

"TIGERS ARE OUR SONS": JAHAI PERSPECTIVES IN UNDERSTANDING TIGER CONSERVATION IN THE ROYAL BELUM STATE PARK, PERAK, MALAYSIA

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Abstract

This paper reports the perspectives and perceptions of Jahai indigenous patrollers and key community members towards the Menraq, a tiger conservation patrolling initiative under which they have been employed, anchoring on community-based conservation in the Royal Belum State Park (RBSP). As a high biodiversity location home to flora, fauna and indigenous inhabitants, there is a growing interest in community-based conservation efforts in this protected area. However, implementing such efforts in other protected areas globally has resulted in deleterious consequences, especially with the imbalanced power dynamics between indigenous inhabitants and park managers or conservation practitioners and the lack of acceptance to merge two different worldviews in achieving conservation goals. For this case study, we conducted semi-structured interviews, participant observations, and participatory cultural mapping with the Jahai Menraq patrollers and several Jahai elders. We found that Jahai Menraq patrollers rely on the protection given by spiritual tigers called '*ceboh*' tigers when doing forest-related activities, including their patrolling duties. Our findings highlight how the Jahai people weave their indigenous narratives, especially those related to tigers, into their job as tiger conservation patrollers. We argue that the *ceboh* tiger practice reflects the importance of indigenous knowledge, spirituality, and kinship in tiger conservation at the RBSP. Park management and conservation practitioners should acknowledge these indigenous perspectives in the pursuit of making the RBSP landscape an 'ethical space' for conservation.

Keywords: Belum-Temenggor Malaysia, community-based tiger conservation, Orang Asli cultural landscape, protected areas, wildlife spiritual values

Introduction

Many flora and fauna are at risk of extinction. The latest report by The International Union for Conservation (IUCN) Red List of Threatened Species shows that 16,900 species of multiple taxonomic groups are threatened with extinction - equal to 28% of the species documented (IUCN, 2022). The species extinction rates are reported to be 1,000 times higher now compared to the time before human impacts became the biggest factor affecting extinction rates (De Vos et al., 2015). Contributing to the ecological and genetic factors affecting extinction are anthropogenic causes such as land development, overexploitation, the introduction of invasive species, and pollution which all remain the primary deterministic factors in accelerating the extinction 'crisis' (Lande, 1998). Protected areas (PAs) hold a reputation as a key strategy in slowing down species extinctions and reaching ambitious global conservation targets (Coates, 2016). One of the most popular conservation approaches in the face of global extinction is 'single-species conservation', also known as 'umbrella species conservation'. It is favoured due to its spatial conservation prioritisation notion whereby many species would benefit from the conservation of one species as it also allows the conservation of landscapes (Simberloff, 1998). The selection process of an 'umbrella' species is often based on their 1) ecological traits, i.e., home range, habitats, and sensitivity towards disturbance; 2) logistical factors, i.e., data availability, funding, policy directions; and 3) cultural importance to garner peoples' support as conservation allies (Bennett et al., 2015; Garibaldi & Turner, 2004; Runge et al., 2019).

The Malayan tiger (*Panthera tigris jacksoni*), is endemic to Peninsular Malaysia and is currently classified as 'critically endangered' by the International Union for Conservation of Nature (IUCN) due to its drastic population decline leaving less than 200 individuals in the wild (Ten et al., 2021). This significant reduction is caused mainly by agricultural expansion, infrastructure development and illegal hunting for wildlife trade (Clements et al., 2010). Historically, the Malayan tiger range encompassed most forest areas in Malaysia except for 3 states (Melaka, Pulau Pinang and Perlis) and 2 federal territories (Kuala Lumpur and Putrajaya) (Kawanishi et al., 2003). Currently, most tiger populations are confined to protected areas and nearby areas, forcing them to survive in the face of human pressures (Kawanishi & Sunquist, 2004). Pursuing the global 'Tx2' commitment among tiger-range countries to double wild tiger numbers by 2022, Malaysia has adopted the National Tiger Recovery Program (NTRP) through its National Tiger Conservation Action Plan (NTCAP), focusing on strategies concerning conservation and research, public awareness, and enforcement (Global Tiger Recovery Program, 2010). The landscape-level approach has been one of the most promising strategies for Malaysia's tiger conservation efforts, emphasising the

cultural values of tigers and their surrogacy traits in biodiversity conservation. Three main forest landscapes have been designated for the long-term viability of tiger populations and other wide-ranging mammals (DTCP, 2009; DWNP, 2008; Zhang et al., 2020).

The Belum-Temenggor Forest Complex (BTFC), a 3,546 km² block located in the northern Peninsular Malaysian state of Perak, is one of the largest forested landscapes assigned as a priority tiger conservation landscape. BTFC is divided into 1) Belum Forest Reserve which received its protected area status in 2007 and was then converted to the Royal Belum State Park (RBSP) under the management of the Perak State Park Corporation (PSPC); and 2) Temenggor Forest Reserve which is under the jurisdiction of the Perak State Forestry Department. As the protected area component of the Belum-Temenggor Forest Complex, RBSP covers an area of 1,175 km² surrounded by a manmade lake built in the 1970s called Tasik Temenggor. RBSP is known for its rich biodiversity which includes over 3,500 species of seed plants with plenty of them being endemic to the park, 32 species of *Dipterocarpaceae*, 150 species of orchids including rare and threatened ones, and 10 species of hornbills, making it one of the two locations in Malaysia that host the highest number of hornbill species (Yeap et al., 2016). Besides, it hosts 22 carnivore species with five being near-threatened and a wide range of endangered mammals such as Malayan tigers (*Panthera tigris jacksoni*), Asian elephants (*Maximus elephas indicus*), and Gaurs (*Bos gaurus*) (Ratnayeke et al., 2018).

In addition to being a biodiversity hotspot, BTFC is also home to the Orang Asli – the indigenous people who are the first inhabitants of Peninsular Malaysia - particularly the Jahai and the Temiar communities (JAKOA, 2018). The Jahai, who are the most dominant tribe in the Royal Belum State Park (RBSP) are one of the 18 Orang Asli subgroups in Malaysia. They are classified in the Semang group, inhabiting the Malaysian states of Perak and Kelantan and some parts of Thailand. The Jahai who are now semi-nomadic and sedentary, are known to embody a way of life centred around the forest and its beings through the Jahai belief systems and livelihood activities (Gomes, 2007). To the Jahai people, forests exist in territories that are shaped over generations through culture, traditional knowledge, and spiritual bonds with human and non-human beings. The linguistic work by Burenhult (2005) documented a rich Jahai vocabulary of their forest landscape. It demonstrated the Jahai's extensive spatial awareness of forests as a cosmos, allowing the harmonious coexistence of plants, animals, humans and supernatural beings. In particular, Jahai people recognise the existence of a deity called Karei, the thunder god that punishes humans through disastrous stormy weather. The other spiritual beings they have bonded with are spirits living in the jungle that can help humans during difficult situations. On top of that, their relation with

animals and plants are not just seen purely as 'resource users and resources' but also as forest beings which are spiritually linked. The work of Diana Riboli (2009) with the Jahai shamans reported that powerful shamans are able to transform themselves into animals including tigers. This transformation is perceived as 'returning' to a natural state, considered esteemed and perfect. The Jahai shamans also own tiger-spirits that they can summon at any time to safeguard the village, particularly in situations of danger that involve tigers. These tiger-spirits are tasked with safeguarding Jahai communities that are exposed to starving tigers due to reduced habitat and roaming grounds. Therefore, the Jahai people interpret the safeguarding by tiger-spirits as a control measure for the rage of the Mother Forest (i.e., starving tigers attacking humans) since it has been wounded and betrayed (Riboli, 2009).

Despite their current semi-nomadic and more sedentary living, the Jahai people are historically one of the few tribes in Peninsular Malaysia who were nomadic hunter-gatherers, shifting from one place to another depending on natural resource availability. However, following the Malaysian government's concept of 'modernisation' and resettlement schemes, the larger Jahai communities (including those in the neighbouring state of Kelantan) have shifted their lifestyle and livelihood strategies from a subsistence economy to earning income as manual labourers (Chan & Lim, 2016). The Jahai communities in RBSP, instead of harvesting for subsistence, are now more dependent on collecting forest products for commercial trade (Loke et al., 2020). As one of the few indigenous communities in Peninsular Malaysia that live inside a protected area, the Jahai of RBSP have a big potential of becoming co-managers of the park. However, the road to co-management (also known as collaborative management and shared governance) – marrying modern and indigenous narratives to pursue conservation goals – is a long and complicated journey. Kamal (2020) highlighted the need to recognise the intangible values of the park from the point of view of the inhabitants themselves in realising the co-management of RBSP. These intangible values include spiritual, cultural, identity, and existence values, as Harmon (2004) listed.

Globally, Collaborative Management of Protected Areas (CMPA) has been identified as one of the main instruments for community-based conservation in protected areas. Establishing its principles is continuously built through global institutions and forums such as the World Parks Congress, summoned by IUCN's World Commission on Protected Areas. For instance, the outcomes of the 5th World Parks Congress in 2003 highlighted the need for central involvement of indigenous communities, which includes their customary land rights and the right to be integral in decision-making. In 2007, the United Nations Declaration on the Rights

of Indigenous Peoples (UNDRIP) was adopted by the UN General Assembly, emphasising the involvement of indigenous peoples in initiatives concerning development and conservation. The policy changes progress slowly yet steadily, but the implementation is even slower in terms of site-level governance. And even worse, some intervention initiatives that claimed to pursue co-management by the government and NGOs were executed through imposition, which then sparked local resistance. These are often influenced by asymmetrical power dynamics and financial factors (Kothari et al., 2013).

As the first steps towards co-management, members of the Jahai communities in RBSP have been integrated into the 'conventional' conservation efforts through their employment in conservation work and eco-tourism such as working as forest rangers with PSPC, field assistants with universities and NGOs, and serving as supplementary enforcement entities (e.g., the Menraq forest patrolling initiative). Such intersections between 'conventional' conservation agendas and indigenous livelihoods emerged globally in the 1980s. However, most of them were said to depict the 'exaggerated romanticism' of indigenous peoples, claiming that indigenous peoples know best when it comes to managing their lands and that their knowledge can be used to inform effective 'conventional' conservation efforts (Dwyer, 1994). The execution remains questionable as the contestation of motives and imbalance of power dynamics might govern these conservation initiatives, enabling 'conventional' conservationists to impose strategies that they think might work for the indigenous communities (Germond-Duret, 2016). In the context of tiger conservation, the Jahai communities of RBSP do exhibit their tiger conservation strategies through their belief systems, language, and practices (Isa & Saidin, 2014; Loke et al., 2020; Majid & Burenhult, 2014). Motivated by the globally known community-based conservation approach, the Jahai people of RBSP are currently at a vital point of intersection as PSPC and other conservation organisations are including them in 'conventional' conservation efforts through community-based conservation initiatives claimed to be people-centric. The need to document this intersection point is imperative. This paper focuses on the relationship between the Jahai people and tigers from their perspective and how they carry these indigenous perspectives as they get involved in tiger conservation efforts initiated by 'conventional' conservationists. This is based on a case study of the Menraq forest patrolling initiative. It aims to provide insights to enhance the integration of indigenous knowledge in tiger conservation.

Methodology

Study area

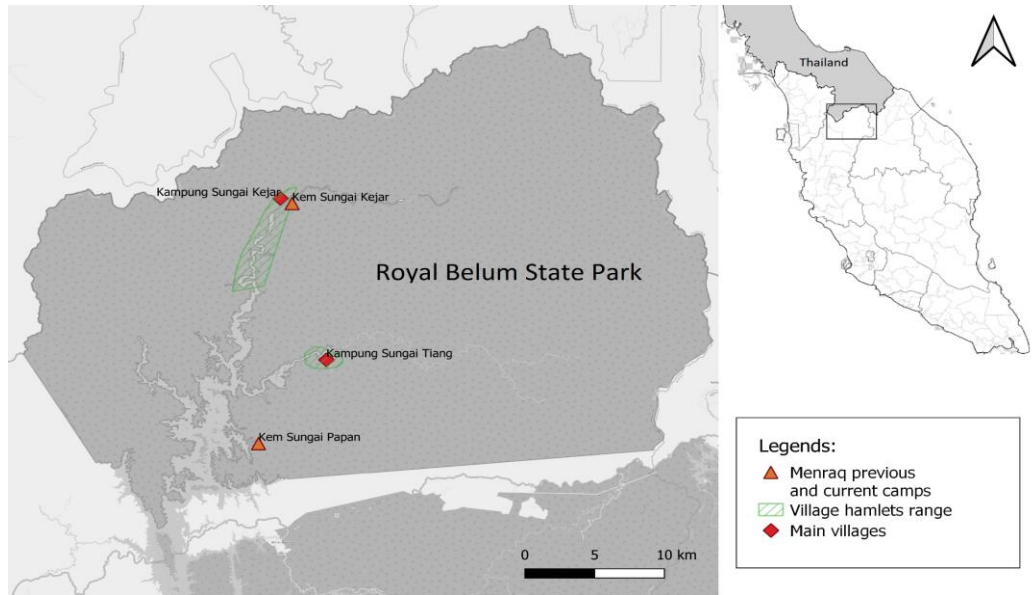


Figure 1: Map of study area showing Peninsular Malaysia and the Royal Belum State Park, including the Menraq camps, the main villages and their associated village hamlets range that were recorded collaboratively with the study respondents during the project (Source: The Authors)

Data was collected from February 2022 to March 2023 at the Royal Belum State Park (RBSP), Perak. RBSP is a state park that borders the Hala Bala Wildlife Sanctuary -another connected forested conservation area in Thailand inhabited by the Jahai communities. Forest rangers and the Malaysian armed forces also patrol RBSP. Historically, the Jahai were hunter-gatherers who moved from one place to another in small groups within their customary landscape while creating temporary dwellings for a shelter called *Nengkep*. In the Royal Belum State Park, most of the Jahai live in permanent settlements named after two river stretches, each consisting of smaller village hamlets. As some of the Jahai of RBSP are semi-nomadic while others are sedentary, the establishment of these smaller hamlets is fluid and changes over time (i.e., they move to new sites after abandoning previous sites). The more permanent settlements are Kampung Sungai Tiang and Kampung Sungai Kejar. Some community members still practice semi-nomadic living, especially visiting family members in other parts of Perak, Kelantan or Betong, Thailand.

This study focused on the Jahai people who worked or are currently working as forest patrollers under the Menraq forest patrolling initiative, a project to provide an alternative means of livelihood for the Jahai communities to work as forest patrollers in RBSP and supplement the existing anti-poaching enforcement efforts in RBSP. This initiative is a collaboration between the Perak State Park Corporation and the Tiger Protection Society of Malaysia (RIMAU). All the patrollers that took part in data collection were from the Kampung Sungai Kejar settlement and its nearby hamlets including Kampung Cenorai, Kampung Hibol, Kampung Tan Hain, and Kampung Bongor Hilir. The data collection was done at 1) Kem Sungai Papan, a former designated camp for Menraq operations, and 2) two villages located within the Kampung Sungai Kejar village hamlets range, namely Kampung Tan Hain and Kampung Bongor Hilir. As the primary Jahai knowledge holders, some elders from these two villages also took part as respondents during the data collection.

There is an imbalance in the infrastructures of the two settlement stretches. Communities at Kampung Sungai Tiang are more equipped with access to preschool, primary school, government-built houses, a community hall, a prayer hall, and limited electricity and internet connection while communities at Kampung Sungai Kejar are more isolated with no access to the mentioned facilities, except for the newly provided internet connection. In 2019, the Tiger Protection Society of Malaysia (RIMAU) initiated a patrolling unit consisting of members from the more isolated Kampung Sungai Kejar and its smaller hamlets in collaboration with the Perak State Park Corporation (PSPC). The forest patrolling unit is called Menraq, a Jahai word meaning 'people' to represent Jahai as the inhabitants of the park and their role in tiger conservation and the conservation of the RBSP landscape as a whole. From 2019 until now, to involve indigenous people in park protection and tiger conservation efforts, RIMAU and PSPC have provided the patrol unit with equipment, way-finding and anti-poaching training, and employment as a means of livelihood for them.

Data collection, processing, and analysis

The data collection used multiple methods including participatory cultural mapping, semi-structured interviews, and participant observation. The main author occasionally stayed at Kem Sungai Papan for 3 to 14 days and conducted daily field trips to Kampung Tan Hain and Kampung Bongor Hilir to interact with the Menraq forest patrollers and village elders. Supplemented by casual conversations and interactions, these trips provided insights into their lifestyle, customary practices, and perception of nature. To better capture the Jahai's relationship with tigers and the Jahai's way of navigating 'conventional' tiger

conservation efforts, participatory cultural mapping exercises were conducted with the Menraq patrollers and two village elders (one of them is a shaman). The information gathered during the semi-structured interviews, cultural mapping exercises, and perception assessments was recorded using an audio recorder after participants were granted permission. The Malay language was used as the main medium of communication. This is because all members of the Menraq patrol team were fluent in Malay, particularly the younger members who acted as interpreters when it became necessary. The Jahai language was used occasionally; however, the main author had a limited vocabulary, which consisted only of words concerning greetings, animals, plants, and kinship among the Jahai.

Recorded interviews were transcribed using Express Scribe Transcription Software version 11.00 in mostly Malay, although this was supplemented with minimal Jahai words to retain participants' emotional essence. The transcriptions were then sorted using Microsoft Word for coding purposes. *Ceboh* tiger practice was identified as a theme using an inductive approach. The detailed description of *ceboh* tiger practice was then coded to identify sub-themes.

Results

Ceboh (*tʃʌ'bo*) is a central practice among the Jahai people and is anchored around healing and protection. In the context of *ceboh* tigers, the *ceboh* supernatural powers are utilised to protect Jahai people from danger in the forest, reflecting the importance of this practice in their previously nomadic lifestyle. Although they are now semi-nomadic and more sedentary, this practice has continued, especially for activities that require them to roam around the forest.

Ceboh (*tʃʌ'bo*) tigers: the sons and protectors of the Jahai

The term '*ceboh*' (*tʃʌ'bo*) refers to a magical stone with healing and supernatural powers. Only shamans can acquire *ceboh* and transfer the powers to other human and non-human beings. However, it should be noted that the spiritual power of Jahai shamans exist in an ascending spectrum, having those with the highest powers being considered *Halak* (*hɔ'ɔk*). The Jahai described *ceboh* as 'cooling', 'located in the heart' and 'able to help with sickness and protection'. A shaman usually first acquires or transfers the healing and supernatural powers via a ritual called *sewang* (*se'wɔŋ*) or *pinglun* (*piŋ'lun*) which is commonly done in the presence of village members, accompanied by traditional music. During *pinglun*, a shaman enters and travels through a magical realm via dreams, allowing himself to communicate with the spirits of other human and non-human beings including animals, deities, and ancestors. A shaman can transfer the powers of *ceboh* to

animals in the forest (e.g., deer, elephants, and tigers) to protect Jahai people in the forest from dangers including threats from real deadly animals.

In the case of tigers, shamans - including *Halak* and those with lesser powers - can transfer their *ceboh* to tiger cubs, enabling them to become the shamans' 'sons'. The shamans took care of their *ceboh* tiger 'sons' and trained them with spiritual powers to become their protectors. The shamans may also ask the tiger 'sons' to protect their family and village members. Tigers who have acquired *ceboh* are considered as 'tamed' and will follow the orders given by their 'fathers' (i.e., shamans). Shamans with higher powers have more tiger 'sons' compared to those with lesser powers. The *ceboh* tigers are said to 'stay with their fathers' at night - though not seen in physical form - and go roam in the forest during the day following the instructions or protecting tasks given by their 'fathers'.

The process of becoming a ceboh tiger

The process of transferring *ceboh* to a tiger cub is not straightforward and involves not only the tiger and the shaman but also another spirit entity called *cenoi* (tʃɛ'noi). Forest trees and flowers, especially the ones in mountainous areas, are believed to host *cenoi* spirits. *Cenoi* spirits are often contained within individual forest trees, particularly in the flowers. The process of a tiger cub becoming a *ceboh* tiger is presented in Figure 2. Contrary to the striking orange colour of real tigers, *ceboh* tigers are white and their skin pattern resembles that of the tree bark pattern of the *cenoi* spirit they have been paired with.

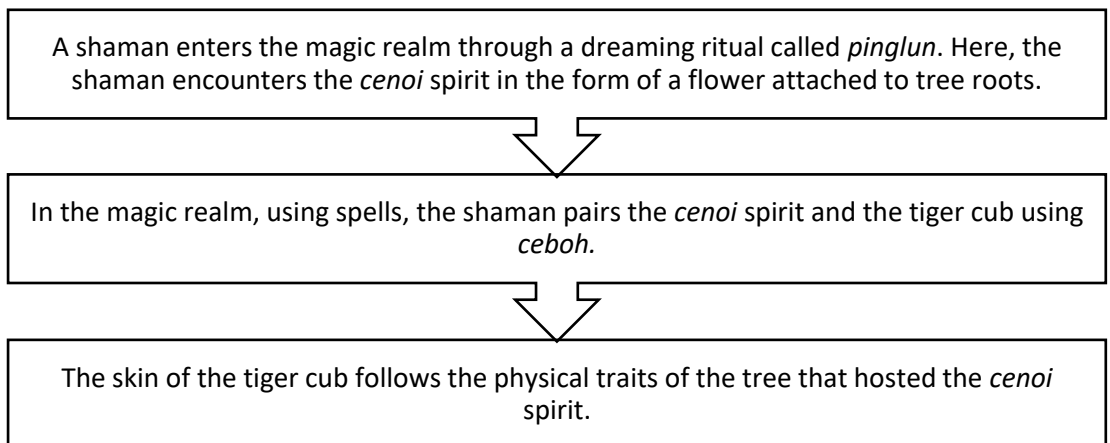


Figure 2: The flow chart that shows the process of a tiger cub becoming a *ceboh* tiger

The inheritance of ceboh tigers

Shamans can also pass *ceboh* tigers as an inheritance to their children, especially those whom they think can carry shamanistic responsibilities. The inheritance of *ceboh* tigers is vital to the Jahai people as a *ceboh* tiger that is not passed down will start to become 'wild' again following the father's death. These *ceboh* tigers without a 'father' will no longer carry out their protecting tasks and start attacking the villagers. The tiger 'son' that is passed to a new 'father' will visit him as an act of introducing itself, as explained during an interview with one of the Menraq patrollers:

The one (*ceboh* tiger) that I met used to belong to my father-in-law. The tiger has a big head. My wife was scared when she saw the tiger. The tiger walked towards us as it appeared from a creek, not far from us. I think that tiger is my father-in-law's, first *ceboh* tiger....The tiger was trying to introduce itself to me. My father-in-law wanted to give the *ceboh* tiger to me. The tiger now wants to stay with me...

(Interview with informant A-CTI , 2 June 2022)

The inheritance of *ceboh* tigers is also a prerequisite for a young person to transfer *ceboh* powers to tiger cubs and take care of them. Only those who have successfully received an adult *ceboh* tiger from an elder figure with shamanistic abilities can embark on the quest of gaining more *ceboh* tigers, as such a task requires shamanistic training. The inheritance of *ceboh* tigers enables these younger shaman apprentices to train their shamanistic skills to become *Halak* (high-power shamans).

The significance of ceboh tigers in the lives of the Jahai people

The presence of *ceboh* tigers anchors the general protection of the Jahai people, especially during any forest-related activities (i.e., gathering resources, long-distance travels, and Menraq patrolling). This notion is evident as documented through these interview excerpts:

I'm always afraid in the forest. When hunting, I don't know what's following me from behind. I rely on the (*ceboh*) tiger to take care of me.

(Interview with informant A-CTP, 2 June 2022)

An elder (referring to a shaman) with *ceboh* tigers will usually send them to the forest to take care of their children.

(Interview with informant Ma-CTP, 26 November 2022)

If *ceboh* tigers didn't follow us, we'd be scared to go to the forest.
(Interview with informant R-CTP, 26 November 2022)

The protection is particularly sought when they breach taboo practices that can attract man-eating tigers:

(It's taboo to) kill lice, sharpen our machete, smoke, cook smelly food items, use fragrance with a strong smell (in the forest). These are taboos. If we take a bath using soap, (real) tigers will come. The tigers will eat us.
(Interview with informant A-CTP, 2 June 2022)

The significance of ceboh tigers in Menraq operations

In the Menraq patrol unit operations context, village elders with shamanistic abilities can send their *ceboh* tigers to accompany the Menraq patrollers when they are on duty for safety purposes. Following their 'fathers' instructions, some *ceboh* tigers will go to the said locations a day early to check if these locations are safe. These tigers relay the information on the danger at particular locations to their 'fathers', who then inform Menraq patrollers.

For our patrol team, we have my father-in-law.... He knows that I'm staying at Kem Sungai Papan. Wherever we go, his (*ceboh*) tiger will follow us.
(Interview with informant A-CTM, 2 June 2022)

The elders (referring to the shamans) will take care of us. When we sleep at night, the (*ceboh*) tiger will go to its 'father'. The 'father' will dream of the place that we're staying at. He can see our surroundings. If there's danger, he will know. He takes care of us. He asks the tiger to take care of us. He already knew (if there's danger).
(Interview with informant A-CTM, 2 June 2022)

In addition to acquiring anti-poaching data, Menraq patrollers are also responsible for documenting wildlife observation data, including tigers. One novel finding is that both village elders and Menraq patrollers perceive tiger footprints that they encounter during patrols as belonging to *ceboh* tigers instead of real tigers. This belief is well encapsulated through these interview excerpts:

The Menraq patrollers said they saw tiger footprints when patrolling. They asked me 'Whose footprints are those (*ceboh* or real tigers)?' Of course, those belong to the *ceboh* tigers. They are there to keep the Menraq patrollers safe in the forest.

(Interview with village elder Ma-CTM, 26 November 2022)

We always inform the elders of our patrolling routes. For example, we say to them that we are going to Sungai Temin and Sungai Peltoh. The *ceboh* tiger(s) will go to these locations before us. When we document the pictures of tiger footprints (while patrolling), those belong to the *ceboh* tigers.

(Interview with Menraq patroller A-CTM, 26 February 2023)

Another striking finding is that the Menraq patrollers used the English word 'spare' to describe the village elders with *ceboh* tigers, enunciating them as the additional but informal patrol team members. During each patrol duty, one to three 'spare' members will follow each team, providing the team with more than one *ceboh* tiger. The 'spare' members physically stayed at their respective villages but followed the teams spiritually through their *ceboh* tigers. Menraq patrollers also mentioned that a few are currently learning shamanistic skills and own a very minimal number of *ceboh* tigers to accompany them in the forest. Their *ceboh* tigers are said to be younger and 'still in training' compared to those that belong to village elders.

He's one of our 'spare' members. 'Spare' can be more than one person.

(Interview with informant A-CTM, 26 February 2023)

F: "So whenever a Menraq team goes patrolling, one 'spare' member will follow?"

A: "One or two. They must be people with shamanistic skills."

(Interview with informant A-CTM, 26 February 2023)

F: "Are there any Menraq members that act as 'spare' members (by providing their *ceboh* tigers to accompany the team)?"

A: "Yes, I'm one of them. We (young people) can own *ceboh* tigers if we learn how to take care of them. But mine is young, small in size."

(Interview with informant A-CTM, 26 February 2023)

Ceboh tigers and Jahai kinship

The significance of *ceboh* tigers in the life of the Jahai people and their livelihood strategies exhibit such complex kinship relations 1) between the Jahai people and non-human beings, 2) among the Jahai people and 3) among non-human beings, as seen in Figure 3.

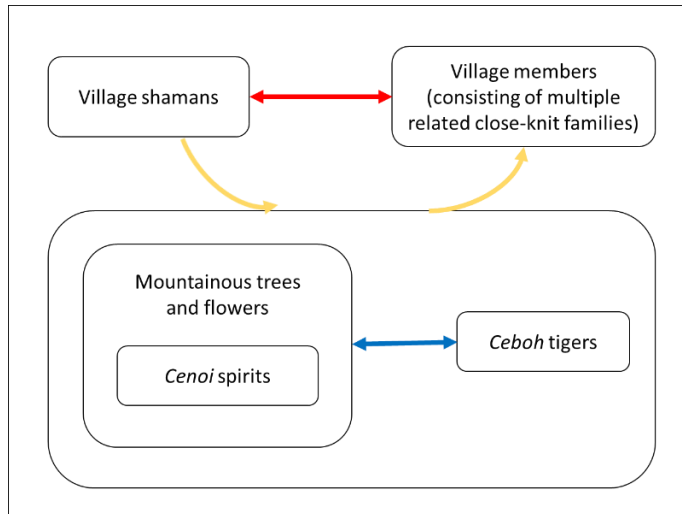


Figure 3: Kin relations of *ceboh* tigers highlighting human-human relation (red), human-non-human relation (yellow) and non-human-non-human relation (blue)

Based on interviews and observations, Menraq patrollers reported that they have undergone multiple operation-related changes as their employers (PSPC and RIMAU) find the best way to craft an employment structure that would work for the Jahai people. One of the main things that PSPC and RIMAU have been experimenting with for the past few years is the composition of the patrol groups. A patrol group comprises four to six people, having one team leader each. Unlike the previous operation styles, the recently established style allows the Menraq patrollers to decide on the patrol groups themselves. This reveals the group composition that Menraq patrollers prefer. Even though most of the Menraq patrollers are related by family, both close and distant, the current group composition shows that they prefer to create teams of more closely related members from the same village. The relationship between patrol group composition and kinship relation is reported in Table 1.

Table 1: The kin relation of Menraq patrol groups from each village. The symbols '✓' and 'X' represent the presence and absence of kin relation, respectively.

Village \ Kinship	Grandfather	Father (including father-in-law)	Brother (including brother-in-law)	Uncle	Cousin	Non-relative
Bongor Hilir	X	X	✓	X	✓	X
Hibol	X	X	X	✓	✓	X
Tan Hain	X	✓	✓	X	X	X
Jerai	X	X	✓	X	✓	X

Concerning 'spare' members (shamans that follow them to the forest spiritually through *ceboh* tigers), each patrol group from each village has three 'spare' members who are closely related to at least two members of each group. All the 'spare' members are village leaders who are either fathers, fathers-in-law, uncles, or grandfathers to Menraq members. The kinship of 'spare' members who own *ceboh* tigers concerning Menraq members in each village is shown in Table 2.

Table 2: The kin relations of 'spare' members with Menraq patrollers from each village

Village \ 'Spare' member	A	B	C
Bongor Hilir	Father-in-law	Father-in-law	Father
Hibol	Father	Father	Father
Tan Hain	Uncle	Grandfather / Father	Father
Jerai	Father-in-law	Grandfather	Father

Discussion

Indigenous knowledge and spirituality for conservation

Indigenous cultural and spiritual identities are shaped through indigenous peoples' interactions with their customary landscapes for generations (Ingram, 2019; Sletto, 2009, 2015), giving rise to indigenous knowledge (IK) (Smith, 2011). This is reflected in the *ceboh* practice of the Jahai which provides them with healing

and protection. One of the earliest pieces of literature regarding the Jahai's *ceboh* practice mentioned that the *Halak* (hə'lək) use the *ceboh* stone to look out for the presence of wild tigers lurking near their nomadic camps and warn the other community members (Schebesta, 1973). This evidence and the transfer of *ceboh* powers to tigers to become *ceboh* tigers for protection from man-eating tigers, as documented in this study, reflect shamans' role in mitigating human-tiger conflicts among the Jahai. Similarly, for the shamans of the Batek people, identification with the tiger serves as a symbolic transformation, converting the perceived danger of tigers into a potent source of spiritual and communal strength which offers protection and guidance (Endicott, 1979). A similar role is seen in the *Boulay* of Sundarban Tiger Reserve, India. A *Boulay* is a man with traditional expertise who uses his superpowers to protect some areas which hinder tigers from entering these 'enchanted territories' and harming people. Unlike, a Jahai shaman that uses *ceboh* stones, a *Boulay* uses magic spells to confine tigers within a fixed circular space and keep their jaws shut (Chowdhurym et al., 2016).

Moreover, the *ceboh* tiger practice within Jahai indigenous knowledge embodies deep practical wisdom in navigating the forest and its inhabitants. It highlights a profound connection to the landscape, acknowledging the dual nature of the forest and its inhabitants—both benevolent and potentially hazardous. According to Riboli (2009), tigers are perceived – by the Jahai people- for having the capacity to swiftly gauge the character traits of humans, including morality, kindness, and generosity. Therefore, there is no reason for a virtuous human to fear tigers. However, this is not the case for landscapes where there are starving tigers, as they are more likely to attack humans.

For this reason, nurturing *ceboh* tigers is a practical strategy to enhance their safety within the forest, mitigating the risks associated with potential tiger attacks. Similarly, Lye (2004) highlights that the Batek people of Pahang adopt a notably pragmatic and practical approach to the forest. Although tiger attacks are feared within the Batek worldview -similar to that of Jahai-, the coexistence of humans and tigers is not perceived as a struggle for control or exclusion but rather as an integrated part of their community's fabric. Within the Batek paradigm, safeguarding the forest and its dwellers embodies an 'ethic of care,' driven by the understanding that failure to do so would harm their community. This contrasts with the conventional conservation standpoint, where forest preservation typically stems from recognising its intrinsic values (Lye, 2004).

Spirituality provides wisdom to humans in shaping their relationship with each other and non-human beings in the landscapes they live in (Prakash Kala, 2017). Spirituality has also been included as one of the basic attributes that make up a landscape, along with other values such as the economy and biodiversity

(Brown, 2005; Rolston & Coufal, 1991). In the case of *ceboh* tigers, it is suggested that they encapsulate two spiritual values of the Jahai. For this discussion, these spiritual values are considered 'Wildlife Spiritual Services' as coined by Lopes & Atallah, (2020). Firstly, the *ceboh* tiger concept highlights the spiritual sacredness of Malayan tigers as a species to the Jahai people. The sacredness of tigers lies within their ability to protect the Jahai people from danger and threats while they are in forest landscapes including protection from real tiger attacks as a result of taboo violations. Based on the interviews, our results suggest that the Jahai's spirituality towards *ceboh* tigers has helped them feel safe and secure, especially when they take part in forest-related activities, including their job as Menraq patrollers. Whilst this is a bit different from the Soligas of India who worships Bengal tigers (Agnihotri et al., 2021), the relationship that both Jahai and Soliga people have with tigers exhibits their acceptance that conflicts with animal neighbours are inevitable. They also have developed spiritual and behavioural coping mechanisms with tigers to mitigate these conflicts in pursuing harmonious co-existence. The Batek people of Peninsular Malaysia also exhibit a similar protection purpose of spiritual tigers as tigers become vessels that shamans can enter to protect humans from real tigers during nighttime (Riboli, 2009).

Secondly, the *ceboh* tiger concept practised by the Jahai also highlights the landscape-level interconnected spirituality involving entities other than tigers such as mountainous plants and *cenoi* spirits that these plants host (refer to Figure 3). The interconnectedness between *cenoi* spirits and Jahai people is well documented by Riboli (2009) who describes *cenoi* as fairy-like '*tiny beautiful perfect men and women who live inside flowers and offer help to humans in distress*'. In the case of *ceboh* tigers, Jahai shamans match a *cenoi* spirit with a tiger to become a *ceboh* tiger that could protect Jahai people through a dreaming ritual called *pinglun*. This reflects how the benevolent values of the *cenoi* spirits, especially in helping humans in times of distress, are transferred to the tiger cubs. The transfer of values symbolically indicates the 'taming' of a wild entity such as a tiger before they embark on their new role that involves protecting responsibilities. With this landscape-level interconnectedness, I suggest that the Jahai narrative of *ceboh* tigers highlights the 'ethos of care' employed by many indigenous societies as every tribal member is considered to have a spiritual bond anchored by reciprocity with all beings, recognising no separation between human and non-human beings (Johnson et al., 2016). This ambiguity is also seen in the spiritual entity believed by the communities in Kibale of Uganda, called *Kaliisa*. As communities that practice both agriculture and hunting, they ask for *Kaliisa's* permission to hunt, and in return, *Kaliisa* - a non-human element within their ecosystem- protects them and their cattle while they hunt. In the case of *ceboh* tigers, the protection given by *ceboh*

tigers fits the semi-nomadic lifestyle as the protection given is concentrated in the forest landscapes while they do forest-related activities. The matching of *cenoi* spirits with their respective tigers through a ritual called *pinglun* also highlights the main ritual anchoring the Jahai's spirituality. As a dreaming community, the Jahai's spirituality extends even to the dream realm, allowing them to interact with all beings. According to Chan (2016), *pinglun* may become extinct among the Jahai people of Peninsular Malaysia due to 1) less dependency towards forest spirits for protection and healing, 2) conversion of Jahai people to Islam, and 3) a shift in musical preferences to modern music. In the context of this research, recognition of *ceboh* tigers in the lives of the Jahai, especially as they participate in 'conventional' conservation interventions such as the Menraq patrolling initiative, is vital in preventing the erosion of Jahai dependency towards forest-related spirits.

***Ceboh* tigers and the Jahai's complex kinship**

In many indigenous societies, kinship is an anchor that shapes their interaction with associated landscapes and is not limited to the kinship between humans but also with non-human beings that exist within the landscapes. Through his report to the United Forest Service on the Karuk tribe, the term 'kincentric ecology' was first coined to describe the land-care practices of his people, highlighting how Karuk people see themselves as one of the entities in the ecological family that shares similar ancestry (Martinez, 1994). This concept is further popularised by Salmón (2000), emphasising how Rarámuri of Northern Mexico view themselves as an integral part of life and the landscape they live in. The kin, in this matter, involves all beings within the ecosystem and is governed by reciprocity with one another through giving and receiving (Whyte, 2020). The 'kincentric ecology' concept is significant in the complex kinship relations on *ceboh* tigers, where the tiger, a non-human entity, becomes kin through the *ceboh* process. The procedure also requires *cenoi*, a tree-related non-human entity as the third element. As presented in Figure 3, the making of the *ceboh*, therefore, connects multiple entities including humans (i.e., Jahai shamans and Jahai people) and non-human beings (i.e., *cenoi* spirits, *ceboh* tigers, mountainous plants) that to the Jahai are all related through common ancestry (Evans, 1930).

Moreover, this study builds upon Riboli's (2009) research, which focused on the spiritual connection between Jahai shamans and their tiger-spirits. Riboli highlighted how these tiger-spirits offered protection against danger and tiger attacks for both the shaman and the villagers. In this study, we delved further into this relationship by uncovering that the bond between the shaman and their tiger-

spirit – reported in this study as *ceboh* tigers- is formed through a kinship-making process. Through the transfer of power from the *cenoi* spirit to a tiger cub, the cub inherits protective abilities and becomes ready for further spiritual nurturing by the shaman. This transformation results in the tiger being perceived as the shaman's 'son', contributing to a deeper understanding of their spiritual connection (Riboli, 2009). This study, however, did not reveal direct instances of Jahai shamans transforming into tigers, a concept hinted at in Riboli's work. Several plausible reasons contribute to this absence within the scope of our study. Firstly, the study's relatively short duration might not have allowed sufficient time to establish the deep trust required for community members to disclose such profoundly spiritual stories. Additionally, considering that almost two decades have passed since Riboli engaged with the Jahai shamans who informed her of the tiger transforming abilities, it is plausible that the specific shamanistic abilities enabling such transformations may no longer exist within the contemporary Jahai community. Lastly, the community might consciously choose not to reveal this highly spiritual information to outsiders, seeking to preserve its sanctity, which may be due to evolving cultural attitudes regarding the external sharing of sacred knowledge.

In the context of *ceboh* tigers, kinship plays a vital role in 1) proving shamanistic and guardianship abilities, 2) group membership and 3) inheritance of a supernatural entity such as *ceboh* tigers. First, the shamans take care of the Menraq patrollers while on duty by utilising their shamanistic abilities and *ceboh* tiger 'sons'. Shamans with higher shamanistic abilities have more *ceboh* tigers than those with lower shamanistic abilities. In a way, the *ceboh* tiger acquisition exhibits a shaman's power in protecting his family and community members. Such evaluation of power is not foreign among indigenous communities. For example, the Amazonian Tapirapé men and women who seek to become shamans and protect their community need to embark on a dreaming quest and require them to create good relations with a particular spirit as many as possible (Wagley, 1977). The assignation of Jahai elders as 'spare' members also showcases the 'guardianship' provided by a Jahai shaman through kinship towards human beings, i.e., his family and community members, and non-human beings, i.e., his *ceboh* tigers. The more *ceboh* tigers a shaman has, the more he is seen to be reliable in providing guardianship and becoming a 'spare' member of Menraq. This perfectly reflects a shaman's role in Jahai's cosmology: to provide healing and protection to the Jahai people and become the intermediary between human beings and non-human entities (Schebesta, 1973).

Second, the current self-determined patrol group composition reflects how kinship plays a role in human-human group membership. Although most of the

Menraq members are from the same village hamlet consisting of sub-villages and are mostly related, they prefer to compose groups consisting of more closely related members from the same village. This also applies to the 'spare' member assignment of each group. An explanation for this would be the concept of 'otherness' adopted by many indigenous communities. Santos-Granero (2007) summarised the three spheres of 'otherness' adopted by native Amazonians consisting of 1) familial others, 2) neighbouring others, and 3) foreign others. In the Menraq patrol group composition context, the Jahai may have adopted the first sphere: familial others - making them prioritise those more closely related in practising *ceboh* tigers - despite being related to all. Another possible reason for this is that kinship is considered a social capital to evaluate risks in some indigenous communities. For instance, the Jakun people of Tasik Chini perceive kinship as important in the face of disaster-related risks. A kinship that celebrates mutual help would enable them to better recover from stress and shock (Sadeka et al., 2020). Based on the Menraq patrol group composition, the preference for more closely related kin as team members may reflect their trust towards those of closer kin, especially in executing risky tasks such as patrolling in the deep forest.

Third, kinship is foundational in the inheritance of *ceboh* tigers among the Jahai people. Instead of being passed down like a property with written agreements, *ceboh* tigers are inherited by young people from closely related elder figures with shamanistic abilities through a real-life introduction and physical manifestation of *ceboh* tigers. The inheritance of *ceboh* tigers reflects the kinship between the shaman and his children and his *ceboh* tigers. It also showcases a new kinship between the children of the elder figures who inherit the *ceboh* tigers and the *ceboh* tigers. Inheriting a *ceboh* tiger is a huge responsibility as this would ensure the safety of the community members from danger and attacks of real tigers. Instead of written agreements, the inheritance is often sealed when the young person 'accepts' the *ceboh* tiger when it visits and is willing to learn shamanistic skills to train and care for the *ceboh* tiger. Such introduction allows them to be considered as shaman apprentices. Even though they prefer groups of closer kin, perhaps further studies can be done to explore how the employment of the Jahai people enables ally creation among shaman apprentices through networking despite coming from different villages or sub-villages.

Royal Belum State Park: an 'ethical space' for conservation

One of the main challenges indigenous communities face is that they often need to resort to reactive modes of action instead of engaging positively and proactively towards initiatives introduced to them (Smith, 2011). As more 'community-based

conservation' interventions are being planned and implemented in RBSP, it is important that the park management and conservation practitioners document, understand and recognise the Jahai narratives of the RBSP landscape. The Jahai's spirituality, culture, and identity are deeply woven into the RBSP landscape through their perspectives on tigers. As for both conservation and a Jahai landscape, RBSP must be managed as an 'ethical space' that allows the balancing of asymmetrical power by certain stakeholders and meaningfully engaging indigenous narratives in Indigenous-conservation partnerships and involvement (Nikolakis & Hotte, 2022). In the pursuit of creating this 'ethical space' for conservation, the Jahai people of RBSP should not be seen just as a 'stakeholder' but also a rightsholder, whereby their wellbeing and access to self-determination are promoted rightfully as recognised in UNDRIP (Sarkki et al., 2023).

Conclusion and recommendations

This study documented a tiger-related Jahai perspective, particularly from the point of view of Menraq patrollers and a few elders who have been exposed to 'conventional' conservation interventions and narratives through employment. The case study of the Menraq patrollers particularly highlighted a hybrid of indigenous and conventional conservation partnership through land-based employment, a form of employment that aims to be a livelihood strategy while preserving the inhabitants' culture. Although the employment protocols of the Menraq initiative are rather exploratory at the moment, this paper offers two important recommendations. Firstly, self-determination is vital in pursuing indigenous-conventional conservation employment. Even though this may be odd in conventional employment, self-determination is particularly important for indigenous people as they see and navigate the landscape differently. By allowing them to compose the team best suited for conducting the work in their local landscape, conservation can be a vessel for returning the sovereignty of landscapes to indigenous people. Secondly, weaving indigenous protocols into indigenous conservation employment is imperative. This would require all stakeholders to adapt to change and new knowledge as the employment would bring two different worldviews together to meet conservation goals. This, however, must be done with the aim of 1) reducing asymmetrical power dynamics, 2) striving for cultural safety and resilience, and 3) providing livelihood strategies that would allow indigenous inhabitants to exist harmoniously in protected areas. Furthermore, the insight gained into the kinship-based relationship between shamans and *ceboh* tigers illuminates an additional dimension in understanding indigenous perspectives on conservation. Exploring such spiritual connections

may offer further avenues for incorporating indigenous wisdom into conservation practices, enriching both ecological preservation efforts and cultural safety within these landscapes.

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List of Interviews

Highlighted below are the key interviews cited in this paper, offering vital insights into the study's focus:

Interview 1: Group interview, 2nd June 2022 (2 hours 11 minutes)

- Location: Kem Sungai Papan, Royal Belum State Park
- Number of interviewees: 4
- Interviewee(s) cited in the paper:
 - A (informant code: A-CTI, role: Menraq patroller)

Interview 2: Mode: Group interview, 2nd June 2022 (2 hours 11 minutes)

- Location: Kem Sungai Papan, Royal Belum State Park
- Number of interviewees: 5
- Interviewee(s) cited in the paper:
 - A (informant codes: A-CTP and A-CTM, role: Menraq patroller)

Interview 3, Group interview, 26th November 2022 (1 hour 48 minutes)

- Location: Kampung Tanhain, Royal Belum State Park
- Number of interviewees: 5
- Interviewee(s) cited in the paper:
 - Ma (informant codes: Ma-CTP and Ma-CTM, role: Jahai elder)
 - R (informant code: R-CTP, role: Menraq patroller)

Interview 4, Group interview, 26th February 2023 (2 hour 3 minutes)

- Location: Kampung Bongor Hilir, Royal Belum State Park
- Number of interviewees: 5
- Interviewee(s) cited in the paper:
 - A (informant code: A-CTP, role: Menraq patroller)

In addition to the interviews cited within this paper, several other interviews significantly contributed to the understanding of the subject matter. While not directly referenced in the text, these interviews played a vital role in shaping the study. Below is a table detailing the interviews.

No.	Date	Location	Number of interviewees	Duration
1.	11 th April 2022	Kem Sungai Papan, Royal Belum State Park	3	1 hour 57 minutes
2.	16 th April 2022	Kem Sungai Papan, Royal Belum State Park	6	46 minutes
3.	16 th April 2022	Kem Sungai Papan, Royal Belum State Park	3	1 hour 4 minutes
4.	16 th April 2022	Kem Sungai Papan, Royal Belum State Park	3	1 hour 36 minutes
5.	2 nd June 2022	Kem Sungai Papan, Royal Belum State Park	4	2 hours 11 minutes
6.	3 rd June 2022	Kem Sungai Papan, Royal Belum State Park	5	1 hour 16 minutes
7.	5 th June 2022	Kem Sungai Papan, Royal Belum State Park	4	58 minutes
8.	7 th June 2022	Kem Sungai Papan, Royal Belum State Park	6	59 minutes
9.	7 th June 2022	Kem Sungai Papan, Royal Belum State Park	10	58 minutes
10.	8 th June 2022	Kem Sungai Papan, Royal Belum State Park	2	2 hours 57 minutes
11.	8 th June 2022	Kem Sungai Papan, Royal Belum State Park	2	1 hour
12.	20 th July 2022	Kem Sungai Papan, Royal Belum State Park	5	1 hour 27 minutes
13.	20 th July 2022	Kem Sungai Papan, Royal Belum State Park	10	2 hours 3 minutes
14.	21 st July 2022	Kem Sungai Papan, Royal Belum State Park	10	1 hour 5 minutes
15.	22 nd July 2022	Kem Sungai Papan, Royal Belum State Park	2	56 minutes
16.	22 nd July 2022	Kem Sungai Papan, Royal Belum State Park	10	1 hour 8 minutes

17.	23 rd July 2022	Kem Sungai Papan, Royal Belum State Park	3	15 minutes
18.	23 rd July 2022	Kem Sungai Papan, Royal Belum State Park	3	1 hour 34 minutes
19.	24 th November 2022	Kampung Bongor Hilir, Royal Belum State Park	8	1 hour 53 minutes
20.	25 th November 2022	Kampung Bongor Hilir, Royal Belum State Park	4	1 hour 37 minutes
21.	26 th November 2022	Kampung Tanhain, Royal Belum State Park	5	22 minutes
22.	27 th February 2023	Kampung Tanhain, Royal Belum State Park	4	1 hour 51 minutes

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