



Conservation through entertainment: Analyzing digital reception of wildlife messaging in popular Indonesian cinema

Nadhira Adesta Ramadhanti^{1,*}

¹ School of Environmental Science, Universitas Indonesia, Central Jakarta, DKI Jakarta 10430, Indonesia.

*Correspondence: nadhira.adepta@ui.ac.id

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ABSTRACT

Background: Wildlife conservation is rarely portrayed in Indonesian cinema. *Petualangan Sherina 2* (2023) brings attention to orangutan conservation and critiques the exploitation of wild animals by influencers. Despite ongoing online discourse and legal protections, public awareness remains low. This study explores how the film represents these issues through anthropocentric and biocentric perspectives. **Methods:** Using qualitative content analysis, key scenes, characters, and songs are examined to identify ecological values. Audience perception is assessed through sentiment data from Google Trends and social media posts on X (formerly Twitter). **Findings:** The film presents strong anthropocentric and biocentric messages. However, public interest peaked at the film's release and quickly declined. Online responses focused more on nostalgia and entertainment than environmental themes. **Conclusion:** *Petualangan Sherina 2* delivers a strong conservation message by blending entertainment and education. However, audience engagement remains limited, highlighting the need for ongoing media efforts. Nostalgia and cultural storytelling enhance the film's impact on biodiversity awareness. **Novelty/Originality of this article:** This study uniquely combines film analysis with digital sentiment tracking to evaluate environmental messaging in Indonesian popular cinema.

KEYWORDS: depiction; online sentiment; wildlife conservation; wildlife exploitation.

1. Introduction

Before we begin talking about wildlife conservation, it has to be noted how this activity is a response to anthropocentric activities. Hence, let us begin with how anthropocentrism caused the need to conserve. The relationship between the Anthroposphere and the Biosphere has accelerated biodiversity loss. Human attitudes, including feelings, actions, and perceptions toward a certain species shape this impact (Fonseca et al., 2021). It is said by Bennett (2016) quoted in Fonseca et al. (2021) that how people evaluate conservation depends on their perceptions. There are four categories of perception that Bennett proposed can improve conservation policies and practices; social impacts, ecological outcomes, legitimacy of conservation governance, and acceptability of conservation management. These four categories are essential to promote species conservation in an anthropocentric landscape.

However foremost, we need to engage people emotionally with the subject of conservation actions, starting from pushing the boundary of cross-species empathy. In their research on empathy and compassion toward other species, Miralles et al. (2019) reminds

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us how empathy is crucial for successful social interactions between humans. Their predispositions are determined by the likeliness of our genes as humans, which facilitated the well-coordinated and well-cooperated interactions between individuals. Move forward, their findings indicate that our capacity for empathy varies significantly between species, largely influenced by the phylogenetic distance separating them from humans. While relatedness and resemblance (in terms of overall similarity) are distinct concepts, they tend to correlate empirically. Through anthropocentric view, relatedness can be viewed as a broad approximation of the shared external traits inherited from a common ancestor (synapomorphies), which, over a lengthy divergence period, are expected to diminish gradually. Henceforth, they propose the hypothesis that our emotional connection with other organisms, whether actual or perceived, largely hinges on the number of external characteristics that can be intuitively recognized as similar to those of humans. The closer a species is to us in evolutionary terms, the more we tend to perceive these signals (interpreting them as anthropomorphic cues) and, consequently, the more likely we are to respond with a human-to-human style of empathy toward it.

As explained above, we are starting to get a sneak peek on how conservation to certain species, for example primates, might be affected by such view. We will circle back to said subject later on primates and orangutan conservation. Now, we will move forward to how conservation is processed through new forms of anthropocentrism; the modern world of media display. Social media holds significant potential for spreading conservation messages and mobilizing public action to protect our biodiversity (Bergman et al., 2022). For example, some conservation organizations are currently already relying their efforts on social media platforms to gain awareness and to raise funds. The existence of social media itself is viewed as a double-edged sword, where it can stretch networks, becoming an effective tool for education and fundraising, yet on the other hand can also have counterproductive impacts on public perception towards wildlife conservation (Freund et al., 2021). There are also some new surveillance technologies that enable publics to observe private lives of wild animals through their personal devices such as smartphones, computers, and other digital platforms. These technologies create new public-wildlife relationships, fostering digital intimacy but also placing wildlife within frameworks of care, commodification, and control. This relationship is now labelled as part of Digital Anthropocene (Von Essen et al., 2023). Another form of media display for conservation is in the form of cinematic motion, in which we are about to dive deeper. Fonseca et al. (2021) defined their research on producing a movie to improve attitudes towards a threatened species (in their case, reptiles), as below:

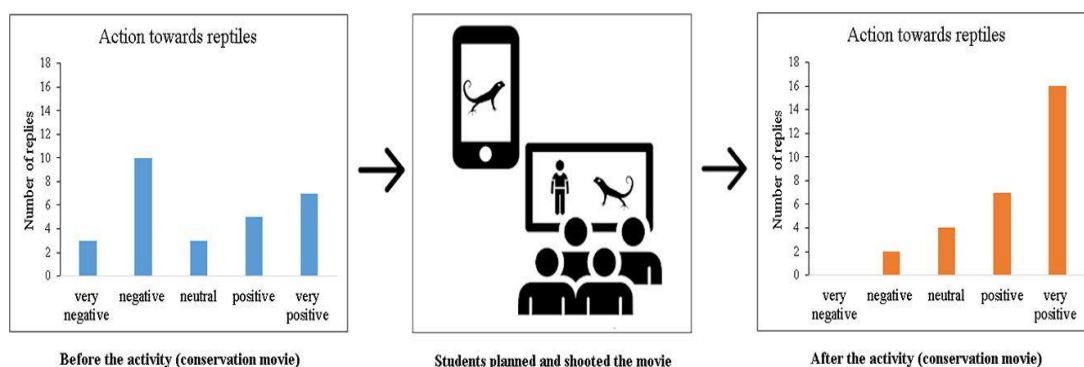


Fig. 1. Graphical abstract on shooting skinks for good: producing a movie improves attitudes towards a threatened species (Fonseca et al., 2021)

Their research, by reaching the part of conclusion, highlighted that apart from feelings and perceptions, actions are required for wildlife conservation. The research was conducted to students, yet the conclusion might be applicable to any groups in public. To be more explored in this paper are environmental advocacy from celebrity and conservation action trends on the internet.

The research by Abidin et al. (2020) explores how celebrity advocacy in environmental issues is defined in various form of practices, like hashtag publics, brandjacking, and online communities. Furthermore, the research put celebrity advocacy for environmental issues in groups that are: (a) celebrity animals, (b) ambassadors, (c) white saviours, (d) indigenous heroes and heroines, (e) gurus, (f), commercial TV products, (g) entrepreneurs, (h) activist intellectuals, and (i) ordinary people. Some of these groups are adept at promoting, while others tend to be too unpredictable and can result in negative images. Olmedo et al. (2024) explored more on how celebrities intervene in wildlife advocacy. Their articles review show that celebrity endorsement for environmental causes has been reported since the 1990s. The range of campaign topics themselves is broad, endorsed by various types of celebrity such as film stars and musicians due to their significant display in mass media. However, the essentially needed research of wildlife knowledge, they discovered, is still lacking among those campaigns. This condition forms a new risk where the actual message of the environmental problem being ignored by audience since they do not match the narrative, social roles, or even emotions and values associated with that particular situation (Lakoff, 2010; Olmedo et al., 2020).

Now the question arises, do technological advances significantly improve people's willingness towards conservation actions? Whether it's in the form of social media posts, applications on the phone, and especially movies. With the general situation and questions are elaborated, we can now explore into our main focus; Indonesia's situation in wildlife conservation and our recent Digital Anthropocentrism approach. Indonesia, a country rich in biodiversity, is where wildlife has become an increasingly critical issue due to habitat loss and illegal wildlife trade. Legally, Indonesian wildlife is divided into two groups; protected species and unprotected species. Under Law (UU) No. 5 of 1990 on the Conservation of Biological Natural Resources and Ecosystems, trading in protected animals is considered a criminal offense, punishable by up to 5 years in prison and a fine of Rp. 100 million. Animal-related crimes are addressed both within and outside the Criminal Code due to frequent incidents of animal abuse by irresponsible individuals. Such behaviours threaten endangered species, often driven by human desires for ownership with little regard for their natural populations. These violent acts are typically motivated by personal profit, such as hunting animals for meat or selling their fur or tusks (Prihatini et al., 2021)

Orangutans, one of Indonesia's most iconic and endangered species, are often at the centre of conservation efforts. The remaining three species of orangutans, two from Sumatra (*Pongo abelii* and *P. tapanuliensis*) and one from Borneo (*P. pygmaeus*) are all classified as Critically Endangered by the International Union for Conservation of Nature (IUCN). The rapid decline on their population was likely the result of hunting by humans and climate change combined. At this moment, their biggest threat is hunting and forest loss. The forest loss itself is caused by various phenomenon such as forest fire, land use for agriculture, logging, mining, pulp and paper production, and infrastructure. Hunting used to be done for food, currently it's more about human-orangutan conflict from the forest loss actions (Chua et al., 2020). Other research on orangutans by Sherman et al. (2020) focusing on the Bornean species stated that high levels of orangutan killings and illegal captivity have driven intakes at rescue facilities. While factors such as deforestation, human-orangutan encounters, and fires have led to large-scale translocations of wild orangutans. In 2017, rescue facilities housed 1,112 orangutans, a figure relatively unchanged since 2007 despite the release of 1,219 individuals, which included 605 former captives and at least 523 translocated wild orangutans. Rescue efforts have not significantly improved law enforcement or prevented the loss of wild orangutans. Sherman and team concluded how translocations, in particular, pose significant risks to the conservation of orangutan populations and individual well-being. Two years later in another study, Sherman et al. (2022) further assessed the patterns in wildlife poaching and illegal trade of orangutans, along with the law enforcement efforts, and conservation interventions. Their findings show that only 22 legal cases (representing less than 1% of 2229 reported orangutan-related crimes) were brought to court, with convictions secured in 20 of them. Enforcement presence in national parks inhabited by orangutans ranged from just 0.28 to 2.11 officers

per 100 km², significantly lower than the internationally recommended standard of 3-11 officers per 100 km². Although interventions such as public education and voluntary handovers of captive orangutans have been implemented, these measures have not led to a reduction in crime rates.

Now, let us circle back to Miralles et al. (2019) hypothesis on cross-species empathy and compassion. We know that orangutans are part of the primate group, which regarded as closely related to humans in terms of phylogenetics. We can hypothetically conclude that there is indeed a high effort in orangutan conservation, especially in Indonesia. Yet, the research by Freund et al. (2021) shows how, in fact, there is a negative sentiment towards countries that are mainly conserving orangutans, Indonesia and Malaysia. In one hand, this sentiment shows high regards on orangutan conservation, likely approving Miralles et al.'s hypothesis. In the other hand, this condition raises more question on the efficiency of orangutan conservation itself. Freund and team's research was conducted through YouTube analytics and sentiment analysis of orangutan conservation videos, where they found videos with longer human-orangutan interaction screentime were viewed more by audience. Yet the comments are significantly negative towards Indonesians and Malaysians, where the audience suggested the people of Indonesia and Malaysia are the ones responsible for destroying orangutans' habitat. It is said that the conservation effort is basically just a way to produce videos and generate money.

Another case of online sentiment analysis towards conservation effort was discussed in the research by Shan et al. (2022). Although conducted to different subject (in their case was rhino trade), their research shows a pattern between negative sentiment of the topic and countries with high volume of wildlife exploitation. They also made a conclusion as to how social celebrities participation arouses public concern in wildlife matter, although the influence does not last for more than a month. We can see how the urgency is now not limited to the conservation action itself, but also perception and action. In Indonesia, awareness surrounding how wildlife conservation works remains limited. It was until the end of 2023 that Indonesian cinema was finally released an environmental-themed film that focused on wildlife conservation. *Petualangan Sherina 2* was released on 28 September 2023, produced by Miles Films. The film, though fictional, brought up the theme on environmental issue, focusing on orangutan conservation in Kalimantan and the wildlife exploitation for exotic pet collection by celebrities.

A literature review was previously conducted through qualitative research on how the film is generally interpreted as educational media in building awareness and its perspective from cinema industry (Setiaji & Altamira, 2024). It is said that through film, there are three characteristic elements where a film is considered as educational medium. The first one is about how films as a medium for spreading views must consider their large audience reach. The purpose is to convey messages and increasing awareness, even calling action on a certain issue. The second element is the development of the films' genre, from drama to documentaries and others. Finally, the third element is where a film could be a suitable medium to represent an on-going phenomenon in the society.

Another research on cinematic approach for environmental theme by McCormack et al. (2021) tells us that film is a form of narrative persuasion. It is said that conservation researches have recently emphasized the potential of visual storytelling to spread environmental messages widely. Evidence indicates that visual storytelling effectively influences beliefs, attitudes, and behaviours. However, a clear model demonstrating how such narratives can foster outcomes like human-nature connection and pro-environmental behaviour (PEB) is still lacking. Amid numerous environmental challenges and the growing "extinction of experience", scholars still argue that film can help can help connect people with nature and influence their actions.

Right now, we have to put these two perspectives side by side. The first one is how wildlife plays an essential role in human life. The human relationship with wildlife, throughout history and across various cultures, have been shaped by the ways in which animals are valued, utilized, and symbolized (Castillo-Huitrón et al., 2020). The second one is how with the development of information technology, individuals are increasingly

immersed in mass media where cinema occupies a substantial share of the media content they consume (Kubrak, 2020).

In this study, the topic on conservation will be highlighted, yet we cannot separate it with how people's attitudes affected by a certain form of storytelling narrative, in this case the storytelling from *Petualangan Sherina 2*. While the whole film itself will be analysed to identify its anthropocentric and biocentric element, internet trends of *Petualangan Sherina 2* will also be examined, along with some social media evidence to support. By the end, this study is hoped to see the broader potential of Indonesian cinema, as well as this nation's effort in maintaining well-conserved biodiversity as inseparable effort.

2. Methods

This research will employ dual approach, one to analyse the film and the other to see audience perception. The first part will focus on examining the movie through the lenses of anthropocentrism and biocentrism, while the second part will explore the film's online sentiment using data from Google Trends and social media.

2.1 Movie analysis

The film will be analysed using anthropocentrism and biocentrism theories that are mostly already being mentioned on the Introduction. Anthropocentrism aspect is characterized by human-centered needs and interests. On the other hand, biocentrism emphasized the intrinsic value of all living organisms. By applying these frameworks, the analysis will identify *Petualangan Sherina 2*'s portrayal of human-wildlife interactions and conservation themes. Certain scenes, dialogues, and narrative elements including the songs will be evaluated to determine the film's core ideologies.

2.2 Google trends analysis

To assess public sentiment toward the film and its central themes, this research utilizes Google Trends as a primary tool for analyzing online search behavior. A study by de Oliveira Caetano et al. (2023) argues that Google Trends enables large-scale, real-time analysis of public interest in biodiversity and conservation topics. This aligns with the Aichi Target 1 (raising public awareness), and reflects how digital tools can measure cultural attention and outreach impact across countries using relatable search terms like species names or national parks. Another study utilising Google Trends for nature-related activities is from (Lenda et al., 2023), where they track public interest in birdwatching and gardening during major period like the COVID-19 lockdown. Their findings reveal how public engagement with nature spikes during periods of restricted mobility and stress. While both highlights the benefits of using Google Trends, they also noted that data can be skewed in regions with low Google usage, making cross-country comparisons could be difficult. Interest captured might reflect momentary trends or media influence, not long-term behavior change. Google Trends also favors popular, easily recognized species or keywords, which may bias conservation priorities toward certain fauna.

Following the approach outlined by Havelka et al. (2020), the data is categorized based on keywords, geographic location, and time range. However, this study diverges in its analytical focus by not relying on Relative Search Volume (RSV). Instead, it interprets the data directly from the visual and categorical outputs provided by Google Trends. These include the "Interest Over Time" graph, which reveals fluctuations in public attention through notable peaks and declines; the "Interest by Subregion" map, which highlights regional variations in search behavior and engagement; and the "Related Queries" section, which identifies frequently associated search terms that provide insight into the relevance and framing of the film's environmental themes.

To initiate the inclusive scope, the acquired data will be using the time custom time range between 20 July 2023, which was the day the first trailer of *Petualangan Sherina 2*

aired, until the day this part is written, which was 21 December 2024. Keywords will be separated from English and Indonesian as listed below in Table 1 with their relevance on the topic.

Table 1. Indonesian and English keywords with their relevance

Indonesian	English	Relevance
<i>Petualangan Sherina 2</i>	Sherina's adventure 2	Title of the film
<i>Konservasi satwa liar</i>	Wildlife conservation	Specific conservation context
<i>Konservasi</i>	Conservation	Broader conservation context
<i>Orangutan</i>	Orangutans	Central animal featured in the movie
<i>Eksplorasi satwa liar</i>	Wildlife Exploitation	Specific wildlife issue context

2.3 Supporting evidence from social media

Tweets (from the social media X) containing relevant keywords that are mentioned in Table 1 or any relevant discourse surrounding the topic will be manually selected and examined for sentiment. Tweets will be reviewed qualitatively as supporting evidence to complement the Google Trends findings. The inclusion of selected tweets in this study is based on the understanding that X serves as a platform where individuals engage with scientific and ethical issues, not just by sharing links but through original commentary. A study by Maleki & Holmberg (2024) regards how tweets, especially the original ones, can reflect a user's personal engagement with a topic and are more likely to contain communication-rich, human-like sentences compared to retweets. These kinds of tweets are often used to disseminate or comment on issues including scientific ones and may indicate genuine interest or ethical concern, even outside of formal academic channels. While according to Shan et al. (2022), tweeting behaviours are generally somewhat affected by the information of traditional mass media, they concluded from analysing the relationship between the current trending online news and Tweet numbers.

A study from Chua (2021) highlights the significance of Twitter as a dynamic platform for orangutan conservation, describing it not only as a site of knowledge exchange and advocacy, but also as a volatile arena shaped by strong opinions, moral claims, and affective engagements. Drawing from ethnographic research, Chua treats Twitter both as a methodological tool and an ethnographic object, reflecting the tensions between professional identity and public engagement in digital conservation spaces. Her work illustrates how conservation discourse online is deeply entangled with issues of power, legitimacy, and representation, especially in how conservationists, researchers, and local communities navigate these platforms.

3. Results and Discussion

3.1 Movie analysis

The movie opens with our protagonist's adulthood life, in comparison to her childhood from the first movie, portraying her job as a journalist (00:00:30 – 00:08:40). Sherina views highly of herself as the best journalist in the building, worthy of the big opportunity to report for The World Economic Forum in Davos, Switzerland. Until her supervisor relocates her and her cameraman co-worker, Aryo, to Orangutan Kalimantan (OuKAL), an orangutan conservation in Kalimantan. Much to her refusal, Sherina thinks her relocation was caused by her supervisor siding with the company's nephew. However, her supervisor tells her that this decision was made due to her experience and skill in nature knowledge.

We can see how Sherina is struggling with her human-centered ambition. Living in the middle of metropolitan life of Jakarta, she is long unattached to nature and wildlife other than the ones provided in urban area. A research from Bonthoux et al. (2024) analysed the socio-ecological mindset of city dwellers such as Sherina on how they develop people-nature connections in the city to furthermore develop an attachment to other living beings.

The research itself, taking place in an urban river, shows how relationships between city dwellers and urban wild places are not merely built through behaviour, but also affective and cognitive components. Wild elements such as birds, plants, and water flows were attracting the users more than the historic architectural elements. It also appears that users' age and visitation frequency positively correlated with their nature knowledge.

The reference suits with how at beginning of the movie, Sherina took a jog on River Walk U / C Kuningan, a by-the-river city park where she was enjoying the open space while singing a song titled *Menikmati Hariku* (Enjoying My Day) before the scene quickly shifted to her going to work. The song's lyrics describes how she enjoys the sunshine, unbothered by the heat, depicting how she's not completely excluding herself from her environment even though the subject was quickly moved to her singing about her ambitious approach on work. It appears how Sherina always keeps her affection towards nature, which soon will lead us on how she processes her relocation to Kalimantan.



Fig. 2. Sherina's work relocation to Kalimantan for orangutan conservation

In the scene where her supervisor informed about her relocation, Sherina was not simply reluctant, but refused the relocation. It is not until she digs into her childhood collection of scout badges, old backpack from the first movie, along with other memorabilia, and motivation from her parents that she decided to fully take the responsibility to report for the job. The motivation arises as she met her childhood friend, Saddam, whom turned out as OuKAL project manager (00:16:55). As the opposite to Sherina's city-dwellers personality and ambition, Saddam is now portrayed as a strongly environmental person. He is depicted as a responsible and firm leader of an orangutan conservation project (Setiaji & Altamira, 2024).

The main plot revolves around the release of a pair of orangutans, mother and child, named Hilda and Sayu. In the process, OuKAL team involves a local young girl named Sindai, whom rescued Hilda before she was rehabilitated by OuKAL. In the scene where they carry Hilda and Sayu in a boat to cross the river (00:32:50), Sherina sings the song titled 'Sayu', describing her emotional connection to the baby orangutan. This act gives a callback to Miralles et al. (2019) research on empathy and compassion toward other species. The lyrics "*Sayu, matamu sayu, bertemu maku, luluhkan hatiku. Sayu, tanganku itu serupa tanganku, memanggil senyumku*" depicts how Sherina sees the similarities between herself and the orangutan physically by the shape of their hands and the way their eyes emote, just as how Miralles's analysis on how the close-relatedness of phylogenetic factor can result in higher empathy and compassion across species.

The movie then shifted to the story's villains, a pair of husband and wife named Ratih and Syailendra. Ratih (previously on 00:20:40 – 00:22:50) is depicted to collect domestic cats and a wild cat as her exotic pet. As she scrolls through her social media, she sees her socialite friends are exhibiting their exotic wild pets that are considered more attractive than her own collection. Furious, she asks her husband to give her another wild animal as pet. As the story goes, it turns out a baby orangutan was what Syailendra planned to reward her with. This is the point where the story between this pair and the orangutan conservation

back in Kalimantan aligned. Returning to the jungle, we are now shown that Syailendra's men, well-arranged by one of OuKAL employee, are preparing themselves to abduct Sayu from the program.



Fig. 3. Syailendra's men attempt on abducting Sayu the baby orangutan

The release of Hilda and Sayu was initially running smooth, with the team had reached the spot safely, built up a camp to monitor, and keeping an employee to keep watch. The process of conservation action and monitoring is thoroughly depicted. As educational purpose, this shows an advancement in Indonesian cinema regarding environmental issues. In the movie plot itself, this scene leads to the abduction of Sayu. Sindai sees Syailendra's men in action and pursues them, followed by Sherina and Sadam. In this sequence, Sherina is reliving her childhood spirit of getting into trouble with criminals. However for Sadam, although worries and certainly aims to rescue Sayu, regards Sherina's action as reckless for not involving authorities and his team.

Approaching the climax of the movie, a gala was held in Syailendra and Ratih's place, celebrating their marriage anniversary with Sayu is being held captive in a cage. Sneaking in as a reporter, Sherina takes her chance to rescue Sayu after her failed attempt back in Kalimantan. This time, Sadam compromises and helps her through every process. After a series of effort and entertaining action sequence, the antagonist pair as well as their gang of illegal hunters were being arrested and detained by the authorities. A scene showed how the authorities expressed their commitment to protect wildlife more efficiently, preventing more wildlife hunting in the future.

Overall, the film effectively expresses the issues on orangutan conservation and even explores to broader environmental theme at times. Through its engaging dialogue and plot line, *Petualangan Sherina 2* efficiently managed to balance entertainment with environmental education, raising awareness of critical topics such as wildlife preservation and the crime against it. The integration of its characters, including the adaptation of real celebrity cases with wildlife, provides relatable context for the audience, creating an accessible message to be perceived. There is not yet any evidence showing or indicating audience action caused by the film, yet we could try by exploring the internet trend by time. In the next point of discussion, we will examine the online sentiment from Google Trends and social media X.

3.2 Google trends online sentiment

After including five keywords at a time due to maximum input, categorizing them based on Language (Indonesian and English), Google Trends' Interest Over Time graphics suggest as in Figure 4 and Figure 5. Note that each keyword has different category based on Google Trends' database. Some are considered as specific topics, such as *2023 film* for 'Sherina's Adventure 2', and *Primate* for 'Orangutans'. The rest are simply considered as 'search term'.

Due to the specificity of this research's keyword choice, the graphs below will show a mix of topics and search terms.

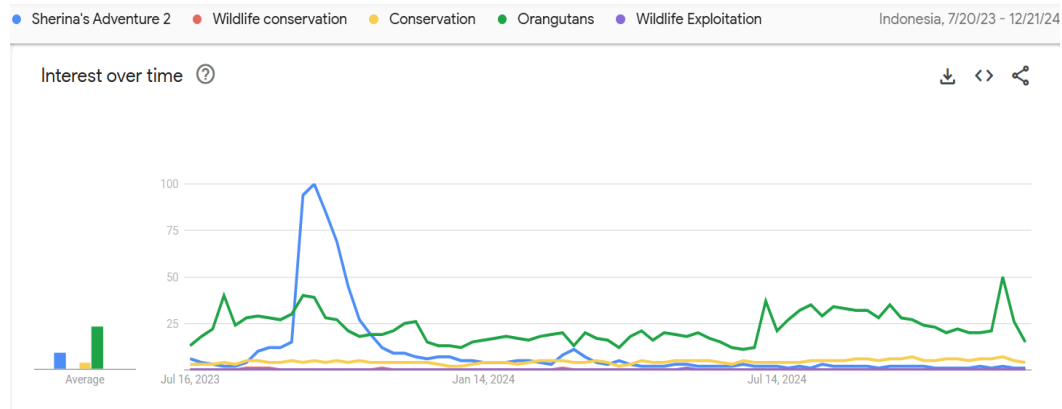


Fig. 4. Interest over time for English keywords

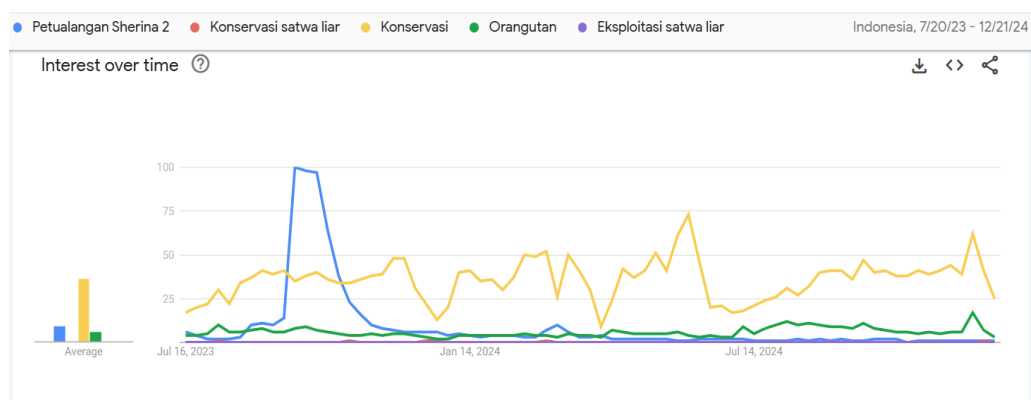


Fig. 5. Interest over time for Indonesian keywords

According to Google News Initiative, in selecting topics, we should prevent comparing topics with search terms. The results of a topic and a search term with the same name will look different. However in this study, some keywords do not make it to be a whole topic to be analysed, especially the Indonesian keywords that are all considered as search terms. As shown from Figure 4 and Figure 5, the topic of Sherina's Adventure 2 and search term *Petualangan Sherina 2* both peak around the release date of the film, which was in 28 September 2023, before rapidly declines by time. The most significant difference can be seen in the comparison of keywords 'Orangutans' and 'Orangutan'. The keyword 'Orangutans' is considered as a topic while the other is a search term, hence the significant gap between their graphs as shown below in Figure 6.



Fig. 6. Difference between the keyword 'Orangutans' and 'Orangutan' interest over time

If we compare the English and Indonesian keywords by the subregion breakdown provided by Google Trends, we can see more clearly the impact of the keywords to the result. In English keywords, it is geographically dominated by the keyword 'Orangutans'. While in Indonesian keywords, the dominating keyword is 'Konservasi'. The results are shown in Figure 7 as below.

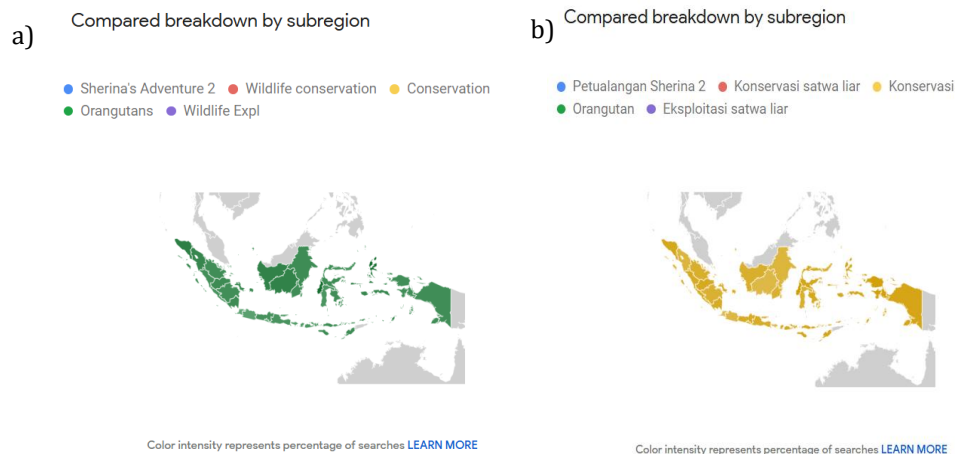


Fig. 7. a) English keywords interest by subregion in Indonesia; b) Indonesian keywords interest by subregion in Indonesia

From those two keywords, we will further see their related queries as below in Figure 8 and Figure 9. We could see how related queries from the keyword 'Orangutans' are all considered as *Breakout*, which means they are search terms that grew by more than 5000% in search volume. While for the keyword 'Konservasi', none of the related queries are pulling through the *Breakout* limit, varying between 450% to 2850% in search volumes.

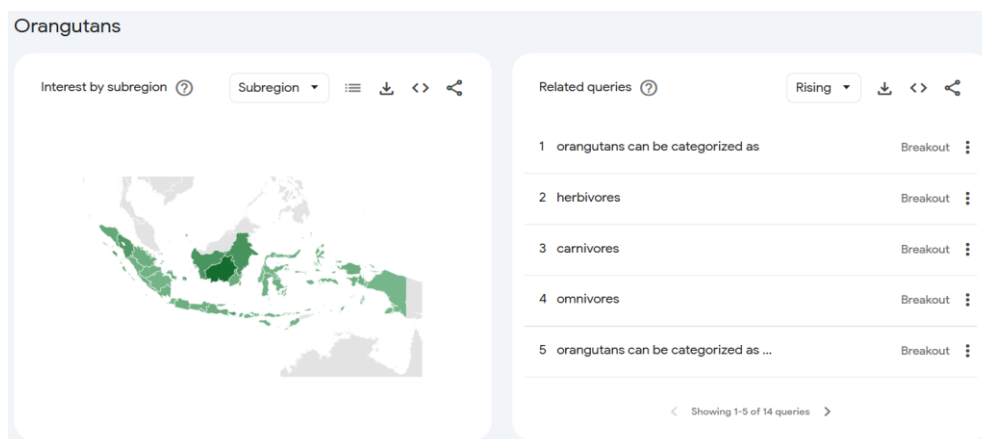


Fig. 8. Keyword 'orangutans' related queries

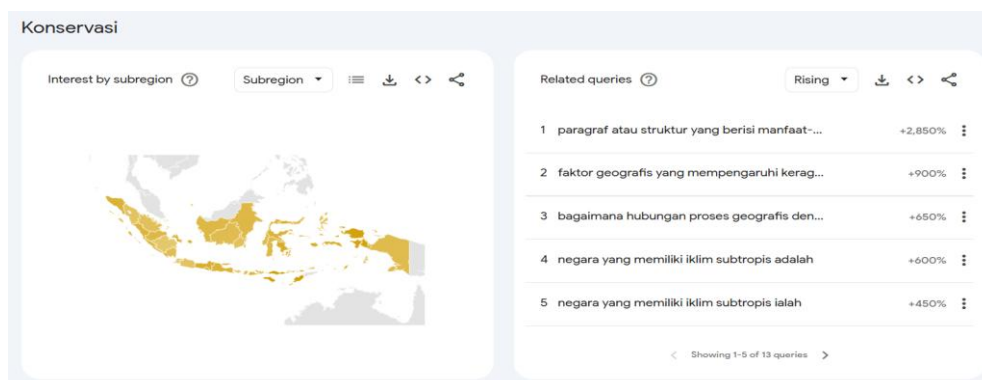


Fig. 9. Keyword 'konservasi' related queries

Overall, in our focused examination to the movie title, there is a significant drop of the trend, as well as most of the issues that are brought up. A commentary by Troumbis (2017) examines how public interest in biodiversity has been declining in Google Trends. It reveals a broader and global challenge in sustaining public interest in biodiversity to begin with. The declining trends in Interest Over Time suggest that conservation topics struggle to maintain visibility outside of major events, such as the release of a film. The commentary also highlights how existing research has been indicating that public engagement with biodiversity issue is not only influenced by communication strategies, but also by cultural shifts and linguistic priorities.

Another study that might explain this situation is from Nghiem et al. (2016). Their study explores Google Trends' capacity to measure public interest in conservation topics. Their findings include how while some topics, like "ecosystem services", showed an upward trend, others such as "endangered species", experienced a consistent decline. Another keyword they use, just like in this research, is "orangutan", that they found fluctuated with peaks that are corresponding to specific events or media coverage. It is suggested that media coverage plays the most significant role in shaping public interest. On the other hand, academic publications showed weaker and less consistent correlations with public awareness. However, media coverage or seminal events are often recorded to trigger temporary spikes in interest. They rarely sustain the interest without continuous engagement or follow-up actions. The study concludes that while Google Trends is a powerful tool to gauge public interest, it must be used cautiously, considering the shifting baselines and contextual factors.

3.3 Supporting evidence from social media

Despite the trend drop, if we manually search some of the keywords on social media such as X, we could still discover some tweets that are indicating audience perception on *Petualangan Sherina 2* and orangutan conservation issue, though separately. Back in the release day on 28 September 2023, the account @cinemuach tweeted their review right away on X expressing their sentiment on the movie as nostalgic, successfully evoked childhood memories, and resonating deeply with audiences who grew up with the original film. The tweet earned more than 800 retweets and over 2k likes. Another tweet found around the release day, on 29 September 2023, is from the account @TarizSolis. There is a mention of "orangutan" once in their tweet and not much elaborated as a whole theme. The tweet shared that watching the sequel felt like reuniting with old friends, bring back emotions and memories from their youth. The tweet earned more than 500 retweets and over 1.5k likes.

Now, the recent discovery. A discourse about how wild animals being exploited as pets recently resurfaced on X, back in 10 November 2024, which is National Heroes Day of Indonesia. The account @piyopikavet, owned by a veterinarian, was quote-tweeting @indiratendi, a wildlife biologist working in primates and tiger conservation, whom posted a picture of her holding baby orangutans along with her coworkers. @piyopikavet reflected on how the exploitation of wild animals often begins with people perceiving them as merely cute and adorable. While critiquing the ongoing practice of exotic petownership, the tweet also expressed appreciation for @indiratendi's and team efforts in nursing baby orangutans before eventually releasing them into the wild. @indiratendi's tweet received more than 2.6k retweets and over 16k likes, @piyopikavet received more than 2.8k retweets and over 10k likes. Both tweets earned wide attention from the netizens, showing high interest in our discussed topic although not directly referencing the plot of *Petualangan Sherina 2*.

3.4 Further discussion on biodiversity conservation in digital media

Digital media and online platforms have become crucial in shaping public awareness and sentiment toward wildlife conservation, yet their impacts are complex and multifaceted. For example, a study by Chua et al. (2021) highlights how species awareness

days, particularly those focusing on charismatic animals, can temporarily increase public engagement and online information-seeking behaviors. At the downside, more than half of the taxa they tested show no significant rise in attention, suggesting limited long-term effects. Complementing this study, Pernat et al. (2025) demonstrate how media coverage and viral social content around their object of interest, the Nosferatu spider's northward range expansion in Europe, led to marked spikes in citizen science participation and online searches, emphasizing the power of sensationalized narratives to mobilize public interest and also cautioning about potential public concern regarding biodiversity changes. On the other hand, when it comes to orangutans, even when their distressed images spread and have increased public awareness of deforestation, the deforestation issue itself continues to be persistent (Bager et al., 2021). The study by Fair & Schreer (2025) mentioned how orangutans are already often portrayed as charismatic species in international media, particularly for conservation messaging aimed at global Northern audiences. However, local communities may not share this perception. They observed how villagers in area of Sapan, Borneo viewed orangutan releases as peculiar and even disruptive, seeing the animals more as pests than symbols of endangered biodiversity. These local perspectives are often excluded from highly curated digital narratives, which instead emphasize emotional appeal and global donor engagement.

Meanwhile, de Oliveira Caetano et al. (2023) provide a broader perspective by analyzing global biodiversity and conservation-related search trends, revealing that although interest in charismatic mammals has grown, public engagement with conservation actions has declined since 2019, with economic inequality further influencing disparities in conservation awareness. Another study by Nijman et al. (2021) highlights how beyond Twitter, there are other social media platforms that reveal orangutan-related activities, including their illegal trade, which are happening on Facebook and Instagram. Their investigation identified multiple cases of orangutans, along with other apes such as gibbons and chimpanzees, being offered for sale online despite explicit platform bans. This suggests that digital spaces play multiple, sometimes contradictory, roles in orangutan conservation. Future research could benefit from a comparative approach that examines how orangutan-related content circulates across different platforms, including both advocacy narratives and illicit trade. Together, all these studies underscore the importance of strategically crafted conservation communication that leverages popular interest while addressing socioeconomic factors and the nuanced relationship between online sentiment, media portrayal, and sustained conservation outcomes.

4. Conclusions

This research highlights how *Petualangan Sherina 2* effectively raises awareness of conservation issues, particularly in orangutan conservation. Through a narrative that balances education and entertainment, the film succeeds in making these themes accessible and relatable to wide audience. Both elements of anthropocentrism and biocentrism are well-depicted in the movie, showing their significant difference that reflects on the plot and the characters.

However, the result of online sentiment analysis from Google Trends reveals a broader and even more global challenge in sustaining public interest in biodiversity. The declining trends in interest over time suggest how conservation topics struggle to maintain its visibility outside major events such as the release of a film. Media coverage plays more significant role in keeping the trends up as oppose to academical publications. This aligns with existing research that indicates public engagement with biodiversity issues is not only influenced by communication strategies, but also by cultural shifts and linguistic priorities. Through social media, viewers express both their personal connection and appreciation for *Petualangan Sherina 2* cultural reverence. This event, although not always on trend, blends nostalgia and social environmental messaging that helps improving the evolving role of films in contemporary discourse.

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References

- Abidin, C., Brockington, D., Goodman, M. K., Mostafanezhad, M., & Richey, L. A. (2020). The Tropes of Celebrity Environmentalism. *Annual Review of Environment and Resources*, 45, 387–410. <https://doi.org/10.1146/annurev-environ-012320>
- Bager, S. L., Persson, U. M., & dos Reis, T. N. P. (2021). Eighty-six EU policy options for reducing imported deforestation. *One Earth*, 4(2), 289–306. <https://doi.org/10.1016/j.oneear.2021.01.011>
- Bergman, J. N., Buxton, R. T., Lin, H. Y., Lenda, M., Attinello, K., Hajdasz, A. C., & Bennett, J. R. (2022). Evaluating the benefits and risks of social media for wildlife conservation. *Facets*, 7(1), 360–397. <https://doi.org/10.1139/facets>
- Bonthoux, S., Boulay, A., & Voisin, L. (2024). City dwellers' experiences and attitudes towards wild places based on an urban river. *Urban Ecosystems*, 27(3), 667–679. <https://doi.org/10.1007/s11252-023-01485-y>
- Castillo-Huitrón, N. M., Naranjo, E. J., Santos-Fita, D., & Estrada-Lugo, E. (2020). The importance of human emotions for wildlife conservation. *Frontiers in Psychology*, 11, 1277. <https://doi.org/10.3389/fpsyg.2020.01277>
- Chua, L. (2021). Selfies and Self-Fictions. *Social Analysis*, 65(1), 151–161. <https://doi.org/10.3167/sa.2021.650111>

- Chua, L., Harrison, M. E., Fair, H., Milne, S., Palmer, A., Rubis, J., Thung, P., Wich, S., Büscher, B., Cheyne, S. M., Puri, R. K., Schreer, V., Stępień, A., & Meijaard, E. (2020). Conservation and the social sciences: Beyond critique and co-optation. A case study from orangutan conservation. *People and Nature*, 2(1), 42-60. <https://doi.org/10.1002/pan3.10072>
- Chua, M. A. H., Tan, A., & Carrasco, L. R. (2021). Species awareness days: Do people care or are we preaching to the choir? *Biological Conservation*, 255, 109002. <https://doi.org/10.1016/j.biocon.2021.109002>
- de Oliveira Caetano, G. H., Vardi, R., Jarić, I., Correia, R. A., Roll, U., & Veríssimo, D. (2023). Evaluating global interest in biodiversity and conservation. *Conservation Biology*, 37(5). <https://doi.org/10.1111/cobi.14100>
- Fair, H., & Schreer, V. (2025). Lively gifts and exclusive commodities: Rethinking encounter value in orangutan conservation. *Geoforum*, 159, 104213. <https://doi.org/10.1016/j.geoforum.2025.104213>
- Fonseca, C. A., Sá-Pinto, X., Dinis, H. A., & Vasconcelos, R. (2021). Shooting skins for good: Producing a movie improves attitudes towards a threatened species. *Science of the Total Environment*, 791. <https://doi.org/10.1016/j.scitotenv.2021.148356>
- Freund, C. A., Heaning, E. G., Mulrain, I. R., McCann, J. B., & DiGiorgio, A. L. (2021). Building better conservation media for primates and people: A case study of orangutan rescue and rehabilitation YouTube videos. *People and Nature*, 3(6), 1257-1271. <https://doi.org/10.1002/pan3.10268>
- Havelka, E. M., Mallen, C. D., & Shepherd, T. A. (2020). Using Google Trends to assess the impact of global public health days on online health information seeking behaviour in Central and south America. *Journal of Global Health*, 10(1). <https://doi.org/10.7189/jogh.10.010403>
- Kubrak, T. (2020). Impact of films: Changes in young People's attitudes after watching a movie. *Behavioral Sciences*, 10(5). <https://doi.org/10.3390/bs10050086>
- Lakoff, G. (2010). Why it matters how we frame the environment. *Environmental communication*, 4(1), 70-81. <https://doi.org/10.1080/17524030903529749>
- Lenda, M. L., Skórka, P., Jaźwa, M., Lin, H. Y., Nęcka, E., Tryjanowski, P., Moroń, D., Knops, J. M. H., & Possingham, H. P. (2023). Recognizing the importance of near-home contact with nature for mental well-being based on the COVID-19 lockdown experience. *Ecology and Society*, 28(3). <https://doi.org/10.5751/ES-14374-280313>
- Maleki, A., & Holmberg, K. (2024). Tweeting and retweeting scientific articles: implications for altmetrics. *Scientometrics*, 129(10), 6197-6220. <https://doi.org/10.1007/s11192-024-05127-8>
- McCormack, C. M., K Martin, J., & Williams, K. J. (2021). The full story: Understanding how films affect environmental change through the lens of narrative persuasion. *People and Nature*, 3(6), 1193-1204. <https://doi.org/10.1002/pan3.10259>
- Miralles, A., Raymond, M., & Lecomte, G. (2019). Empathy and compassion toward other species decrease with evolutionary divergence time. *Scientific Reports*, 9(1). <https://doi.org/10.1038/s41598-019-56006-9>
- Nghiem, L. T. P., Papworth, S. K., Lim, F. K. S., & Carrasco, L. R. (2016). Analysis of the capacity of google trends to measure interest in conservation topics and the role of online news. *Plos One*, 11(3). <https://doi.org/10.1371/journal.pone.0152802>
- Nijman, V., Smith, J. H., Foreman, G., Campera, M., Feddema, K., & Nekaris, K. A. I. (2021). Monitoring the trade of legally protected wildlife on facebook and instagram illustrated by the advertising and sale of apes in indonesia. *Diversity*, 13(6). <https://doi.org/10.3390/d13060236>
- Olmedo, A., Milner-Gulland, E. J., Challender, D. W. S., Cugnère, L., Dao, H. T. T., Nguyen, L. B., Nuno, A., Potier, E., Ribadeneira, M., Thomas-Walters, L., Wan, A. K. Y., Wang, Y., & Veríssimo, D. (2020). A scoping review of celebrity endorsement in environmental campaigns and evidence for its effectiveness. *In Conservation Science and Practice* 2(10). <https://doi.org/10.1111/csp2.261>

- Olmedo, A., Veríssimo, D., Challender, D. W. S., Dao, H. T. T., Rubino, E. C., & Milner-Gulland, E. J. (2024). Designing celebrity-endorsed behavioral interventions in conservation. *Conservation Biology*, 38(3). <https://doi.org/10.1111/cobi.14273>
- Pernat, N., Buchholz, S., Kriegs, J. O., Steen, J., & Hollens-Kuhr, H. (2025). Moving north under the eye of the public: The dispersal ecology of the Nosferatu spider, documented by citizen scientists. *Basic and Applied Ecology*, 84, 40–49. <https://doi.org/10.1016/j.baae.2025.02.002>
- Prihatini, L., Mega Wijaya, M., Novanda Romelsen, D., Kunci, K., & Pidana, T. (2021). Aspek hukum pidana terhadap penegakan hukum perlindungan hewan di Indonesia. *Palar (Pakuan Law Review)*, 7(2), 37–52. <https://journal.unpak.ac.id/index.php/palar/article/view/3582>
- Setiaji, G., & Altamira, M. B. (2024). Film as an educational media in building awareness on wild animal conservation (case study: *Petualangan Sherina 2*). *Jurnal vokasi Indonesia*, 12(1). <https://doi.org/10.7454/jvi.v12i1.1219>
- Shan, S., Ju, X., Wei, Y., & Wen, X. (2022). Concerned or Apathetic? Using Social Media Platform (Twitter) to Gauge the Public Awareness about Wildlife Conservation: A Case Study of the Illegal Rhino Trade. *International Journal of Environmental Research and Public Health*, 19(11). <https://doi.org/10.3390/ijerph19116869>
- Sherman, J., Ancrenaz, M., & Meijaard, E. (2020). Shifting apes: Conservation and welfare outcomes of Bornean orangutan rescue and release in Kalimantan, Indonesia. *Journal for Nature Conservation*, 55. <https://doi.org/10.1016/j.jnc.2020.125807>
- Sherman, J., Voigt, M., Ancrenaz, M., Wich, S. A., Qomariah, I. N., Lyman, E., Massingham, E., & Meijaard, E. (2022). Orangutan killing and trade in Indonesia: Wildlife crime, enforcement, and deterrence patterns. *Biological Conservation*, 276. <https://doi.org/10.1016/j.biocon.2022.109744>
- Troumbis, A. Y. (2017). Declining Google Trends of public interest in biodiversity: semantics, statistics or traceability of changing priorities? *Biodiversity and Conservation*, 26(6), 1495–1505. <https://doi.org/10.1007/s10531-017-1294-z>
- Von Essen, E., Turnbull, J., Searle, A., Jørgensen, F. A., Hofmeester, T. R., & van der Wal, R. (2023). Wildlife in the Digital Anthropocene: Examining human-animal relations through surveillance technologies. *Environment and Planning E: Nature and Space*, 6(1), 679–699. <https://doi.org/10.1177/25148486211061704>

Biography of Author

Nadhira Adesta Ramadhanti, School of Environmental Science, Universitas Indonesia, Central Jakarta, DKI Jakarta 10430, Indonesia.

- Email: nadhira.adesta@ui.ac.id
- ORCID: N/A
- Web of Science ResearcherID: N/A
- Scopus Author ID: N/A
- Homepage: N/A