

Indigenous Knowledge Documentation: Perspectives of Dusun and Bajau Communities in Kota Belud, Sabah, Malaysia

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Abstract

In the context of biodiversity conservation, the application of indigenous knowledge provides insights into how indigenous peoples operate and coexist with the natural environment without imposing severe impacts and essentially sustain the resources for generations. Due to its oral and practical nature in transmission, indigenous peoples find it difficult to maintain the traditional pathway of indigenous knowledge transfer. Moreover, indigenous knowledge is perceived to be extinct sooner or later. This phenomenon calls for indigenous knowledge documentation. This study aimed to explore the perspectives of the Dusun and Bajau people with regard to documentation of their indigenous knowledge. This study applied qualitative research design, which was carried out in Kota Belud, Sabah. Semi-structured interviews were employed to collect primary data with six informants (n = 6). The data was then thematically analysed with the aid of Nvivo 10. The findings in this study revealed that the informants acknowledged that indigenous knowledge gradually vanished. Following that, they expressed a positive attitude pertaining to the documentation of indigenous knowledge. At the same time, informants conveyed some of the possible constraints in documenting indigenous knowledge, such as biopiracy, lack of support from authorities, and lack of initiatives among indigenous peoples. Finally, this study concludes by presenting some recommendations to address the issues of indigenous knowledge documentation.

Keywords: Dusun, Bajau, Indigenous Knowledge Documentation, Indigenous Peoples, Biopiracy

Introduction

It is perhaps not too ambitious to state that indigenous knowledge is no longer an alien concept in academia. In the context of biodiversity conservation, the application of indigenous knowledge provides insights into how indigenous peoples operate and coexist

with the natural environment without imposing severe impacts and essentially sustain the resources for generations.

Indigenous knowledge is tacit in nature, formed and developed from direct interactions, experiences, and observations with the environment. In addition, indigenous knowledge is transmitted by various oral traditions such as folklore, traditional songs and dances, myths, and rituals. Due to its oral and practical nature in transmission, recent evidence reported by Adam et al (2021) suggests that indigenous peoples face difficulties such as changes in indigenous livelihood practices, changes in religious belief, contact with dominant non-indigenous societies, and loss of indigenous institutions. These difficulties hinder the transmission of indigenous knowledge from taking place efficiently as indigenous peoples are detaching themselves from their traditional identities.

Following that, indigenous knowledge is perceived to be extinct sooner or later (Masron et al., 2015). This phenomenon serves as the basis for indigenous knowledge documentation. Indigenous knowledge documentation may be understood as a process of identifying, collecting, organizing, registering, or recording indigenous knowledge as a means to dynamically maintain, manage, use, disseminate, and/or protect indigenous knowledge according to specific goals of indigenous communities (World International Property Organization, 2017). In essence, indigenous knowledge documentation is vital to ensure its continuous preservation (Masron et al., 2015). The concept of indigenous knowledge documentation across indigenous communities is not a foreign practice. The cultural uses of plants and animals have been extensively documented, mainly by ethnobotanical and ethnocultural research (Maden et al., 2008).

In many places, indigenous knowledge remains as the primary reference for healthcare among traditional societies (Robinson & Zhang, 2011). The core of indigenous knowledge in traditional medicine emphasises a holistic approach to health, including spiritual and emotional issues as well as mental and physical health (Williams et al., 2011). In traditional Chinese medicine, medicinal plants are used to cure commonly treatable diseases such as the common cold, digestive problems, skin infections, and flu. The advent of the COVID-19 pandemic led researchers to study traditional herbal medicinal plants as an alternative therapy for the treatment and management of coronavirus as reported by (Ademola et al., 2021; Mirzaie et al., 2020). This significance is reflected by the development of national public indigenous knowledge registers and institutional databases for indigenous knowledge documentation by countries such as Panama, Peru, China, India, and Venezuela (Alexander et al., 2004). Therefore, the published documentation of indigenous knowledge as mentioned allows access to the utilisation of genetic resources and associated indigenous knowledge (Reyes-Garca et al., 2021). Furthermore, Anywar et al (2020) positively propose that the practise of traditional medicine has the potential to make a major breakthrough into modern medicine, especially in finding and formulating cures for modern diseases.

In the same vein, proponents of indigenous knowledge critically urge the incorporation of indigenous knowledge into environmental assessment. This is the result of acknowledging indigenous communities and their knowledge as "critical resources for understanding and adapting to climate change" (David-Chavez & Gavin, 2018, p.1). Therefore, documentation of indigenous knowledge should support the efficient integration and application of indigenous

knowledge when deemed feasible. In the context of environmental assessment, indigenous knowledge is inextricably applicable in observing weather, landscape, and resource changes as these components are known as Cultural Keystone Indicator Species that give insights into the effects of environmental changes (Echeverria & Thornton, 2019). The documented indigenous knowledge could further assist traditional communities to prepare for and respond to future environmental changes by applying a range of place-based adaptation modes.

Within the context of Malaysia, various approaches have been proposed in efforts to document indigenous knowledge of traditional or indigenous communities. Fui et al (2015) presented a comprehensive approach to documenting Orang Asli's traditional knowledge in Malaysia. This project was a great effort from the Forest Research Institute Malaysia in line with the requirements of the Convention of Biological Diversity 1992, the National Policy on Biological Diversity 1998 and the United Nations Declaration on Rights of Indigenous Peoples 2007, supported by the Ministry of Natural Resources and Environment. In the documentation process, the project involved and engaged with local communities as well as established a partnership. In Sabah itself, the Biocultural Database of the Sabah Museum initiated documentation work that mainly focused on ethnobotany among 30 ethnic communities (SaBC & GDF, 2009). Another prominent indigenous practise that is widely documented is *tagal* or *managal sungai*, a community-based river management. The core principle of this practise underlines the forbiddance of utilising the river resources over a certain period. Essentially, *tagal* practise aims to sustain a continuous supply of fish in the river. Each community collectively establishes its own terms and regulations in the *tagal* area (Foo, 2011). The *tagal* practise has significantly proven its success in river conservation over the long term. Thus, Sabah's Fishery Department adopted this practise as a system in the conservation of riverine resources throughout the state (Wong et al., 2009).

This paper explores the perspectives of Dusun and Bajau people with regards to indigenous knowledge documentation in biodiversity conservation in Kota Belud, Sabah, Malaysia. Indigenous knowledge is at the core of the identities, cultural heritage, and livelihoods of indigenous peoples (United Nations Declaration, 2008). At the same time, indigenous knowledge reflects the holistic approach to life, a central element embedded in the worldview of indigenous peoples, linking cultural and biological diversity. Hence, documentation of indigenous knowledge supports the conservation of both cultural heritage and biodiversity.

Methodology

This qualitative study used a case study approach to seek an in-depth exploration of indigenous knowledge documentation from multiple perspectives of informants (Simons, 2009). The case study was performed in Kota Belud, Sabah. The northern part of the district covers an area of 1,391-kilometres square with a total population of 111,8000 people. The population in Kota Belud is made up of various ethnicities, including Dusun Tindal, Bajau Sama, Iranun, and Ubian. These ethnic groups occupy the different geographical landscapes in Kota Belud. Bajau and Sama are found in the lowlands, Dusun and Tindal are found in the highlands, and Ubian and Iranun live on the coast.

The study employed six ($n = 6$) informants (Table 1) who were selected by purposive and snowball sampling. More importantly, this study dutifully adhered to the ethical guidelines of the Universiti Putra Malaysia's Ethics Committee for Research Involving Human Subjects. Moreover, informants were also provided with prior informed consent forms in which they had the right to accept or refuse taking part in this research.

Table 1

Informant profile (Source: Fieldwork 2019)

No	Informant Code	Ethnicity	Age	Background
1.	B1	Bajau	53	Traditional medicinal practitioner
2.	B2		73	Native Chief
3.	D1	Dusun	56	Head of local NGO
4.	D2		55	Member of local NGO
5.	D3		52	Member of local NGO
6.	D4		67	Native Chief

This study took place in October 2019. Data was collected by using semi-structured interviews and observation during fieldwork. Data generated in the form of audio recordings was then transcribed verbatim. In the process of thematic analysis, we made use of NVivo10, a qualitative data analysis software that provided a more organised data management. Similar to manual thematic analysis, coding was initiated by generating categories. The interaction of categories eventually built themes that reflected the research question in terms of textual structure.

Findings and Discussion

The Perception of Indigenous Knowledge Loss

Indigenous peoples in modernization are exposed to multiple threats when it comes to their culture and indigenous knowledge base. Based on the findings in this study, the loss of indigenous knowledge among Dusun and Bajau communities in Kota Belud occurred in the form of abandoning certain practices, disregarding indigenous beliefs, and speaking in non-native languages or dialects. With regards to language, it was observed that there was a shift in language usage away from using indigenous language elements. In this case, it was a normal phenomenon for Dusun and Bajau parents to converse using English and/or Bahasa Malaysia (Malay) among themselves. Essentially, this would lead to the loss of indigenous languages and further escalate the decline of indigenous knowledge (Bromham et al., 2020). Again, it is emphasised that indigenous knowledge was passed by verbal tradition, hence indigenous language acted as an important medium for knowledge transfer. This situation entailed those who failed to converse in their mother tongue being at a disadvantage in understanding indigenous knowledge. An informant described the situation as follows:

"In terms of language, it might go extinct." I take the Dusun language, for instance. I observe that parents are more comfortable conversing with their children using either Malay or English. This one I see could go extinct". (D4)

In addition, the loss of indigenous knowledge took form in the negligence of indigenous communities in taking care of the environment. This was observed by the disposal of domestic waste along the roads. This situation is seen to be against what indigenous communities have

always known as the stewards of the world's biodiversity for thousands of years (Kelles-Viitanen, 2008). One informant expressed concern regarding this matter as below

If we were to ask 10 people, "How do you practise indigenous knowledge?" only four could answer. I mean, those who demonstrate respectable practises in environmental stewardship. The other six were most likely ignorant. If that served as our benchmark, it seems the percentage of Kadamaian people in the practise of [indigenous] knowledge, I take it to be about 40 percent. " (D2)

Both indigenous communities and scientists validate and acknowledge the loss of indigenous knowledge. Nevertheless, a lack of empirical data in assessing the cultural components makes it challenging to predict the actual rate of loss as proposed by (Reyes-Garca et al., 2014). This situation is further complicated as each indigenous group owns particular and different sets of cultural traits compared to other groups, making generalisation rather daunting. In particular, the mechanisms behind the loss of indigenous knowledge vary across periods and cultural groups, as reported by (Boyd and Richerson, 1985). Another perspective that is worth noting is that the inability of indigenous peoples to equip and support themselves to confront sociocultural change accelerates the loss of indigenous knowledge. Reyes-Garca et al (2014) highlight that attrition of indigenous knowledge entails loss of biodiversity. Hence, preserving indigenous knowledge is highly beneficial to both biodiversity conservation and indigenous peoples (McDade et al., 2007).

Acceptance of Indigenous Knowledge Documentation

Indigenous peoples are acknowledged as the holders and sole owners of indigenous knowledge, a common notion accepted when it comes to rights of ownership. Hence, Tagle (2002) comprehensively reported that indigenous knowledge documentation and sharing is subject to particular indigenous communities' customary laws and practices; they maintain the right to decide the conditions of knowledge usage; and more importantly, they must not be forced to share their knowledge and resources. This study revealed that Dusun and Bajau informants demonstrated a positive attitude with regard to indigenous knowledge documentation. We base the positive acceptance of Dusun and Bajau informants on factors such as cultural identity, inheritance for current and coming generations, and the preservation of knowledge itself. Indigenous knowledge documentation may serve as a reference to current generations on the abandoned practises of their forefathers, especially in agriculture, as it has fully shifted to modern methods. One informant showed his acceptance towards documentation based on that reason:

"I think I concur that [indigenous knowledge] is documented. For example, although it has been long forgotten, the traditional tools used in farming were less efficient compared to modern machinery. If there were no customs and traditions, we would definitely ask about the identity of the ethnic group. Hence, we could possibly observe its customs and culture; we know it's Bajau. So, I agree with documenting [indigenous knowledge]." (B2)

At the same time, a Dusun informant expressed his positive acceptance towards indigenous knowledge documentation as a means to lessen the loss of indigenous knowledge as well as to act as a reference for coming generations. As conveyed below, believing the virtue

engrained in the indigenous knowledge system, the informant also hoped to share it for the benefits of humanity, as conveyed below:

"If that's beneficial, we should document it." As we document these customs and traditions, they are going to be the reference for coming generations. I suppose we may attenuate the threat of [indigenous knowledge] losses. We definitely agree. If possible, we will share the heritage of Dusun with others out there. This reflects a good image [of our community] and our practices' own sensible norm. We would like to welcome anyone who is interested in learning about and understanding our tradition. (D3)

On the other hand, documentation of indigenous knowledge could preserve their language, which was on the verge of extinction. An informant expressed his concern as follows:

"I welcome the efforts to document our indigenous knowledge. One purpose of this, the future of every ethnic group and community itself, is to uplift our own indigenous language. We'll gladly accept that. It may be kept in a cultural institution or the native court. We also consent that everyone has access to indigenous knowledge. That's how it's supposed to be. " (D1)

Acceptance of indigenous peoples' documentation demonstrates their commitment to this cause. Our previous work demonstrates that the Dusun and Bajau communities in Kota Belud faced various challenges in passing down indigenous knowledge. Therefore, documentation may provide a means to protect the remaining parts of indigenous knowledge. In essence, documentation of indigenous knowledge may be a useful tool for Dusun and Bajau people to conquer future challenges related to the environment, economy, and social (IBP, 2013). Worried about the demise of indigenous knowledge holders, especially the elderly, Masron et al (2015); Kraisame (2018) too, advocate documentation of indigenous knowledge.

Acceptance of indigenous knowledge documentation was also demonstrated by the willingness of Dusun and Bajau people to form partnerships and collaborate with relevant parties to realise this effort. Documentation is a multidimensional effort that demands engagement and participation from different levels of individuals, including indigenous communities, researchers, experts, and government bodies. Considering the Dusun and Bajau people have granted their consent to document their knowledge, having the challenges discussed previously hinders the process. At this time, there was no extensive effort being carried out on documenting indigenous knowledge on biodiversity conservation in Kota Belud. Most informants interviewed said that they had not yet been approached to perform this action. Regardless, they always had university students and researchers coming to study other aspects of their cultures, such as marriage, the judicial system, and the administrative system. One informant expressed his willingness to work jointly with anyone in knowledge documentation, despite worries about public acceptance of this effort clouding his mind. He conveyed his thoughts as below:

"When it comes to my own tradition, I am all for it regardless of whether it is not going to be well accepted by others." I suggest we muster and strengthen our people to preserve our tradition. Whether it is accepted or not, that depends. (B1)

Considering some issues in knowledge documentation discussed earlier, some felt it was the responsibility of indigenous communities to cooperate and participate in documentation. As one informant put it:

"We would certainly cooperate." Because this is our responsibility. Culture, tradition, language, customs, traditional food, etcetera, are significant in tourism. Sure, we would work together. "No problem." (B2)

The process of knowledge documentation involves five stages known as planning, fieldwork, analysis, archiving, and dissemination of end products. Meanwhile, dimensions of cooperation present in knowledge documentation are coordination, distribution of labour, standard of interoperation, authorship and authority, and feedback (Glenn, 2009). Coordination in indigenous knowledge documentation refers to the management of documentation projects. It is performed by a coordinator who works directly with indigenous knowledge holders.

In managing the documentation project, the coordinator needs to outline the clarity of research goals and assess if the goals are being achieved with the predetermined methods. The coordinator also handles the labour and work distribution (Melin, 2000). Next, the distribution of labour contributes to a pool of expertise in different stages of the documentation process. The labour distribution at each stage of the process must essentially have a clear understanding of the work they are doing (Thagard, 1997). Interoperation refers to the setup for different data resources to interact (Glenn, 2009). It also involves some processes, such as data repository from one source to another, harmonisation of data, and different sets of data (Caracciolo & Keizer, 2011). Following that, authorship and authority are other concerns in the documentation of indigenous knowledge. This pertains to the order of names on a documentation project. The order of names may reflect seniority, expertise, and the amount of work completed on the project. The entirety of this matter depends on researchers and knowledge-holders. Essentially, it is advised to consider this issue prior to embarking on a documentation project. Lastly, feedback in knowledge documentation is significant for continuous evaluation of the project between researchers and knowledge holders as proposed by (Dwyer, 2006).

Challenges in Indigenous Knowledge Documentation

Documentation is deemed a plausible means to preserve indigenous knowledge. Given that the dissemination and transfer of indigenous knowledge relies heavily on oral traditions, it is susceptible to being lost. Documentation may sound easy, but the process is undeniably time-consuming, laborious, and costly. Based on the previous discussions, the Dusun and Bajau people in Kota Belud acknowledged the existence and importance of indigenous knowledge to their community. Whilst indigenous peoples acculturate well with other societies, they uphold some traditions that bring significance to their wellbeing and heritage. More importantly, they correspond well to the idea of indigenous knowledge documentation. Yet, they are at the same time concerned with the challenges arising from indigenous knowledge documentation.

Biopiracy

Numerous studies on indigenous knowledge have been published and made accessible to the public. While many people benefited from this, some ill-intentioned individuals intended to exploit indigenous knowledge and resources for personal gain. The underlying point in this context is the exploitation of resources that were possibly deemed culturally and economically abusive to the Dusun and Bajau people who relied on those natural resources. This could be proven in the practise of traditional medicine. Among the Dusun and Bajau people, traditional medicinal plants are culturally important, which leads them to preserve and protect their heritage. Most Dusun and Bajau people proposed no objection to sharing their knowledge with outsiders, but that did not necessarily imply that non-indigenous people could exploit and gain profits from resources that belong to the indigenous communities. One informant offered his views regarding this matter:

"In terms of traditional medicine, I do not find any problem with documenting those medicinal herbs. The only concern is if someone steals the plant and brings it somewhere else. That is the issue I am seeing now. Because this is our heritage. The heritage that is supposed to be protected Considering that resources were to be taken out and developed somewhere else, it's a loss to our future generation. But if it were to be consumed or grown in the local area, it would benefit the indigenous community itself. I am referring to endemic plants here. Something happened, someone [illegally] exploited it and propagated it. In that case, we are losing our identity or advantage in the coming future". (D4)

The Dusun and Bajau people who actively engaged and participated in safeguarding their natural resources were conscious and protective of their invaluable natural resources. Allowing access to outsiders to appreciate the beauty of flora and fauna may enhance the economic aspects of the Dusun and Bajau people. In the same vein, another informant thought that some people would take advantage of their welcoming gesture:

"Just like our emblem in Kadamaian, which is the rafflesia. We welcome visitors coming to view the flowers. If it is looted, it is a disservice to us. Rafflesia, as they know, can be found in Sabah. It'd be a surprise to know that Japan can grow rafflesia. We don't wish for that. We don't restrict those who come to visit, take photos, or learn; we don't mind sharing. Some even used knives or tissue paper to take out the spores. We are completely against it. Sure, they can take a look. Our concern is when they possess the spores and propagate, it's a loss to us. " (D2)

The above discussion describes an act known as biopiracy. Efferth et al. (2016) define biopiracy as "the use of biological resources and/or knowledge of indigenous tribes or communities without allowing them to share the revenues generated out of economic exploitation or other non-monetary incentives associated with the resource/knowledge" (Efferth et al., 2016, p. 166). As reported by Anthons (2010); London (2007), biopiracy has been shown to be detrimental to indigenous knowledge, in which the Dusun and Bajau people may lose their cultural heritage unique to their ethnic group.

Lack of Support from Authorities

Both the Dusun and Bajau people suffered from a lack of support from authorities or government entities. Knowledge documentation is a large-scale project that is impossible to complete in isolation. In this context, collecting and gathering adequate information calls for a series of fieldwork supported by the labour of expertise from different backgrounds. In all probability, Dusun and Bajau people need support from government bodies in the form of endorsement and financial funds that would facilitate the process of documentation. One informant commented, "The first challenge is funding." The funding source for documentation Second, government support is crucial. (D3)

The importance of indigenous knowledge as a part of the cultural heritage of Dusun and Bajau should be recognised by government bodies. Recognition, by right, should be initiated by providing necessary support to protect indigenous knowledge (Jewell, 2017), including documenting it. Effective and sufficient discussion should be held between the government and the Dusun and Bajau communities to lay out the concerns pertaining to the documentation of indigenous knowledge. Such an initiative empowers both Dusun and Bajau people to be provided with assistance to manage their cultural and natural resources. Nordin et al (2012) underline that government support does not stop at the end of the documenting process but assists Dusun and Bajau people with documented protection and secrecy that serves as a vital defence from misuse.

Lack of Initiatives to Initiate Documentation among Dusun and Bajau people

In the indigenous knowledge documentation of the Dusun and Bajau people in Kota Belud, the Dusun and Bajau people are the main players on the basis that they are the sole knowledge holders. Only those communities have the full contextual understanding of every aspect of indigenous knowledge. However, as their communities were slowly disengaging themselves from their own culture, documentation seemed like an arduous task to carry out. One informant stated that indigenous youth did not have a sense of belonging to their culture: "Most probably the constraint is the generation detached, disregarded, and disengaged [from indigenous practices]." (D4)

In particular, indigenous knowledge documentation also required a form of grassroots expertise, and this was what seemed missing among the Dusun and Bajau people in Kota Belud. This knowledgeable community would be needed to collect and gather materials prior to documenting them. As one informant put it:

It should sprout from the grassroots, so it is difficult for us. I mean, for certain groups, we need to find someone who is knowledgeable about this, but not necessarily an expert. It then becomes easier to pass down [the knowledge], finding materials whenever needed. I think that seems the best solution. However, as for now, we start from the bottom to dig for our indigenous knowledge. (B2)

The situation above may largely be driven by the change of traditional livelihood practices. In this case, Dusun and Bajau people are exposed to and involved in modern wage labour (Tang & Gavin, 2016), which illustrates the loss of touch with the practise of indigenous knowledge. Additionally, a lack of initiatives among Dusun and Bajau people further discourages knowledge transfer, which consequently brings difficulty in knowledge documentation.

Conclusion

Based on the discussion above, it is apparent that indigenous knowledge documentation is necessary to preserve its complete raw form for posterity and allow access for future planning and decision-making. We also deduce that there is still proper or integrated work on indigenous knowledge documentation among the Dusun and Bajau people in Kota Belud, Sabah. In addition, the demise of the elderly as the holders of indigenous knowledge imposes a concerning issue in the sense that indigenous knowledge would be extinct. Although there is research being carried out between these two communities, the work is not sufficient to compensate for the loss of indigenous knowledge in the current setting. Moreover, depending on the oral traditions to preserve and maintain indigenous knowledge further compromises the tacit nature of the knowledge itself. In documenting indigenous knowledge, there are several aspects to take into account based on the guidelines by WIPO (2017) and the findings of this study. First, is to understand the interests and concerns of the Dusun and Bajau communities. This includes their informed consent to whom the knowledge should be accessible. The informants in this study came to the same agreement, allowing their indigenous knowledge to be accessible to all. However, this could not be generalised to other communities in other parts of Kota Belud. The second is to define the objectives of the indigenous knowledge documentation. In this case, the documentation intends to support biodiversity conservation efforts. The third is to appoint someone to lead the documentation project. Certainly, documentation ought to engage the Dusun and Bajau people themselves as the holders of indigenous knowledge. These three points should be paid attention to by the Dusun and Bajau communities as the holders of indigenous knowledge, to plan and carry out the work of documentation.

It is undeniable that documented indigenous knowledge is one of the cornerstone pillars to engaging knowledge systems for conservation and environmental assessment, as highlighted by (Reyes-Garca and Benyei, 2019). Documentation mainly focuses on storing and not spreading knowledge. Hence, this situation imposes a major concern as it does not conform to the principle of open science (Carroll et al., 2020). Consequently, this calls for synergies between indigenous knowledge and open science by creating a more participatory environment that encourages indigenous and expert communities to contribute equally to maintaining and creating new knowledge. In addition, indigenous communities should be brought to the forefront of international environmental discourses that would allow their knowledge and Western science to merge and co-exist (Reyes-Garca et al., 2021). These two principles would enhance multiple values and maintain the cultural and biological diversity.

Invitingly, the findings of this study perhaps serve an opportunity for state governments, respectful organizations, and research institutions to establish a social network with indigenous peoples to address viable solutions. Malaysia has not yet developed a specific policy on indigenous knowledge, despite having ratified international treaties that recognise the rights of indigenous peoples to protect their knowledge systems, such as the International Covenant on Economic, Social, and Cultural Rights; The Convention on Biological Diversity; The Rio Declaration on Environment Development; and The United Nation's Declaration on the Rights of Indigenous Peoples. Reflecting on this study, the state government, organizations, and research institutions may utilise the existing international instruments to amplify the voices of Dusun and Bajau people with regard to acquiring funds and protecting their knowledge.

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