

THE TURTLE CONSERVATION AND EDUCATION CENTER (TCEC)'S ROLE IN BALINESE COMMUNITY TRADITIONS' TURTLE USE

EDI SUSILO ^{1*}, ANGGIRESTA A. ALLENDIRA ², MEIRANDA JASMINE ³,
AULIA LANUDIA FATHAH ⁴, BERLANIA MAHARDIKA PUTRI ⁵ and
ANDIK ISDIANTO ⁶

^{1,2,3} Department of Socio-Economy Fisheries and Marine, Faculty of Fisheries and Marine Science, Universitas Brawijaya, Malang, Indonesia.

^{4,5} Department of Utilization of Fisheries and Marine Resources, Faculty of Fisheries and Marine Science, Universitas Brawijaya, Malang, Indonesia.

⁶ Doctoral Program of Environment Studies, Universitas Brawijaya, Malang, Indonesia.

Email: ¹olisuside_fpik@ub.ac.id (*Corresponding Author), ²anggiresta@student.ub.ac.id,

³meirandaj@gmail.com, ⁴aulialanudiaf@gmail.com, ⁵berlaniamahardika@gmail.com,

⁶andik.isdianto@ub.ac.id

Abstract

Turtles are protected reptiles because their population in the ecosystem continues to decline. The hunting of turtles for ceremonial and commercial purposes generates controversy among the community, particularly among foreign communities, regarding the use of turtles in Bali. The practice of utilizing turtles is popular in South Bali. Locals hold that turtles are revered as sacred creatures and refer to them as Bhadawang. In addition to traditional ceremonies, people consume and sell turtles. To protect the declining turtle population, it is necessary to establish conservation areas. TCEC (Turtle Conservation and Education Center) was established to preserve turtles and their natural habitat and to educate the Serangan people of Bali. TCEC collaborates with BKSDA Bali, BPSPL, and PHDI to provide education, assist with conservation efforts, and aid in maintenance. The use of turtles in this ceremony is, of course, a social issue with pros and cons. Six people agree with the use of turtles for ceremonies because their use is protected by law and the existence of TCEC as a conservation institution, while two people disagree because turtle conservation must be prioritized. The community's participation in protecting turtles in Serangan Village demonstrates how well-liked TCEC is there. In addition, it has a positive effect on the local economy through renting homestays, selling cuisine near the TCEC, and selling souvenirs.

Keywords: Community-Based Tourism, Serangan Island, Green Turtles, Hawksbill Turtles, And *Tri Hita Karana*

INTRODUCTION

Turtles provide an important ecological role in marine ecosystems, including the maintenance of coral reef and seagrass habitats, the distribution of aquatic nutrients, and the enhancement of fish diversity [1]. Turtles also consume jellyfish, and their presence is essential for maintaining the equilibrium of marine ecosystems [2]. Although sea turtles serve a crucial ecological role in marine ecosystems, their populations continue to decline annually on a global scale. Human factors and biological factors contribute to the continued decline of turtle populations [3], including their migratory behavior [4] and threats from predatory animals such as crabs, birds, and other reptiles [5]. Compared to natural factors and predators,

however, human causes are viewed as more influential. These factors include beach and sea pollution, garbage, destruction of habitats and migration routes, illegal hunting for eggs, meat, and shells [6,7,3] both for sale and for food and conversion of nesting habitat into a tourist attraction [8]. As the turtle population is decreasing and it is designated in Appendix I of the Convention on International Trade in Endangered Species (CITES) (www.cites.org), its existence is protected by international agreements and national laws. In addition to Law no. 5 of 1990 on the Conservation of Biological Natural Resources and Ecosystems, PP No. 7 of 1999 on the Preservation of Plant and Animal Types, and PP No. 8 of 1999 on the Utilization of Wild Plant and Animal Types, PP No. 7 and Law no. 50 of 1990, which prohibit the trade of all turtle products, eggs, and species, the Bali Regional Regulation through the Decree of the Governor of Bali No. 243 of 2000 prohibits the trade in turtle eggs [9]. After that, Law No. 31 of 2004 on Fisheries and PP No. 60 of 2007 on Conservation of Fish Resources were enacted, bringing significant adjustments to the management of sea turtle conservation [10].

Social, cultural, and economic relationships between turtles and humans have been observed in several countries, including Indonesia, where they have been documented verbally and in writing [11]. Turtles have a strong cultural connection with Indonesian society, particularly Balinese traditions, rituals, and customs [12,13]. Green turtles play an essential role in traditional Hindu religious ceremonies in Bali, which contradicts the national and international governments' conservation campaigns [14]. Due to the declining turtle population, Balinese religious leaders prohibited the use of turtle meat in traditional ceremonies [15]. In 2005, the Hindu Dharma Council (Bhisama) stated that substitutes for turtles could include images, cakes, or other animals, as long as the turtle was not killed and was released after the ritual was concluded [16]. From 2004 to 2008, at least twenty to thirty turtles were used for ritual ceremonies in Bali [10]. As a result of public dissatisfaction in 2009, it became lawful to purchase captive-bred green turtles for traditional ceremonies [17]. One of these turtles with a diameter of less than 20 centimeters and a price tag of IDR 500,000 can be found at the Turtle Conservation Center [16]. Illegal fishing and trade of the species *Chelonia mydas* (green turtle) and *Lepidochelys olivacea* (Olive ridley turtle) continue [9], ; therefore, conservation is necessary. It is anticipated that turtle conservation will enhance public awareness of how to protect and preserve turtle habitat [18]. The Turtle Conservation and Education Center (TCEC) in Serangan Traditional Village, Denpasar, Bali, is one of the locations on the island of Bali committed to turtle conservation.

Serangan is a potential area that demonstrates the Denpasar City government's environmental preservation, historical and cultural values, education, and cultural tourism attractions [19]. The Turtle Conservation and Education Center's (TCEC) primary objective is to protect, educate, promote tourism, prevent illegal trade, and provide turtles for traditional ceremonies in collaboration with Parisada Hindu Dharma Indonesia (PHDI) Bali [20]. TCEC provides conservation education, hatchling nurturing, semi-natural hatching, egg collection, and beach monitoring [21]. At TCEC, tourists have the opportunity to contribute directly to turtle conservation. *Tri Hita Karana* comprises harmonious human-to-God relationships (*parhyangan*), harmonious human-to-human relationships (*pawongan*), and harmonious human-to-environment relationships (*palemahan*) [22]. According to Dalem et al. (2021),

TCEC's implementation of turtle-based ecotourism meets 92% of the *Tri Hita Karana* criteria for effective governance, *parhyangan*, *pawongan*, and *palemahan*. This research is important to determine the turtle conservation activities at TCEC, the role TCEC plays in educating the Balinese Hindu community to minimize the use of sea turtles in traditional ceremonies, and to participate in disseminating information regarding the protection and preservation of sea turtles to the broader community, as well as to determine whether educational values can be effectively implemented in accordance with conservation objectives.

LITERATURE REVIEWS

According to previous studies, turtles have been used for generations as offerings in traditional ceremonies and wedding traditions. The Enggano people capture turtles for weddings [24], whereas the Balinese use turtles in traditional ceremonies as offerings. Several traditional ceremonies in Bali, particularly in the Kuta and Tanjung Benoa areas, often use turtle meat [14]. Turtles are regarded as a symbol of natural equilibrium, and as such, they must be preserved with great religious fervour [25]. People believe that if they abandon this traditional ceremony, catastrophic events will occur in their lives, and they are going to suffer severe punishments [26]. In addition to ceremonial practices, global warming, environmental contamination, and disease are also threats to turtle populations [14]. The Turtle Conservation and Education Centre (TCEC) was established in order to preserve turtles and provide turtles for traditional ceremonies. In addition to being a conservation centre, TCEC also serves as an educational and alternative tourist destination [27]. This education and tourism initiative aims to enlighten the public and tourists about turtles and the significance of turtle conservation through direct experience at tourist attractions [28].

MATERIAL AND METHODS

This form of study is qualitative research, involving the collection and narrative analysis of field data [29]. Qualitative methods seek to comprehend the significance of interactions between human behaviour in particular social [30–32]. Qualitative research involves the use and collection of various empirics, such as case studies, experiences, interviews, notes, observations, history, and other related sources [33,34]. Serangan Village has been known for turtle hunting in the past, so locating the Turtle Conservation and Education Centre (TCEC) in Serangan Village as a conservation effort is one way to learn how to conserve turtles, which are commonly used as traditional offerings in Bali. This study's subjects included the TCEC, Deputy Traditional Leaders, the residents of Serangan Island, and tourists. This study aims to explain how turtle conservation and educational tourism are practiced in Serangan Village, as well as the use of turtles in Hindu religious ceremonies with the TCEC. Interviews and observations (primary) and literature, website, and documentation studies (secondary) were used to collect data. Using the technique of purposive sampling, the sample was determined based on the criteria that the informant must be able to convey information clearly and in detail to the researcher.

DATA COLLECTION

Data collection techniques used include:

1) Interviews

Interviews are activities used to directly collect data and information from 8 informants, including 1 person from the Deputy Traditional Chair, 1 person from the Chair of TCEC, 1 person as a former turtle hunter and chief of souvenir craftsmen, 3 residents of Serangan village, and 2 domestic and international tourists. Several questions were posed to the informant in order to get his or her perspective on all matters concerning TCEC. The results of interviews are recorded or transcribed by researchers and then analysed [35].

2) Observation

Observation is observing the activities of the Serangan village, which uses turtles as a tradition, as well as the conditions of conservation management and the series of education systems at the TCEC.

3) Documentation

Documentation of letters and transcripts to TCEC for interpretation.

DATA ANALYSIS

Miles and Huberman are used for the data analysis, which includes data reduction, data display (data presentation), and conclusion drawing and verification. Data reduction is the classification of data into necessary and unnecessary categories. The simplified data is then presented as a structure of information. When presenting qualitative data, narrative text, matrices, graphs, networks, and charts are the most common formats. The presented data is then used to draw conclusions and receive verification. Figure 1 depicts a visual representation of the data analysis performed.

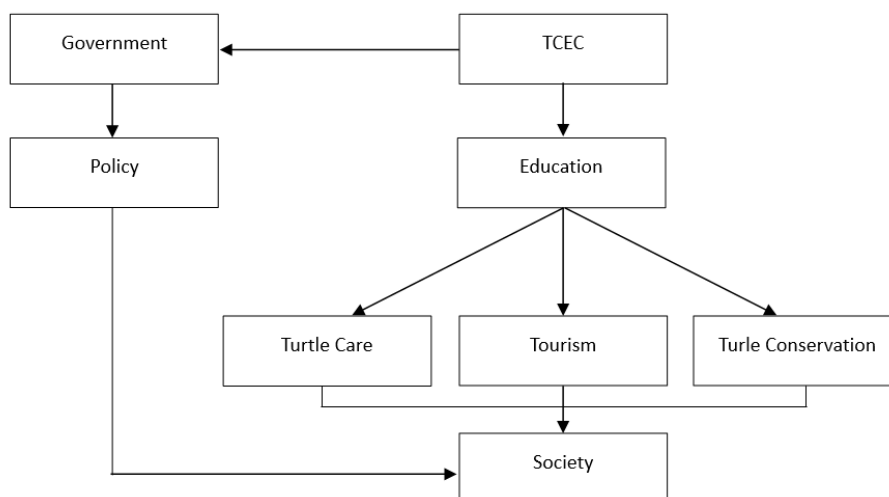


Figure 1: Data Analysis Visualization

RESULTS AND DISCUSSION

Turtle Conservation and Education Center (TCEC)

TCEC was established in 2006 on Serangan Island, Denpasar, Bali. It is one of the conservation centres that protects endangered turtles and involves local communities [36,21]. Before the existence of TCEC, local residents of Serangan Island often hunted and ate green turtles for traditional Balinese ceremonies. At present, this turtle population threatens extinction. The hawksbill turtle, or *Eretmochelys imbricate*, has the most beautiful carapace of any species of turtle. Therefore, many people in local communities hunt and give these turtles as gifts. The TCEC protects the survival of these three species of turtles in the rehabilitation ponds. TCEC protects 3 of the 7 species of turtles in the world, such as the olive ridley turtle (*Lepidochelys olivacea*), the green turtle (*Chelonia mydas*), and the hawksbill turtle (*Eretmochelys imbricate*) [27]. TCEC was established with the following purposes and goal [37]:

1. Stop everything turtle trade, consumption, and use.
2. Support widespread turtle protection.
3. Prepare turtles for religious ceremonies without slaughtering them.
4. Monitor the population and size of turtles.

According to Law No. 5 of 1990, conservation is a protected habitat for endangered plant and animal species. Under TCEC administration, the turtle conservation becomes a secure location for turtle nesting and egg hatching. Annually, TCEC collaborates with the community and associated organisations on the release of hatchlings into the ocean. According to the study's results by Oka et al. (2021), the formation of TCEC has the goal of strictly regulating the turtle trade, thus providing job opportunities for the local community.

TCEC has a definite effect on the economy of the surrounding community. The Serangan village generates income through homestay rentals, culinary sales near TCEC, and souvenir sales. They are also frequently used by students for internships and thesis research. In line with previous studies by Dewi (2022), TCEC contributes to the local economy by offering alternative livelihoods to the turtle trade. This TCEC uses the potential of education, tourism, conservation, and research, with an emphasis on commerce, to create new opportunities for Serangan Island's endangered sea turtles.

TCEC Working Pattern

Conservation Management Technical Guidelines

The technical guidelines for turtle conservation management developed by the Department of Maritime Affairs and Fisheries of the Republic of Indonesia serve as the foundation for the turtle management techniques implemented at TCEC, as described in Figure 2 below.

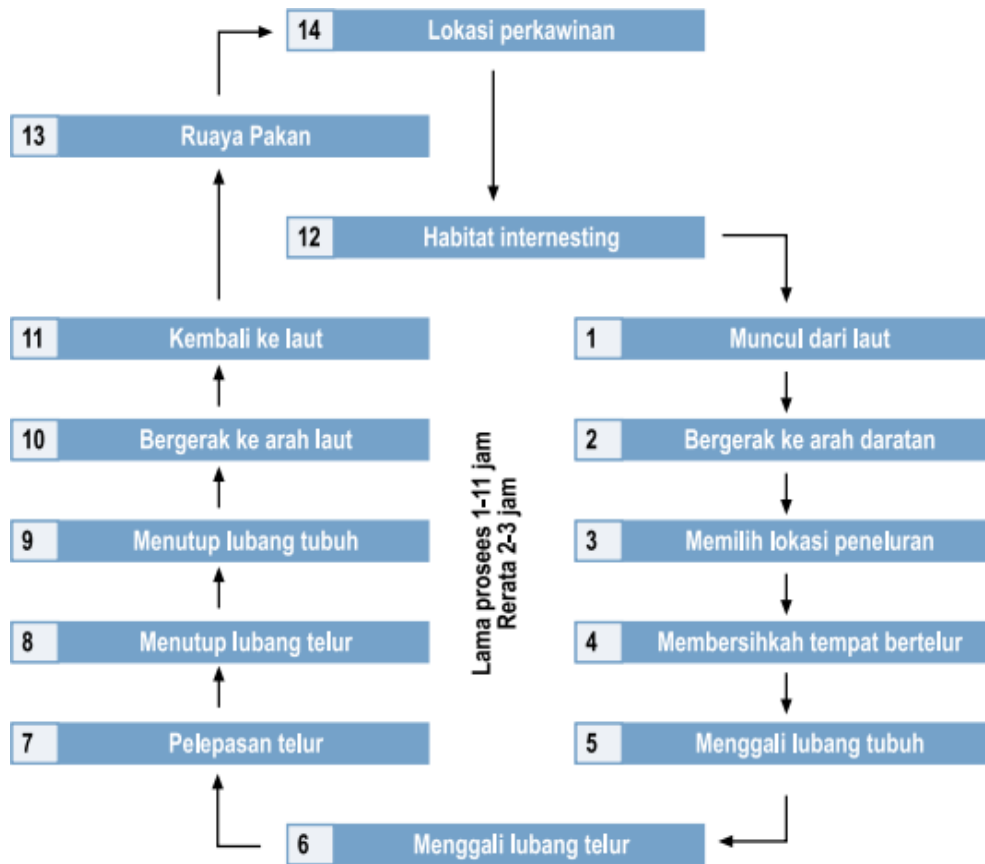


Figure 2: Visualization of Turtle Monitoring

(Source: Department of Maritime Affairs and Fisheries)

1) Monitoring turtle eggs and hatchlings

Turtles spend between 1-11 hours at the surface before returning to the water. There are two separate types of egg hatching: natural and semi-natural. Natural hatching occurs directly in the marked turtle nesting area, which is protected from coastal erosion and predators. In the meantime, semi-natural hatching occurs at the site where the turtle funds its eggs, and a hatching hole is created. The eggs hatched at TCEC originate not only from TCEC but also from local residents and fishermen. The birth success rate at TCEC is 75% [21]. The efficacy of egg hatching is affected by temperature, which in turn affects sex indicators. When the temperature is high (optimal), the sex ratio tends to favour females, whereas when the temperature is low, the sex ratio favours males [20].

2) Turtle and baby turtle breeding

Generally, turtles are bred to prevent their extinction. Once the turtles return to their natural habitat, it is anticipated that conservation will improve their chances of survival. Technically, the process of breeding turtles includes egg transfer, semi-natural hatching, nurturing of the hatchlings, and release of the hatchlings. Turtle eggs will be relocated from natural nests to

semi-natural nests in order to preserve eggs and the species [20]. The most essential factors to consider when rearing hatchlings are water circulation and the size of the nurturing area. Good water circulation will prevent skin diseases caused by food waste and secretions. In the meantime, a spacious nursery area will allow the hatchlings to move freely [18].

3) Turtle Monitoring

Monitoring is one of the conservation activities aimed at ensuring that turtle nests and eggs are safe from predators so that preventative measures can be taken immediately in the event of a disturbance [21]. This monitoring can be used to determine the level of conservation management's effectiveness. Monitoring occurs once per week or once per month. Activities are performed either manually or with the aid of instruments. In TCEC management, the nest egg, number of eggs, nest dimensions and openings, hatching rate, and nesting of turtles are monitored (Figure 3).



Figure 3: Monitoring Turtles Laying Eggs on the Beach

4) Tourism Management Techniques

To manage turtle conservation tourism, the following techniques must be implemented:

- a) Designing the spatial layout and governance of turtle conservation educational tourism by completing supporting facilities;
- b) Promoting and socialising with residents and educational institutions;
- c) Creating tour packages such as adopting hatchlings; and
- d) Developing and managing tourism by taking into consideration the conditions and comfort of the residents.

The Infrastructure At Turtle Conservation

The key to success in turtle conservation management is providing adequate facilities [39]. The TCEC's supporting facilities include the following:

1) Education Class Hall

Students who are on educational tours at TCEC frequently use this room.

2) Turtle Pond

In the turtle pond, students, members of the public, university students, and tourists to TCEC will learn about turtles and their habitat. They will see all types of turtles at TCEC directly in this spot (Figure 4).

3) Turtle Egg Hatchery

This facility was constructed to provide increased protection for turtles. The beach turtle eggs will be transported to this location using a method involving the creation of a 100-egg hatching pit (Figure 4).

4) Bathrooms

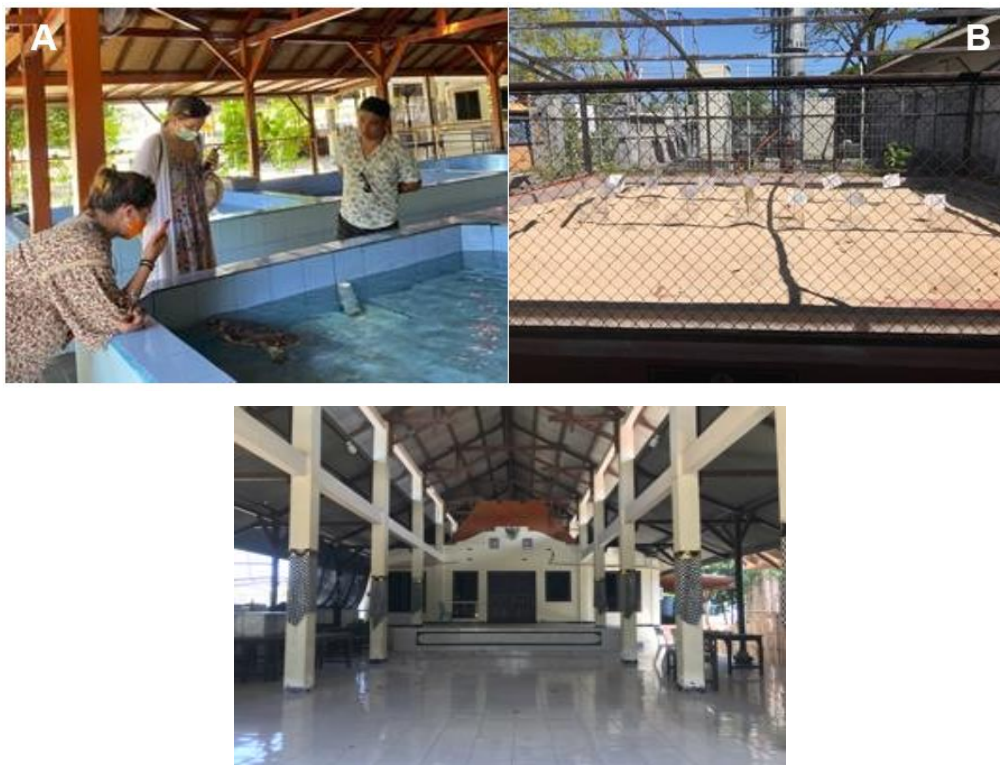


Figure 4: TCEC Facilities: (A) Turtle Breeding Pond, (B) Turtle Egg Hatchery, and (C) TCEC Hall

Educational Tourism (Edu-Tourism)

The TCEC vision is to reestablish Serangan Island as Turtle Island with conservation, educational, economic, and socio-cultural goals [20]. Domestic and international tourists are educated on turtle species throughout the world, including those in Indonesia and Bali, as well as on the growth and differences between turtle species. Through infographics, PowerPoint presentations, and videos, TCEC provides information on marine life, factors that threaten turtle populations, the dangers of eating turtle meat and eggs, the life cycle of turtles, regulations governing the use of turtles in Hindu religious ceremonies, and turtle conservation activities (Figure 5).



Figure 5: Educational media about turtles (A) Board for Turtle Species in the World; (B) Board on the Dangers of Turtle Consumption; (C) Turtle Life Cycle Board; and (D) Board on Turtle Types in Indonesia

Tourists to the TCEC can participate in a variety of educational tourism activities, such as adopting hatchlings and learning knowledge from facilitators. The explanation for these actions is as follows:

1. Adoption of hatchlings or baby turtles

Two-week-old hatchlings in the rearing pond will be released. Through personal or mass tourist baby turtle adoption programmes, hatchlings can be released [20]. International tourists may pay Rp 150,000.00, while domestic tourists pay Rp 100,000.00. Adopted baby turtles must be released immediately and cannot be brought home or kept by tourists.

2. Providing Material/Information

During the training, TCEC employees and volunteers provided information about turtle conservation, including the dangers of eating turtle meat and eggs, the life cycle of turtles,

regulations regarding the use of turtles in Hindu religious ceremonies, and TCEC's turtle conservation activities. The TCEC educates local residents and children about turtle conservation through research and practical field work (PKL), as well as teaching them handicraft skills to improve their creativity and provide alternative sources of income. Most often, children are also instructed to colour wooden turtle statues with coloured paint [20].

The Relationship Between TCEC And Saving Turtle Eggs Is Within The Legal Framework

Numerous turtle conservation institutions have criticised the turtle trade in Bali, so the government issued National Law No. 5 of 1990 and Government Regulations Nos. 7 and 8 in 1999 to regulate wildlife conservation. The Bali Governor's Decree No. 234/2000 was issued as a result of the central government's suggestion that the Bali government take the preservation of turtles in Bali seriously. The publication of this legal basis confirms that turtles are a species that must be protected and that acts of trade or slaughter are punishable by law [37]. The regulation of turtle animals is also documented in Adi Parwa and the awig-awig of the Serangan Traditional Village, which continues to be guided by the implementation of Tri Hita Karana. Turtle protection in the Serangan traditional village of Awig-awig in Pawos 29, which reads “*penyu lan binatang laut lianan tur seluring paksi*”. Palet 1: *Utsaha desa sane kesangkreb antuk desa wantah pasar desa, LPD, TECE (Pusat Pendidikan dan Perlindungan Penyu), dermaga lan parkir, sane kaayomin olih badan usaha milik desa*. The Awig-Awig contains only the most important information about the life patterns of the residents of Serangan Traditional Village, with no social sanctions [25].

The Conflict That Occurred

Several conflicts, including environmental, economic-tourism, and sociocultural factors, have occurred that threaten the existence of sea turtles. Change and disruption are the result of factors that must be highlighted [40]. Environmental factors, particularly the destruction of coral reefs that provide food and shelter for turtles, are a major cause of conflicts. Turtles won't lay eggs in areas where fishing gear like trawls and dynamite has harmed the environment and made it dangerous. The next conflict was caused by economic and tourism factors. The economic-tourism industry in Bali continues to change in line with the times. Ongoing tourism development is not consistent with the noble objective of community welfare, and some tourism development on Serangan Beach has caused environmental harm. Reclamation harms the habitat of marine organisms and sea turtles.

Around 20,000 turtles are kidnapped and sold annually on the island of Bali. Prior to the implementation of the law, the illegal turtle commerce in Bali had decreased by 80–90% [41]. Since 1970, turtles have been widely consumed in Bali, primarily as medicine, souvenirs, and religious offerings [21]. Before the year 2000, it was estimated that 7,709 turtles were needed annually in the villages of Serangan and Tanjung Benoa for traditional or religious rituals [37]. Meanwhile, data indicates that 110 turtles were slaughtered for traditional or religious purposes in Bali in 2018 and 73 turtles in 2019 (PDHI, 2020). Greenpeace notified the Governor of Bali in 1990 that Bali's tourism would be boycotted if the government failed to

end turtle exploitation [38]. Due to the hunting and exploitation of turtles on the island of Bali, this was followed by a number of countries prohibiting their citizens from travelling there. This has an effect on Bali's tourism because it affects the number of visitors to the island.

In connection with socio-culture in Bali, the use of turtle meat as an offering is mandatory during the Dewa *Yadnya* ceremony. Balinese people believe that turtles, or *Bhawang*, are considered sacred animals, so the use of turtles in this tradition makes a sacred offering, or *yadjna*. The use of turtles in this ceremony is limited to a few regions in Bali. In the past, turtles were used as offerings in wedding ceremonies, tooth cutting, *Ngaben*, *Ngeteg Linggih*, and *Padudusan*. However, only *Ngeteg Linggih* (founding a new holy place) is able to use turtles at this time. The use of turtles for religious activities cannot be easily estimated because of variations in number, type, and time. According to Firliansyah et al., (2017), 930 turtles are used annually for religious activities, which is significantly higher than the BKSDA's estimate of 33 turtles per year. Following the Decree of the Governor of the Regional Head of Level I Bali Number 22 of 1990 concerning Controlling Hunting and Protection of Wild Animals and Regulation of the Use of Turtles, supervision and protection are crucial. To prevent the extinction of turtles, it is crucial to increase public awareness. The turtle trade must also be stopped, and those who smuggle turtles must be punished according to the law, which can include fines and imprisonment [42].

Solution of Conflict

Several conservation organisations, such as Greenpeace, have criticised the use of turtles for consumption, souvenirs, medicines, and religious activities. Greenpeace launched an intensive campaign to stop the trade in turtles, particularly their use for religious activities. Based on the outcomes of eight in-depth interviews, it was determined that six individuals support the use of turtles in traditional ceremonies. Because traditional ceremonies are sacred and must be preserved, this is the case. Meanwhile, two other individuals were opposed to the use of turtles in traditional ceremonies. The reason is that turtles are endangered, so their preservation must take precedence and their use in traditional ceremonies can be supplanted by other animals [43].

"(...) at first, we, the people, did not agree with the restriction on turtle hunting because that had been our source of income for a long time; if our occupation disappeared, what would we eat?" (Interview with a former turtle hunter, February 18, 2022).

Due to the difficulty of eliminating the use of turtles in traditional ceremonies, their use is controlled through a quota system. This restriction adheres to Bali Governor Decree No. 243/2000 regarding the conservation of turtles and other endangered species [16]. This restriction is in accordance with the Bhisama Sabha Pandita Parisada Hindu Dharma Indonesia Centre No. 05/Bhisama/ Sabha Pandita PHDI/VIII/2005 regarding the Use of Rare Biological Resources and/or Rare and/or Endangered Biological Resources in Hindu Religious Ceremonies. The use of turtles requires permission in the form of a letter of recommendation from the Traditional Leader detailing the intended purpose and quantity. This letter is then submitted to the Parisada Hindu Dharma Indonesia (PHDI) and appended to the BKSDA,

which determines the quota. However, there are allegations that merchants are misusing these recommendations to smuggle turtles in order to avoid inspection by officers [44].

Apart from that, as a solution to the many people who depend on turtle commerce for their economic fate, the government provides a solution by providing training. This training involves the creation of turtle-shaped trinkets from shells and stones, which are characteristic of the Serangan region. The residents of Serangan have exported their goods to countries such as Malaysia and Singapore, as well as domestically. Successful souvenir crafters can provide training to both foreign and domestic tourists who visit Serangan [43].

"(...) from the many complaints from the local community, eventually the government and TCEC provided training for us former turtle hunters to make crafts from stone. The results of this craft are so popular that they can be exported to countries such as Malaysia and Singapore" (interview with a former turtle hunter conducted on February 18, 2022).

Establishment of TCEC

The TCEC was established as a consequence of discussions by all relevant stakeholders (government, tourism department, academics, and community) on how to control the massive turtle trade. NGOs in the conservation sector, such as WWF (World Wide Fund for Nature) and the government (Mayor of Denpasar, Natural Resources Conservation Centre, or BKSDA Bali), supported the establishment of TCEC [37]. It is expected that the ecological concept at the TCEC will aid in conserving turtles, restoring them from extinction, assisting local communities economically, such as by creating new jobs, and educating the community about what is happening in its environment. It is anticipated that this will aid in the conservation of turtles.

Government And TCEC Collaboration Agreements

TCEC collaborates with several government institutions, including PHDI (Indonesian Hindu Dharma Parish), BKSDA (Natural Resources Conservation Centre), and BPSPL (Coastal and Marine Resources Management Center). TCEC and the government are collaborating to educate the public on the significance of turtles to the ecosystem. TCEC-BKSDA Bali assists in the care of turtles confiscated from the community. BPSPL contributes to community turtle conservation education. TCEC and PHDI assisted in providing turtles for the tradition ceremony. PHDI and BKSDA Bali worked to assure that the ceremony's turtles originated from TCEC breeding.

Instruction For The Community

Conservation education can increase public awareness of the importance of protecting ecology [45]. TCEC provides education to study tour groups from elementary to middle school children [46]. The government, educational institutions, and local communities must support educational programs [47]. The table reflects the education imparted by TCEC:

Table 1: Education provided by TCEC to the community

No.	Community Level	Education Provided
1.	Student	Visits to TCEC, which are usually carried out by the school, are part of school children's education. Students will learn about turtle species, their diet, and their way of life at TCEC which is packaged in stories and animations. According to Luthfi et al. (2023), children are also taught to color wooden turtle statues in the TCEC hall.
2.	College Students	Internship and thesis research by students on various types of turtles at TCEC, such as hawksbill turtles, leatherback turtles, olive ridley turtles and green turtles. TCEC has also collaborated with RSH Kedonganan who often checks and treats sick turtles at TCEC.
3.	Local Community	Discussions about what people should do if they find eggs or turtles and how to manage turtles caught in fishermen's nets are used to educate the public.
4.	General Public	TCEC shares information about turtles via the internet and Instagram so that the general public has easy access to it.

SUGGESTIONS

According to a study published by Firliansyah et al. (2017), some turtle conservation programmes prioritise tourism over conservation. Another study by Ario et al. (2016), found that TCEC has a high rate of embryonic hatching success. Suggestions for TCEC and BKSDA activities include a greater focus on improved turtle management procedures. Considering that temperature and humidity play a role in the level of success, the turtle's reproductive site must still be considered. Finally, the growing awareness of the significance of turtle conservation among local communities must be maintained. Regardless of the legal basis that has been established, the application of customs, traditions, and customary law, as well as cooperation, can be implemented and emphasised as fundamental arrangements for conservation management [48]. Supervision in licencing the use of turtles for traditional ceremonial offerings must be tightened to avoid fraudulent individuals and attempts to smuggle turtles.

CONCLUSION

The tradition of utilising turtles is widespread in South Bali. Turtles are revered as sacred animals by the local community. In addition to traditional ceremonies, people consume and sell turtles. TCEC was established to protect the declining turtle population and their natural habitat and to educate the Serangan residents of Bali. TCEC collaborates with BKSDA Bali, BPSPL, and PHDI to provide education, assist with conservation efforts, and aid in maintenance. The use of turtles in this ceremony is, of course, a social issue with positive and negative aspects. Six people agreed with the use of turtles because it has become a tradition and must be maintained, while two people disagreed because turtle conservation must take priority and they could use other animals as offerings. The community's role in protecting turtles in Serangan Village demonstrates that TCEC is well received by the community. In addition, it has a positive effect on the local economy through renting homestays, selling cuisine near the TCEC, and selling souvenirs.

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Declaration of Interest Statement

The authors declare that there is no conflict of interest.

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