created in the SEZ, public organizations, the private sector, the community, and the people living around the areas all benefited in four ways. First, people received economic benefits from the belief that the Naga signifies good fortune and prosperity. The public organizations and communities saw the opportunity to use these beliefs to promote tourism through activities or ceremonies. More and more people are reported to have visited these areas every year, and the service sector, especially hotels and restaurants, apparently grew to support tourists. This growth has generated higher income in the province, which conforms to the study by Cohen (2007) that Nong Khai's Naga Fireball Festival is very important to the local economy as the number of tourists has been increasing every year. Income earned from tourism benefits local people. Second, the Naga sign has also assisted people socially and culturally. Stories of the Naga are linked to the way of life of the people of the Mekong in terms of agricultural ceremonies, art, and architecture. According to a study by Hongsuwan (2011), ideas of sacredness are associated with the Mekong through folk tales that link Buddhism and the Naga. Therefore, people in the community are quite familiar with the Naga ceremonies in which rules must be strictly observed, thereby helping to maintain order in society.

Along with economic and social and cultural benefits, people have also benefited spiritually. As the Naga represents success, people pray for the things they want in exchange for observing the Five

Precepts, especially refraining from alcohol. It is believed that anyone who constantly practices the Five Precepts will feel calm, relaxed, and hopeful that their wishes will come true (Eoseewong, 1993). This idea supports the sociological concept that tourism has an impact on society and people's morale as tourism activities allow people to have various experiences, knowledge, and enjoyment. Thus, tourism can be seen as an alternative way of promoting the quality of life and relieving social stress. Finally, natural resources and the environment also benefited from the Naga. According to the stories, the Naga, a mythical creature, lives in a cave and protects the river. Therefore, people have to respect the Naga by complying with the rules of each place. The areas' landscapes were also modified to enhance the sacred ambiance so that people would fear the Naga's powers. According to Ya-Liang Chang (2017), in Thai folk tales, the Naga is usually portrayed as having supernatural power to transform itself into other shapes to warn people, protect them from danger, and bestow wealth upon them. However, anyone who misbehaves or shows disrespect will be avenged by the Naga and they will experience misfortune. This research used the idea of the Naga sign because the Naga is a mythical creature existing in both Buddhism and Hinduism. There are also stories that connect the Naga with the way of life of the Mekong people. Thus, in addition to promoting economic growth, the Naga sign also helps to preserve local traditions, conserve natural resources and the environment, and ensure that both local people and visitors will conduct themselves properly.

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