

Original Research Paper

Strategy of Management of *Pavo Muticus linnaeus* Population in Bekol and Bama Savana of Baluran National Park

Oktarino Ilham Wijayanto^{1*}¹Forestry Study Program, Faculty of Agriculture, University of Mataram, Jl. Majapahit No.62 Gomong, Mataram 83115, West Nusa Tenggara, Indonesia.

Article Info

Artikel History

Received: 10 May 2025

Revised: 30 May 2025

Accepted: 30 June 2025,

Published: 31 August 2025

Corresponding Author: Oktarino

Ilham Wijayanto

Author Name: Oktarino Ilham

Wijayanto

Email: rinowaluyo@gmail.com

Number Hp: +62 878-6416-9604

DOI:

ISSN: [3108-9801](https://doi.org/10.31089/ijtb.v1i2.3108-9801)EISSN: [3109-0842](https://doi.org/10.31089/ijtb.v1i2.3109-0842)

© 2025 The Authors. This article is licensed under a Creative Commons Attribution 5.0 International License

Abstract

This study aims to determine the management strategies and populations of green peacocks in bekol savanna and Bama savanna. The method of collecting data for the population is done by the Line Transect method which uses a path length of 2 Km with an unspecified path width and for spatial distribution carried out by stabilizing the coordinate points in each encounter and measuring the encounter distance and angle of encounter. And then it is managed by Geographic Information System. Whereas the strategy for optimizing the management of green peacock populations is used by in-depth interview method and Focus Group Discussion (FGD) then it are analyzed descriptively, quantitatively. The results of the study carried out that population estimation was found for 27 individuals in Bekol savanna and 38 individuals in Bama savanna and having different sex ratio production at Bekol savanna had a ratio of male and female, which are 1: 2 and in Bama savanna had a 1: 4 sex ratio, and had a percentage of age structures dominated by adolescents from the two observation pathways, while the strategy for efforts to optimize the management of green peacock populations is obtained by the management of adaptive green peacock habitat to conduct regional management by increasing workforce personnel and maximizing cooperation in education and research from various partner institutions

Keywords: *Pavo muticus linnaeus*, Population, Management strategy

INTRODUCTION

The green peafowl (*Pavo muticus*) is one of the bird species with high ecological and conservation value (Shwe et al., 2021). In Indonesia, its distribution is very limited and is only found in East Java (Balen, 1995). Its rarity makes this bird one of the legally protected wildlife species. This is affirmed in Government Regulation (PP) No. 7 of 1999 concerning the Preservation of Plant and Animal Species. According to the IUCN (International Union for Conservation of Nature) Red List version 3.1 from 2018, the green peafowl is classified as Endangered (EN) (Siddiq et al., 2024). This category indicates that this species faces an extremely high risk of extinction in the wild. Additionally, according to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the green peafowl is listed in Appendix II, which means that international trade in this species must be strictly controlled to prevent exploitation that endangers its survival (CITES, 2023).

The green peafowl has distinctive characteristics, such as striking metallic green plumage and a loud call (Dakin et al., 2016). Its natural habitat ranges from open grasslands and scrublands to agricultural land (Peacock et al., 2024). This species prefers lowlands up to an altitude of approximately 1,200 meters above sea level (masl) (Eliza & Ocampo, 2024). Java Island, one of the main natural habitats for green

peafowl, is Baluran National Park, located at the eastern end of East Java (Pudyatmoko & Kunci, 2019). This conservation area has a variety of ecosystems, including savannas, monsoon forests, coastal forests, and tropical rainforests. Based on the Decree of the Minister of Forestry No. 279/Kpts. VI/1997 dated May 23, 1997, the area of Baluran National Park reaches approximately 25,000 hectares.

However, the population of green peafowl in Baluran National Park, particularly in the Bekol and Bama savanna areas, shows a concerning downward trend (Suhadi et al., 2019). Takandjandji & Sawitri, (2011) state that the population of this bird is decreasing year by year. This decline is caused by various factors, including increased poaching activity, pressure from natural predators, and habitat degradation (Sukumal et al., 2020). One significant form of habitat damage is the invasion of alien plants, such as *Acacia nilotica*, which now dominates and alters the structure of savanna vegetation (Foxcroft et al., 2010). The presence of this acacia is causing a decline in the quality of habitat for green peafowl, as it is covering open areas that were previously used for the birds' daily activities (Chellappan et al., 2023).

This condition indicates that protecting green peafowl requires not only a species conservation approach but also comprehensive habitat conservation (Intarapat et al., 2023). Effective conservation efforts must include controlling invasive species, restoring ecosystems, and strictly

How to Cite

Wijayanto, O.I. (2025). Strategy of Management of *Pavo Muticus linnaeus* Population in Bekol and Bama Savana of Baluran National Park. *Indonesian Journal of Tropical Biology*, 1(2), 50-58.

monitoring potentially damaging human activities (Weidlich et al., 2020). Additionally, it is also important to regularly monitor the population and distribution of green peafowl as a basis for developing appropriate management strategies (Nasar et al., 2024).

Given the ecological importance and conservation status of the green peafowl (*Pavo muticus*), and the lack of up-to-date data on its population and distribution in Bekol and Bama savannas, this research is highly relevant. This research aims to identify the distribution and population size of green peafowl in the area and formulate sustainable management strategies. This strategy is expected to support the long-term conservation of green peafowl and maintain the biodiversity found in Baluran National Park.

METHODS

Date and location of research

This research was conducted in March 2025, in two main savanna areas within Baluran National Park: Bekol Savanna and Bama Savanna, Situbondo Regency, East Java Province. These two locations were chosen because they are the natural habitat of the Green Peafowl (*Pavo muticus*) and have been recorded as areas with a relatively high population of Green Peafowl on the island of Java.

Type of research

The type of research used is quantitative descriptive research (Nassaji, 2015). This research aims to describe the population conditions, spatial distribution, and develop a population management strategy for the Green Peafowl (*Pavo muticus*) in Baluran National Park. This approach allows for field data analysis collected directly, as well as a quantitative interpretation of observation results to support conservation decision-making (Mikkelsen, 2011).

Population estimation

Population data collection for the Green Peafowl (*Pavo muticus*) was conducted using the line transect method, as shown in (Figure 1).

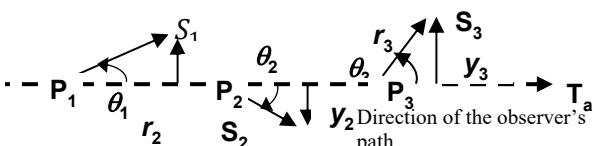


Figure 1. Illustration of a Line Transect (Bismark, 2011)

The line transect method is almost the same as the strip transect method, but the line transect does not have provisions for the width of the strip, as stated by Bismark (2011) that the line transect method does not determine the distance to the right and left, must determine the distance between the animal and the observer (straight-line distance) or the observation distance, and must determine the contact angle between the detected animal's position and the observation path or observation angle. The length of the path used is 2 km, and observations were made over 5 repetitions (Hernawan, 2003). The observation period was conducted according to the daily activities of the green peafowl, which is from 05.00 – 18.00 (Takandjandji dan Sawitri, 2011). The number of lanes was determined from the results of the preliminary study.

Spatial distribution

The spatial distribution of the green peafowl (*Pavo muticus*) in Bekol savanna and Bama savanna of Baluran National Park was observed by recording the location of each green peafowl (*Pavo muticus*) sighting using a GPS (Global Positioning System).

Population management strategies

Formulating a strategy is a step toward optimizing the management of the green peafowl population. The efforts and strategies in managing the research site were analyzed using the *Strength, Weakness, Opportunity, and Threat* (SWOT) analysis approach. This method aims to systematically identify various internal and external factors, the results of which will be used in management planning to formulate mangrove management strategies. The analysis models used to process the collected data are the IFAS matrix and the EFAS matrix, while the IE matrix and the SWAT matrix are used to analyze the results of this data processing. The determination of weights and ratings is based on expert opinion (Table 1).

Table 1. IFAS and EFAS evaluation matrices

Variable	Weight	Rating	Weight x Rating
Strength and weakness			
Subtotal			
strength/opportunity			
Opportunity and threat:			
Subtotal			
weakness/threat			
Total			

*Source: Rangkuti (2005)

Column two is weighted for each factor, from 1.0 (most important) to 0.0 (not important). Column three is given a rating scale from 4 to 1. The rating values for strengths are positive (4 = very large, 3 = large, 2 = medium, and 1 = small), while the rating values for weaknesses are negative (4 = small, 3 = medium, 2 = large, and 1 = very large). The rating values for opportunities are positive (4 = very large, 3 = large, 2 = medium, and 1 = small), while the rating values for threats are negative (4 = small, 3 = medium, 2 = large, and 1 = very large). The quantitative model for strategy formulation is obtained by subtracting the sum of the sub-totals of strength and weakness factors (which will become the X-axis) from the sum of the sub-totals of opportunity and threat factors (which will become the Y-axis) (Figure 2).

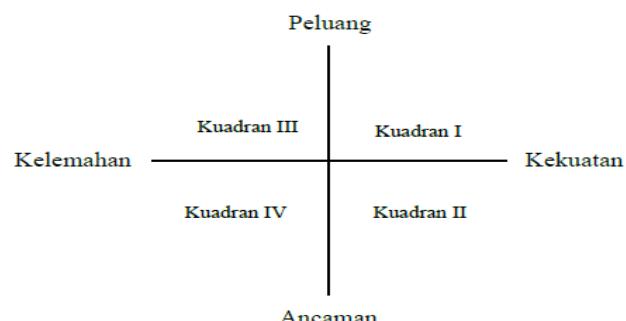


Figure 2. Space matrix

The strategy formulation stage based on IFAS and EFAS analysis is logically structured with the aim of maximizing strengths and exploiting opportunities, while simultaneously minimizing weaknesses and threats (Rangkuti 2005). The formulation of the strategy is developed on a SWAT matrix that combines internal and external factors. This SWAT matrix generally yields four strategic alternatives that can be considered for sustainable mangrove ecosystem management. The SWAT matrix combination standards are presented in (Table 2).

Table 2. IFAS and EFAS matriks

EFAS \ IFAS	Strengths (S)	Weaknesses (W)
Opportunities (O)	SO Strategy A strategy that uses strengths to capitalize on opportunities	WO Strategy A strategy that minimizes weaknesses to capitalize on opportunities
	ST Strategy A strategy that uses strength to avoid threats.	WT Strategy A strategy that minimizes weaknesses and avoids threats.
Threats (T)		

*Source: Rangkuti (2005)

*Description: IFAS : *Internal Strategic Factor Analysis Summary*, EFAS: *External Strategic Factor Analysis Summary*

RESULT AND DISCUSSION

Habitat conditions

Savana Bama and Savana Bekol are located in Baluran National Park. The savanna in Baluran National Park is the most important part of BTNB because it is home to various types of animals such as banteng (*Bos Javanicus*), Javan deer (*Rusa timorensis*), dhole (*Cuon alpinus*), water buffalo (*Bubalus bubalis*), and green peafowl (*Pavo muticus*). Based on its climate, Baluran National Park falls into the dry climate category, and according to the Schmidt and Ferguson classification, it is type F with an average temperature of 27.2°C – 30.9°C and 77% humidity. In savanna areas, based on soil contour, savannas are divided into two types: flat savannas and undulating savannas. This research was conducted in the Bekol savanna and the Bama savanna, which fall into the category of flat savanna. The flat savanna grows on young, stony alluvial soil located in the southeast of the National Park area. (TNB, 2014).



Figure 3. Condition (a) Savana Bekol (b) Savana Bama

Based on the results of the preliminary study, there are two observation paths in this research: one path in Bekol savanna and one path in Bama savanna. The first path, Bekol savanna, falls within the Kramat Resort area, while the second path, Bama savanna, falls within the Bama Resort. Both resorts are included in the Bama National Park Management Section 1. The conditions of the observation location can be seen in (Figure 3).

At the research location, there is vegetation used by green peafowl, including gebang (*Corypha utan Lamk*), pilang (*Acacia leucophloela*), and mimba (*Azadirachta indica A. juss*) as roosting and shelter trees, while kesambi (*Schleichera oleosa*), asam (*Tamarindus indica L*), and widoro (*Zizyphus rotundifolia Lam*) are used as perching and feeding trees. This is in accordance with Takandjanji and Sawitri (2011) that these trees are a favorite place for green peacocks. The observation route in Bekol savanna has the characteristics of open savanna and many open areas compared to Bama savanna, which is more closed and has few open areas. The differences in the characteristics of these two savannas affect the presence of green peafowl; the size of a species' population is usually influenced by its habitat. This is in accordance with Tobing (2008), who stated that population size increases and decreases can occur when the environmental carrying capacity or habitat conditions are good.

Population size

Based on the observation results, it was found that the number of green peafowl found on both routes varied, with 27 individuals found in Bekol savanna and 38 individuals in Bama savanna.

Table 3. Green peacock population size (2007, 2011 and 2019)

No	Location	Yuniar (2007)	Takandjanji and Sawitri (2011)	Currently (2019)
1	Savanna Bekol	48	38	27
2	Savanna Bama	12	37	38
	Total	60	75	65

The high number of green peafowl gatherings in the Bama savanna is believed to be due to the Bama savanna having a variety of vegetation that green peafowl can use for more activities, including as a place to shelter, perch, and sleep. The observation data can be seen in Table 1. Some research results on the green peafowl population in Baluran National Park in the Bekol savanna ecosystem and Bama savanna ecosystems from 2007 to 2019 show an overall fluctuation in population from year to year.

The observation results show that the population on the Bama trail is higher than on the Bekol trail. There was a decrease in the population on the Bekol savanna trail and an increase on the Bama trail. This differs from the findings of Yuniar (2007) and Takandjanji and Sawitri (2011), who stated that green peafowl are more commonly found in Bekol savanna due to the high level of activity carried out by green peafowl, such as mating, foraging, and dust bathing. The decline in the green peafowl population in Bekol Savanna is thought to be influenced by the presence of predators and the scarcity of trees for the green peafowl to take shelter under. Additionally, the high intensity of tourism activities in Bekol Savanna indirectly affects the survival of the green peafowl.

population, whereas in Bama Savanna, there are still many trees for the green peafowl to use to avoid predator attacks.

Sex ratio

The sex ratio of green peafowl in Baluran National Park, specifically in the Bama and Bekol savannas, was determined thru direct observation. The sex ratio used in this study is the reproductive sex ratio, so only adult green peafowl can have their ratio determined. Although there are some challenges in distinguishing between female and male sexes because males can shed their feathers, making them resemble females.



Figure 4. Gender in green peafowl (a) Female (b) Male

The differences between male and female green peafowl are in their feather color, tail, and leg color. Adult male green peafowl have more curled and brightly colored feathers, a longer, fan-shaped tail, and lighter leg color, while adult females have darker and less striking feather colors, a shorter tail compared to males, and darker leg color. Based on the observation results, it was also found that adult males experience a molting season, indicating the end of the mating process. The data from observations on the sex ratio can be seen in (Table 4).

Based on the observation results, the sex ratio of green peafowl in the Bama savanna is 1:4. This ratio is still considered normal because, according to Hernowo (1997), the mating system in peafowl is polygamous, and the normal sex ratio is 1:4-5. This indicates that the green peafowl in the Bama savanna are in good condition. This also means there has been a change in the sex ratio of green peafowl in the Bama savanna, from previous data where, according to Takandjanji and Sawitri (2011), the sex ratio of green peafowl was 1:1.1 in the Bama savanna and 1:2 in the Bekol savanna.

The green peafowl in the Bama savanna have a healthy sex ratio, which is very good for the future population regeneration of green peafowl. However, the sex ratio of green peafowl in the Bekol savanna is still considered disturbed.

Table 4. Sex ratio green peafowl

No	Lane	Adult male	Adult female	Sex ratio	Takndjanji & Sawitri (2011)
1	Savanna Bama	3	12	1:4	1:1,1
2	Savanna Bekol	4	8	1:2	1:2,2
	Total	12	20		

This is because female green peafowl are still scarce. As a result, male green peafowl compete for female green peafowl, preventing the females from mating and laying eggs. The scarcity of female green peafowl will affect the reproductive patterns of green peafowl, and the disruption of male reproductive patterns can harm population health. According to Takndjanji and Sawitri (2011), damage to reproductive patterns can cause male green peafowl without mates to disturb and break the eggs of green peafowl.

Age structur

The population structure of green peafowl in Baluran National Park within the Bama and Bekol savanna ecosystems, based on observation results, shows that juvenile green peafowl have the highest population, followed by adults, while chicks were not found. The chicks could not be found, presumably because the observation time was after the breeding season, and the green peafowl that were chicks the previous breeding season had already become juveniles, and the juveniles had reached adulthood. This can be seen from the data obtained in (Figure 5). Based on this, it can be seen that green peafowl in the Bekol savanna are more dominated by juvenile age structure. The age comparison of juvenile green peafowl at the research location in the Bekol savanna is 52%, and adult green peafowl is 48%. Meanwhile, in the Bama savanna, juvenile green peafowl are 63% and adult green peafowl are 37%. However, in the Bama savanna, the intensity of juveniles found is higher than in the Bekol savanna. Overall, this indicates that the green peafowl population in Bekol savanna and Bama savanna is disturbed because regeneration is hindered.

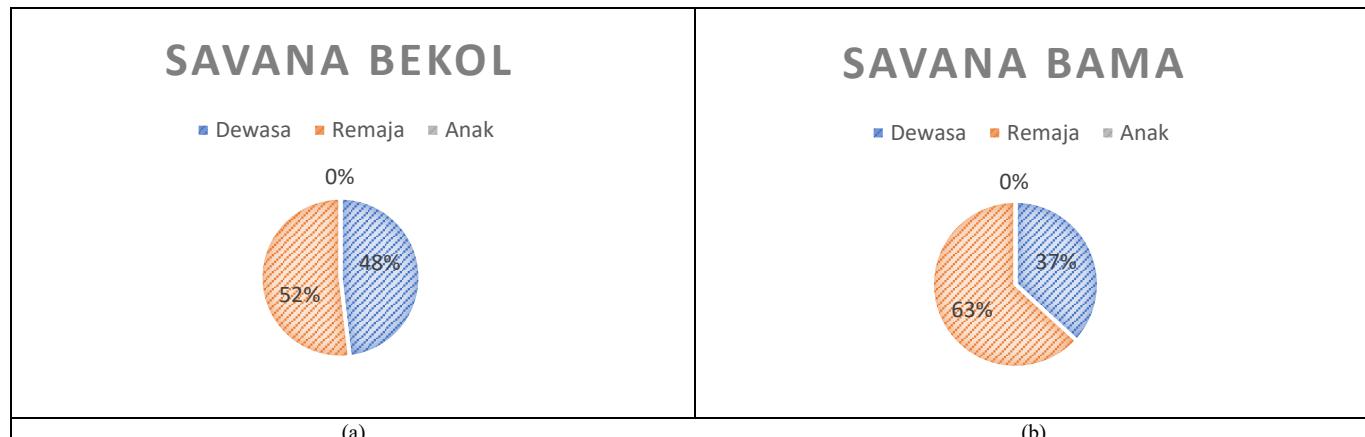


Figure 5. Percentage of age structure (a) Bekol Savanna (b) Bama Savanna

Spatial Distribution

Spatial data was obtained from observations of green peafowl encounters. The data obtained consisted of coordinate points processed from the encounter distance and encounter angle. Green peafowl were more frequently observed in groups, but some were solitary, usually adult male peafowl. After data processing, as seen in (Figure 6), the distribution area and spatial distribution visualization of green peafowl in Bekol savanna and Bama savanna were obtained.

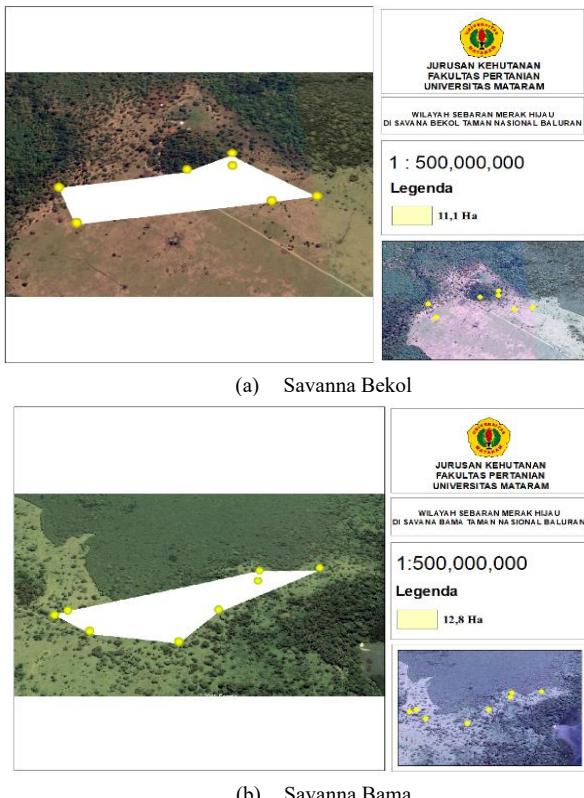


Figure 6. Spatial distribution Green peafowl

Based on Figure 5, the spatial distribution of green peafowl in Bekol and Bama savannas shows that one coordinate point represents several green peafowl individuals found. This is because green peafowl live in groups and are solitary. According to Hernowo (2011), there are 5 types of green peafowl groups: solitary groups, mother hen with chicks groups, adult hen groups, juvenile hen groups, and mixed juvenile groups. As for the green peafowl's home range, it was determined by creating a polygon connecting the outermost points of the observation results. The area of distribution in the Bama savanna was found to be larger, at 12.8 hectares, compared to the Bekol savanna, which was 11.1 hectares. This is likely due to the green peafowl's daily activities being more concentrated in the Bekol savanna.

Optimization Efforts for Green Peafowl Population Management

To formulate optimal efforts for managing the green peafowl population, a SWAT analysis was conducted. According to Rangkuti (2017), SWAT analysis is the systematic identification of various factors to formulate strategies. In this case, an analysis of internal and external factors is needed. Internal factors include strengths and weaknesses, while external factors include opportunities and

threats. To obtain internal and external factors, an analysis must be conducted first.

Table 5. Strength analysis

Internal Factor Strategy	Rating	Scale	Skor
Strengths			
1 Green peafowl can still be found	4	0,3	1,2
2 The presence of green peafowl has been used as a means of education and research	3	0,15	0,45
3 Adequate facilities and infrastructure for the management and monitoring of green peafowl	2	0,1	0,2
4 Habitat green peafowl is included in the priority preservation area	4	0,45	1,8
Total	1	3,65	

Table 6. Weakness analysis

Internal Factor Strategy	Rating	Scale	Skor
Weaknesses			
1 There is no sustainable/continuous population data for green peafowls yet	3	0,5	1,5
2 Polarization of animal types (priority and non-priority)	2	0,2	0,4
3 Lack of more specialized human resources to handle green peafowl	2	0,1	0,2
4 The National Park has not yet implemented a specific policy regarding the management of green peafowl	3	0,2	0,6
Total	1	2,7	

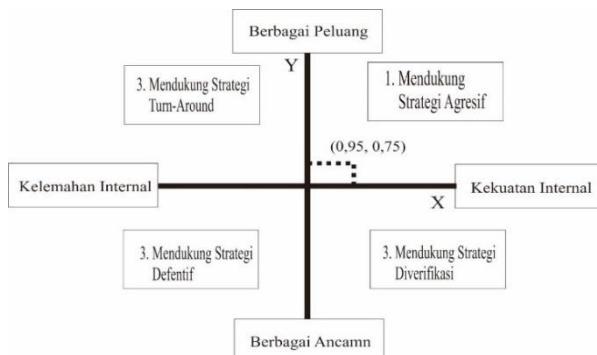
Table 7. Opportunity analysis

Eksternal Factor Strategy	Rating	Scale	Skor
Opportunities			
1 There is an opportunity to increase personnel who are more specifically proficient in green peafowl	4	0,45	1,8
2 The potential for external funding priorities for green peafowl management, such as research	3	0,15	0,45
3 Development of peacock wildlife sanctuaries in case of vulnerability in nature	2	0,1	0,2
4 The opportunity for the green peafowl to become a priority animal	4	0,25	1
5 The presence of green peacocks can be used as educational content	2	0,05	0,1
Total	1	3,55	

Table 8. Threat analysis

Eksternal Factor Strategy	Rating	Scale	Skor
Threats			
1 Lack of public awareness regarding the conservation and existence of green peafowl	3	0,5	1,5
2 The high number of tourist visits can affect habitat conditions	3	0,15	0,45
3 The decreasing workforce due to retirement and job transfers	1	0,1	0,1
4 Threats to areas bordering communities	3	0,25	0,75
Total		1	2,8

Based on the analysis of internal and external factors, alternative strategies were obtained for optimizing the management of the green peafowl population.

**Figure 7.** Quadrant strategy

Based on Figure 7 above, the strength analysis results yielded a total value of 3.65. Meanwhile, the weakness analysis results yielded a total value of 2.7. The cumulative value of these internal factors is 0.95, resulting in a point located on the x-axis with a positive value. This shows that the strengths possessed are stronger than the weaknesses, allowing them to overcome existing weaknesses by relying on their strengths and taking advantage of available opportunities.

To obtain the value of y, it is necessary to accumulate the total value of external factors. Based on the opportunity analysis, the total value obtained is 3.55. Meanwhile, from the threat analysis, the total value obtained is 2.8, and when accumulated, the value of external factors is 0.75, indicating that the y-axis point is at a positive value. This indicates that existing threats can be minimized and even overcome by effectively utilizing available opportunities. Therefore, in formulating efforts to optimize the management of the green peafowl population, this can be considered for the sustainability of the green peafowl population. Based on the description above, it shows that the strategy for optimizing the management of the green peafowl population in Baluran National Park falls into Quadrant 1 or a growth strategy, meaning it has considerable strengths and opportunities (SO strategy). The matrix results in Table 9 of the SWAT analysis above show that there are four alternative strategies that can be implemented in the effort to optimize the management of the green peafowl population, including:

1. SO Strategy (Value 3,6)

The S-O (Strengths - Opportunities) strategy is a strategy created by using all strengths to capitalize on existing opportunities. (Fitri Anggreani, 2021). Adapun strategi yang dapat digunakan yaitu pengelolaan habitat merak hijau yang adaptif untuk meningkatkan pengelolaan kawasan dengan cara peningkatan personil dan memaksimalkan kerja sama dalam bidang pendidikan dan penelitian dari berbagai mitra.

2. WO Strategy (Value 3,3)

The WO strategy is a strategy implemented by utilizing existing opportunities while overcoming weaknesses (Fitri Anggreani, 2021). The WO strategy obtained is to provide ease for external parties to conduct research related to green peacocks and then use the research results as consideration.

3. ST Strategy (Value 3,3)

The ST strategy is a strategy for using existing strengths while avoiding emerging threats (Castelfranchi et al., 1998). The analysis results showed that the ST strategy is to improve the quality of security in protecting the green peafowl habitat. On the other hand, it involves educating the public about the importance of the green peafowl's presence in nature.

4. WT Strategy (Value 3)

The WT strategy is a strategy that combines weaknesses and threats, meaning it aims to minimize existing weaknesses and avoid threats (Sammut-Bonni & Galea, 2015). In this strategy, there are alternative strategies, namely improving policies regarding the management of green peafowl populations and habitats, especially concerning tourist visits and community activities bordering the area. Based on the SWAT matrix analysis, the highest value is shown in the SO strategy, with a score of 3.6. The S-O strategy is a combination of strengths and opportunities that utilizes strengths and opportunities as a strategy. (Cabang et al., 2022) The SO strategy is a strategy created based on existing conditions, namely by utilizing all strengths to seize and exploit opportunities. Based on the SWAT matrix, the SO strategy used is adaptive management of green peafowl habitat to improve area management by increasing personnel support and maximizing cooperation in education and research with various partner institutions. In this case, it is closely related to the goals of conservation.

Population management is also related to monitoring the green peafowl population. This is also stated in Government Regulation No. 7 of 1999, Article 11, Paragraph 1, which is of high quality. To achieve this, it is necessary to consider the available human resources. If the available human resources are sufficient and of good quality, management will run smoothly. This aligns with Condrey & Battaglio (2012), who state that human resources are of good quality when they have the ability to carry out the authority and responsibilities given to them. So that the management of the green peafowl population can run smoothly. types of plants and animals over time. Based on this, monitoring the green peafowl population is very important. Therefore, competent personnel are needed to carry out the monitoring, and it is stated that the government is conducting the monitoring to determine population development trends.

Table 9. SWOT Matriks

INTERNAL	FACTOR	Strengths	Weakness
		<ol style="list-style-type: none"> 1. Green peafowl are still frequently found. 2. The presence of green peafowl has been used as a means of education and research. 3. Adequate facilities and infrastructure for the management and monitoring of green peafowl. 4. Green peafowl habitat is still a priority for area protection. 	<ol style="list-style-type: none"> 1. There is no sustainable data available. 2. Polarization of animal species (priority and non-priority) 3. Lack of more specialized human resources in understanding and handling the Green Peafowl. 4. The National Park does not yet have a specific policy regarding the management of the Green Peafowl.
EKSTERNAL	S-O STRATEGY(3,6)		W – O STRATEGY (3,3)
Opportunity	<p>1. Increased personnel with more specific expertise in Green Peafowl</p> <p>2. Potential for external funding prioritization for Green Peafowl management, such as research.</p> <p>3. Development of peacock wildlife sanctuaries in case of vulnerability in nature</p> <p>4. The opportunity for the green peafowl to become a priority animal</p>		<p>Improving the quality of the green peafowl habitat by prioritizing area security and, on the other hand, increasing personnel with more specific expertise in green peafowl and maximizing cooperation in education and research with various partner institutions. (S4, O1, O2)</p> <p>Providing ease for external parties to conduct research related to the green peafowl, and then using the research results as a consideration for management, makes the green peafowl a potential priority animal for TNB (W1, O2, 4).</p>
Threat	S – T STRATEGY(3,3)		W – T STRATEGY(3)
	<p>1. Lack of public interest in the importance of peacock existence.</p> <p>2. High tourist visitation rates can affect habitat conditions</p> <p>3. Decreasing workforce due to retirement and job transfers</p> <p>4. Resistance from communities bordering the area</p>		<p>Improving the quality of security in protecting the green peafowl habitat. And on the other hand, conducting outreach to the community regarding the importance of the green peafowl's presence in nature. (S4, T1)</p> <p>Improving policies regarding the management of green peafowl populations and habitats, particularly concerning tourist visits and community activities bordering the area. (S4, T2, 4)</p>

CONCLUSION

The conclusion that can be drawn from this research is:

1. The population of the green peafowl (*Pavo muticus*) in Bekol savanna is 27 individuals and in Bama savanna is 38 individuals, with a sex ratio of 1:2 in Bekol savanna and 1:4 in Bama savanna. The dominant age class is juveniles, accounting for 52% in Bekol savanna and 63% in Bama savanna. The area of green peafowl distribution in Bekol savanna is 11.1 Ha and in Bama savanna is 12.8 Ha.
2. The strategies for optimizing the management of green peafowl that can be implemented include adaptive habitat management for green peafowl, which involves increasing personnel and maximizing cooperation in education and research with various partner institutions.

ACKNOWLEDGEMENT

Thank you to the community of Kekait Village for sharing their knowledge and experience regarding traditional practices for processing arenga palm. Thank you also to the field research team for their efforts throughout the data collection process and the preparation of this research report.

REFERENCES

Balai Taman Nasional Baluran. 2014. Buku Zonasi Balai Taman Nasional Baluran. Direktorat Jenderal Perlindungan Hutan dan Konservasi Alam Balai Taman Nasional Baluran. Departemen Kehutanan. Jakarta

Balen, V. (1995). *Pavo muticus IN JAVA. Museum*, 71. <https://doi.org/0006-3207/95/S09.50+0.00>

Bismark M. 2011. Prosedur Operasi Standar (SOP) Untuk Survei Keragaman Jenis Pada Kawasan Konservasi. Pusat Penelitian dan Pengembangan Perubahan Iklim dan Kebijakan Badan Penelitian dan Pengembangan Kehutanan. Bogor.

Cabang, N., Kabupaten, P., Maburroso, P.), Tinggi, S., Islam, A., Ulum, D., & Pamekasan, B. (2022). *Analysis of Strengths, Weakness, Opportunity, Threat (Swot) In Determining The Marketing Strategy of Deposits Products (Case Study in Koperasi Simpan Pinjam dan Pembiayaan Syariah (KSPPS)*. 1(2), 2829–663.

Castelfranchi, C., Conte, R., & Paolucci, M. (1998). Normative reputation and the costs of compliance. *Journal of Artificial Societies and Social Simulation*, 1(3), 3–21. <http://jasss.soc.surrey.ac.uk/1/3/3.html>

Chellappan, M., Ranjith, M. T., Chaudhary, V., & Sreejeshnath, K. A. (2023). BirdPests: Damage and Ecofriendly Management. *Annals of Arid Zone*, 62(4), 361–372.
<https://doi.org/10.59512/aaz.2023.62.4.11>

CITES. (2023). Appendices I, II and III valid from 25 November 2023. *Convention on International Trade in Endangered Species Of Wild Fauna And Flora, November*, 3–80.
<https://cites.org/eng/app/appendices.php>

Condrey, S. E., & Battaglio, R. P. (2012). Editorial. *Review of Public Personnel Administration*, 32(1), 3.
<https://doi.org/10.1177/0734371X12438005>

Dakin, R., McCrossan, O., Hare, J. F., Montgomerie, R., & Kane, S. A. (2016). Biomechanics of the Peacock's display: How feather structure and resonance influence multimodal signaling. *PLoS ONE*, 11(4), 1–25.
<https://doi.org/10.1371/journal.pone.0152759>

Eliza, M., & Ocampo, P. C.-. (2024). *Palawan Peacock Pheasant (Polyplectron napoleonis) Species Distribution Modeling: A Review of the Impact of Typhoon Rai/Odette on the Diversity and Distribution of an Endemic Bird Species*. October.
<https://doi.org/10.58870/berj.v9i1.64>

Fitri Anggreani, T. (2021). Faktor-Faktor Yang Mempengaruhi Swot: Strategi Pengembangan Sdm, Strategi Bisnis, Dan Strategi Msdm (Suatu Kajian Studi Literatur Manajemen Sumberdaya Manusia). *Jurnal Ekonomi Manajemen Sistem Informasi*, 2(5), 619–629. <https://doi.org/10.31933/jemsi.v2i5.588>

Foxcroft, L. C., Richardson, D. M., Rejmánek, M., & Pyšek, P. (2010). Alien plant invasions in tropical and subtropical savannas: Patterns, processes and prospects. *Biological Invasions*, 12(12), 3913–3933.
<https://doi.org/10.1007/s10530-010-9823-7>

Hernawan E. 2003. Studi Populasi dan Habitat Merak Hijau (Pavo muticus linnaeus 1766) di Hutan Jati Ciawitali, BKPH Buah Dua dan BKPH Songgom KPH Sumedang. [Skripsi]. Departemen Konservasi Sumberdaya Hutan dan Ekowisata Fakultas Kehutanan. Fakultas Kehutanan. IPB. Bogor.

Hernowo J.B. 1997. Population Study of Javan Green Peafowl (Pavo muticus Linnaeus 1776) Whith Three Different Methods In the Baluran National Park, East Java, Indonesia. *Media Konservasi* 5(2): 61 - 66

Hernowo J.B. 2011. Ekologi Merak Hijau Jawa (Pavo muticus linnaeus 1758) Pada Beberapa Tipe Habitat di Ujung Timur Penyebarannya Jawa Timur, Indonesia. [Disertasi]. Progaram Studi Ilmu Pengetahuan Kehutanan. Sekolah Pascasarjana. IPB. Bogor.

Intarapat, S., Sukparangsi, W., Gusev, O., & Sheng, G. (2023). A Bird's-Eye View of Endangered Species Conservation: Avian Genomics and Stem Cell Approaches for Green Peafowl (Pavo muticus). *Genes*, 14(11).
<https://doi.org/10.3390/genes14112040>

IUCN (International Union for Conservation of Nature and Natural Resources). 2018. *Pavo muticus*. www.iucnredlist.org. [8 Januari 2019].

Mariana Takandjandi dan/and Reny Sawitri. (2011). Populasi Burung Merak Hijau (Pavo Muticus Linnaeus, 1766) Di Ekosistem Savana, Taman Nasional Baluran, Jawa Timur (Population Phoenix Birds (Pavo muticus Linnaeus, 1766) in Savanna Ecosystem, Baluran National Park, East Java)*). *Jurnal Penelitian Hutan Dan Konservasi Alam*, 1(8), 13–24.

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). 2018. Appendices I, II and III. <http://www.cites.org> [1 Februari 2019].

Mikkelsen, B. (2011). *Metode penelitian partisipatoris dan upaya pemberdayaan: Panduan bagi praktisi lapangan*. Yayasan Pustaka Obor Indonesia.

Nasar, A., Rahman, A., Sharif, A., Shuvo, K. H., Zayma, N., Islam, T., Hoque, N., & Das, Z. C. (2024). *Common Peafowl (Pavo cristatus) Farming in Bangladesh: Current Status, Reproductive Behavior and Health Management*. 06(01).

Nassaji, H. (2015). Qualitative and descriptive research: Data type versus data analysis. *Language Teaching Research*, 19(2), 129–132.
<https://doi.org/10.1177/1362168815572747>

Peacock, J., Macleod, R., Davies, G. M., Boorsma, T., & Tonra, C. M. (2024). Habitat Selection of Three Neotropical Grassland Birds Is Dependent on Vegetation Structure and Resources. *Diversity*, 16(4), 1–17. <https://doi.org/10.3390/d16040229>

Pemerintah Republik Indonesia. (1999). *Peraturan Pemerintah Republik Indonesia Nomor 7 Tahun 1999 tentang Pengawetan Jenis Tumbuhan dan Satwa*. Jakarta, Indonesia.
<https://peraturan.bpk.go.id/Details/54143/pp-no-7-tahun-1999>

Pudyatmoko, S., & Kunci, K. (2019). Habitat dan interaksi spatio-temporal merak hijau dengan sapi. *Jurnal Ilmu Kehutanan*, 13, 28–37.
<https://jurnal.ugm.ac.id/jikfkt/article/download/46142/24554>

Rangkuti F. 2017. Teknik Membedah Kasus Bisnis Analisis Swot Cara Perhitungan Bobot, Rating dan OCAI. PT Gramedia Pustaka Utama. Jakarta.

Sammut-Bonnici, T., & Galea, D. (2015). <sc>SWOT</sc> Analysis. *Wiley Encyclopedia of Management*, January 2015, 1–8.
<https://doi.org/10.1002/9781118785317.weom120103>

Shwe, N. M., Sukumal, N., Oo, K. M., Dowell, S., Browne, S., & Savini, T. (2021). Importance of isolated forest fragments and low intensity agriculture for the long-term conservation of the green peafowl Pavo muticus. *Oryx*, 55(2), 311–317.
<https://doi.org/10.1017/S0030605319000267>

Siddiq, A. M., Sulistiyowati, H., Setiawan, R., Wimbaningrum, R., & Wahono, N. D. (2024). Short Communication: Avifauna survey in Bama coastal area of Baluran National Park, East Java, Indonesia. *International Journal of Tropical Drylands*, 8(1), 14–20. <https://doi.org/10.13057/tropdrylands/t080102>

Suhadi, Dharmawan, A., Prasila Utami, E., & Retnaningtyas, R. (2019). Understanding the Characteristic of Roosting Sites of Green Peafowl (Pavo muticus Linnaeus, 1766) in Baluran National Park. *IOP Conference Series: Earth and Environmental Science*, 391(1).
<https://doi.org/10.1088/1755-1315/391/1/012028>

Sukumal, N., Dowell, S. D., & Savini, T. (2020). Modelling occurrence probability of the Endangered green peafowl Pavo muticus in mainland South-east Asia:

Applications for landscape conservation and management. *Oryx*, 54(1), 30–39.
<https://doi.org/10.1017/S003060531900005X>

Tobing I.S.L. 2008. Teknik Estimasi Populasi Suatu Spesies Primata. *Jurnal Vis Vitalis*. 1(1): 43 – 52.

Weidlich, E. W. A., Flórido, F. G., Sorrini, T. B., & Brancalion, P. H. S. (2020). Controlling invasive plant species in ecological restoration: A global review. *Journal of Applied Ecology*, 57(9), 1806–1817.
<https://doi.org/10.1111/1365-2664.13656>

Yuniar A. 2007. Studi Populasi dan Habitat Merak Hijau (*Pavo Muticus Linnaeus 1766*) di Taman Nasional Alas Purwo dan Taman Nasional Baluran Jawa Timur. Skripsi. Departemen Konservasi Sumberdaya Hutan dan Ekowisata. Fakultas Kehutanan. IPB. Bogor.