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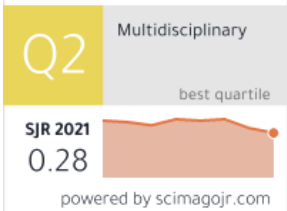
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Environmental Sciences

**ENHANCING ENVIRONMENTAL QUALITY THROUGH COMMUNITY PARTICIPATION BASED ON TRADITIONAL RULES: EMPOWERING THE NEW ROLE OF PECALANG IN BALI****通过基于传统规则的社区参与来增强环境质量：彰显巴厘岛佩卡朗的新作用**Anak Agung Putu Sugiantiningsih<sup>1,2</sup>, I Made Weni<sup>1</sup>, Tommy Hariyanto<sup>1</sup>, Pindo Tutuko<sup>1</sup>, Laksni Sedyowati<sup>1\*</sup><sup>a</sup> University of Merdeka Malang, Malang, Indonesia<sup>b</sup> Sekolah Tinggi Ilmu Sosial dan Ilmu Politik Wira Bhakti, Denpasar, Bali**Abstract**

Pecalang are community organizations that primarily maintain security and order when an indigenous or traditional event takes place in Bali, Indonesia. However, in addition to their role in maintaining security and order during traditional activities, Pecalang also have a role in maintaining environmental preservation in their respective territories with regard to the “Regional Regulation of the Governor of Bali” to minimize plastic waste, which has an inherent stop-motion regarding plastic when it is applied. In this study, observations and interviews were carried out to document how Pecalang in Bali preserve the natural environment in the region. The results of this reveal that there has been an expansion of the Balinese Pecalang’s principal duties to include nature conservation. It is concluded in this study that the role of Pecalang has expanded; not only do they assist in security, but Pecalang also have an important role in maintaining and preserving the natural environment in their respective regions, and have expanded into other regions in the Bali province.

**Keywords:** Pecalang, Preservation, Natural Environment, Bali.

**摘要** 佩卡朗是在印度尼西亚巴厘岛举行土著或传统活动时主要维护安全和秩序的社区组织。但是，除了传统活动中维护安全和秩序的作用外，佩卡朗还具有在各自领土内维护环境保护的作用，这涉及“巴厘岛总督区域法规”，以最大程度地减少塑料浪费。使用塑料时固有的停止运动。在这项研究中，进行了观察和访谈，以记录巴厘岛的佩卡朗如何保护该地区的自然环境。结果表明，巴厘岛佩卡朗的主要职责已扩展到包括自然保护。这项研究得出的结论是，佩卡朗的作用已经扩大。它们不仅有助于安全，而且佩卡朗在维护和维持各自区域的自然环境方面也起着重要作用，并已扩展到巴厘岛省的其他区域。

**关键词:** 佩卡朗，自然保护区，巴厘岛。

**I. INTRODUCTION**

Bali is well known as the island of ‘Paradise on Earth’. Its unique landscape and cultural practices attract large numbers of tourists from all over the world. Bali, as the leading tourism

destination in Indonesia, is able to increase the welfare of its people due to income from the tourism sector [1]. Tourism in Bali has been welcomed by the Indonesian government as a source of foreign exchange earnings [2]. Bali is a tourist destination with tempting offers, friendly

communities, and a unique culture that is a trademark of Bali. One of the cultures or philosophies that belongs to Bali is *Trihitakarana*; *Trihitakarana* is an intangible agricultural indigenous concept [1]. Tourism also impacts on culture [3], [4]. Some efforts have been made to reduce the negative impacts of tourism, including the implementation of low impact development (LID) concept to maintain the natural environment so that the inundation impact can be minimized [5], and the empowerment of the local community on tourism development. Bali is often regarded as a neutral area, free from global influences and with strongly maintained traditions, making Bali a very popular tourist destination. However, the arrival of so many tourists has resulted in Bali experiencing many changes in environmental cleanliness, which has an effect on the comfort of Bali. As is known, the environment is something that exists around humans and influences the development of human life, and must be maintained as clean for the sake of securing both the beauty and inner beauty of Bali. Therefore, the government issued “Regional Regulation of the Governor: Regulation Number 97 of 2018 concerning the Limitation of Disposable Plastic Waste” [6]. However, many citizens and tourists still do not maintain cleanliness in Bali, therefore *Pecalang*, also known as the Bali Traditional Guard, has the main duty of maintaining the security and smooth running of religious ceremonies in its territory. In addition to that, *Pecalang* participates in environmental preservation in Bali, such as in regard to the cleanliness of the beaches, temples, and their respective regions. *Pecalang* comes from the word *calang* and, according to the theology of the word *calang*, can be interpreted to mean ‘vigilantly’. From here it can be interpreted freely – a *Pecalang* is assigned to oversee the security of their traditional village. Being a *Pecalang* cannot be underestimated, because *Pecalang* are volunteers and are not paid. However, they will be provided relief in the *awig-awig* (rules) of their village and be a sign of the presence of an indigenous community, a Balinese community widely known for its Hindu tradition.

This same research about protecting the city environment could also be done by the police, so the city environment could be further cared for [7]. The objective of this study is to evaluate the performance of *Pecalang* as volunteers, focusing on preserving the quality of the tourism environment in Bali, so Bali will always be a tourist destination that is beautiful and clean. Recommendations are expected to come from the leader of the traditional village to be able to

increase the performance of *Pecalang* in preserving the environment in accordance with the local regulations of Bali province.

## II. METHODS/MATERIALS

This study follows a qualitative approach. Starting with a discussion of issues pertaining to qualitative research methods in general, it is highlighted that exploration is central in most qualitative research, and the consequences this has on the planning and conduct of qualitative studies is discussed [8]. Based on preliminary observations about the role of *Pecalang* in Bali, in each district or city in Bali, and then considering the unique, specific and interesting things from *Pecalang* mentioned, the assessment setting in Bali was then chosen applying the rationale that Bali is an international tourist destination, is unique in its customs, religions and culture, and the natural environment in Bali is always a main attraction for domestic and foreign tourists. The focus of the research is then on the issue of the social reality of the role of *Pecalang* in Bali. Specifically, the task of *Pecalang* in environmental preservation related to “Regulation No. 97 of 2018 concerning the Limitation of Disposable Plastic Waste”. Miles and Huberman's Interactive Data Analysis Model is used for data collection, data condensation, data presentation, and conclusion verification/withdrawal according to Miles et al. [9].

Data collection techniques carried out in this study were observation, interview, and documentation, with information about the Governor of Bali, Chairman of the *Pecalang Segara* Pemuteran Village, Member of the DPRD Bali, the Golkar Party, Office of Communication, Information and Coding and Head of *Pecalang*, Br. Padangsari, I Nyoman Rakayasa, and using assistive instruments such as photographic tools, recorders, documents related to research problems, and other tools to verify or bring conclusions that are more concrete or valid for the phenomenon under study.

## III. RESULTS AND DISCUSSION

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### A. Factors Underlying Environmental Pollution in Bali

Internal Factors. Lack of awareness is a key factor impacting environmental pollution. This

leads to improper disposal of waste, excessive use of plastic, and irregular disposal of garbage at final disposal sites (TPA). This means that there is more garbage in the environment, resulting in tourists also not taking responsibility for their own garbage or playing a part in preserving the cleanliness of Bali.

External factors. This includes the lack of government assertiveness regarding regional regulations, which should be enforced against irresponsible people in the form of fines. Additionally, there are a lack of firmness regarding final disposal sites, whose waste always exceeds capacity, increasing air and land pollution, and an increasing population, which causes more waste to be produced.

### **B. The Role of *Pecalang* in Environmental Conservation in Bali**

The role of *Pecalang* in Bali is as *Jaga Baya Desa*. *Pecalang* take care of the village so that it is always in good condition. The village becomes productive, orderly, and *shanti*, maintaining security and cleanliness during traditional and religious ceremonies, as well as when special activities are held by the *Banjar*, *Pakraman*, or Bali provincial government, or for 'Becoming a Bali Tourism Icon' or 'Bali and Inner Beauty' attractions.

### **C. Main Tasks of *Pecalang* in Bali**

The task of a *Pecalang* is to maintain security and order in religious settings in Bali, such as in the capital's *Kahyangan Tiga* temple (*Pura Desa*, *Puseh Pura* and *Pura Dalem*), during *Makiis* (ceremonies for cleaning holy objects) to *Segara* (the sea), *Nyepi* day at *sasihkesanga* (the ninth month of Bali) every year, the fertilisation period followed by the *ogoh-ogoh* parade, the facilitating of *Nyepi* and *Ngembak Geni* holidays, the remembrance of the *Sata War* or *Tabuh Rah* in every *piodalan*/offering period, as well as during the *Ngaben* (burning of corpses) ceremony. The main task of *Pecalang* relates to role theory because the role of *Pecalang* in these matters is the overseeing of security in their traditional village. It is similar to being a security officer of the *Adat* village.

The tasks of the *Pecalang* are various: in addition to maintaining the order of religious events, they protect the sanctity of the temples from irresponsible tourists. Based on these findings, it can be seen that the *Pecalang* now have a wider variety of tasks than they had previously.

### **D. The Role of *Pecalang***

As an organization, a *Pecalang* uses information strategically to make sense of change in its respective environment [10]. The function of the *Pecalang* is to maintain security and order in the village of *Pakraman*, to realise a harmonious relationship between humans with *Sang Hyang Widi Wasa*/God Almighty (a *parhyangan* function), among fellow humans (a *pawongan* function), and in human relations with surrounding nature (a *palemahan* function). According to Emile Durkheim, social reality is a way of acting, whether fixed or not, which can be an external influence or obstacle for an individual [11]. The social reality of the *Pecalang* is to carry out their basic tasks as well as other ones.

Two findings were discovered: the addition of the *Pecalang's* function of maintaining the village's security, and the addition of their role in preserving and keeping the environment of each of the villages clean so that peace is achieved in the area. Based on these findings, it is proposed that the *Pecalang* have an expanded function.

### **E. Commitment of *Pecalang* to their Responsibility**

Commitment is best conceptualized as a single, fundamental construct that may vary according to differences in focus, terms, and time-specific evaluation. Commitment is someone's belief in themselves to be loyal to a duty they have been entrusted with, so that responsibility for a task is maintained. Responsibility is part of a learning process which reflects society's interests and value system [12]. A *Pecalang's* commitment in carrying out its duties is very high, as evidenced so far, no assignments have been overlooked, and all have gone well. Currently, there has been an increase in the National Disaster Management Agency in *Desa Adat* also maintaining Final Disposal Sites (TPA) due to the lack of public awareness in the disposal of garbage. This is related to the Theory of Social Interaction because, like what was been previously stated [13], community institutions are created and maintained or changed through human actions and interactions. Although society and social institutions are seen objectively, in reality everything is built into a subjective definition through the process of interaction (Figures 1, 2, and 3).

Based on the discussion above, it is found that *Pecalang* ask for wages outside of their duties to act as security for the *Adat* village. Based on this, proposals are formulated, namely: to increase the breadth of tasks of *Pecalang*, and to change the level of commitment required in their work.





Figure 1. *Pecalang Segara*, or coast guard.



Figure 2. *Pecalang* that monitor beaches.



Figure 3. *Pecalang* that oversee littering by tourists at the beach.

#### F. Dedication through *Ngayah* in the Performance of Duties

The concept of “traditionality” (applied by law, institutions, people's participation, etc.) [14], or “*Ngayah*”, is a social obligation of Balinese people to apply *Karma Marga*, teachings which can be interpreted as doing work without getting wages, as done by *Pecalang Segara* who have the duty to preserve the beach or sea from garbage. Tourism as a mass industry in Bali poses new environmental risks [15], like through plastic waste (Plastics are composed of a network of molecular monomers bound together to form macromolecules) [16]. *Pecalang Segara* manage this risk by diving into the sea to check whether there is garbage in the sea which is likely to be transported on the reef, as a means to protect and conserve vulnerable and threatened marine life [17]. This is achieved by *Pecalang* enforcing the regional regulations governing the Coast Guard,

as it is known that the beach is one of the landscapes most hunted by tourists. This relates to the Social Interaction Theory because in the *Ngayah Pecalang* service there is a guideline for interacting with the community whereby the carrying out of their duties must be done well and sincerely.

Based on this, it is found that the existence of *Pecalang* was not optimal in carrying out the task of preserving the cleanliness of the beach. It is therefore propositioned that the *Pecalang* tasks be expanded from providing security to ensuring preservation and cleanliness of beaches.

#### IV. CONCLUSION

The role and function of *Pecalang* in Bali as Balinese customary police officers is to do it's task from securing and maintaining the carrying out of indigenous and religious ceremonies in Bali. The duties and functions of *Pecalang* now, however, have expanded so that the responsibilities possessed by *Pecalang* have increased – specifically that they are now also responsible for environmental preservation in Bali such as for *Pura*, beaches, *Desa Adat* and other tourist attractions. Due to a lack of awareness of the community and tourists about maintaining the cleanliness of these tourist attractions, *Pecalang* are currently responsible for the cleanliness and purity of Bali, as well as for assisting the Government in implementing “Regulation No. 97 of 2018 concerning the Limitation of Disposable Plastic Waste”. Where currently Bali is no longer dependent on plastic, but has found other alternatives, this is an attempt by the Bali Government to preserve the environment through ‘Stop the use of plastic’ movements, such as limiting supermarkets’ use of plastic bags and replacing plastic food packaging with other materials. The environment of Bali is therefore to be maintained, with cleanliness and comfort, so that Bali will remain a tourist destination.

*Pecalang* need to carry out and enhance their duties and obligations as *Jaya Baya* – namely to maintain security, order, cleanliness, purity, bliss, and peace of the traditional villages in Bali. As regulated in “Regulation No. 97 of 2018 concerning Limitation of Disposable Plastic Waste”, *Pecalang* help the Government in implementing the regulation through the *Pecalang* commitment, which is to maintain the sustainability of the environment in Bali, honouring the mandate to maintain the stability of Bali, Bali *Shanti*, and *Sutrepti*.



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