Stakeholder Perceptions as Strategic Communication Strategy in the Management of Forest Park Conservation in Riau

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ABSTRACT

Article history: Received 24 Mar 2024 Revised 26 Apr 2024 Accepted 15 May 2024 This research aims to analyze the prevailing conditions and determinants shaping individuals' perceptions concerning the management practices of the Great Forest Park conservation area within Riau Province. Employing a qualitative research methodology, this study utilizes Nvivo 12 Plus software as a tool for data collection. The findings underscore that the management of the Great Forest Park conservation area in Riau Province is appraised through the lenses of preserving its protected function, institutional arrangements, collection preservation, recovery preservation, and sustaining utilization functions. However, significant enhancements are deemed requisite across each of these principles to foster improved management of the Grand Forest Park in Riau Province. Furthermore, various factors influencing public perceptions regarding the management of the Great Forest Park conservation area in Riau Province predominantly include the intensity of socialization endeavors, comprehension of the benefits derived from forest functions, community engagement in forest management initiatives, and participation in conservation-focused training programs.

Keywords: Conservation, Grand Forest Park, Management, Perception, Riau

ABSTRAK

Penelitian ini bertujuan untuk mengetahui kondisi yang ada dan faktor-faktor yang mempengaruhi persepsi masyarakat terhadap pengelolaan kawasan konservasi Taman Hutan Raya di Provinsi Riau. Penelitian ini kemudian menggunakan pendekatan penelitian kualitatif dan software Nvivo 12 Plus sebagai alat pengumpulan data. Hasil penelitian ini menunjukkan bahwa pengelolaan kawasan konservasi Taman Hutan Raya di Provinsi Riau dapat dilihat dari prinsip pelestarian fungsi lindung dan pengelolaan penataan kelembagaan, pelestarian fungsi koleksi, pelestarian fungsi pemulihan, dan keberlanjutan fungsi pemanfaatan yang memerlukan perbaikan pada setiap prinsip yang ada agar pengelolaan Taman Hutan Raya di Provinsi Riau lebih baik. Kemudian, beberapa faktor yang mempengaruhi persepsi masyarakat terhadap pengelolaan kawasan konservasi Taman Hutan Raya di Provinsi Riau didominasi oleh faktor intensitas kegiatan sosialisasi, pengetahuan manfaat fungsi hutan, keterlibatan masyarakat dalam pengelolaan hutan, dan partisipasi dalam pelatihan di bidang konservasi.

Kata Kunci: Konservasi, Taman Hutan Raya, Manajemen, Persepsi, Riau

INTRODUCTION

Fundamentally, forests are indispensable resources that offer a plethora of benefits to humanity, both tangible and intangible. Residents residing in proximity to forests not only consider them as habitats but also rely on them to fulfill their daily necessities (Cahyawati et al., 2022; Hasri, 2021; Bana et al., 2022). Communities relying on basic natural resources, notably wood, foster interactions with their surroundings (Fahmi et al., 2015). Therefore, it is imperative for village communities in forested areas to actively participate in forest conservation efforts (Hidayah, 2021; Qodriyatun, 2019). Community engagement in forest management not only fosters environmental awareness but also enhances understanding of the significance of conservation efforts, addressing the economic welfare challenges arising from limited resource access (Budiningsih et al., 2022).

Forests play a pivotal role in ensuring economic and social sustainability by providing various forest products, including timber (*Hasil Hutan Kayu*/HHK) and non-timber forest products (*Hasil Hutan Bukan Kayu*/HHBK). Additionally, forests offer vital environmental services, such as biodiversity maintenance, carbon sequestration, erosion prevention, and hydrological functions, contributing to ecosystem longevity and ecological balance (Komarudin & Flambonita, 2020; Putri et al., 2021). Consequently, forests serve as invaluable resources for communities, facilitating employment opportunities through forestry industries (Gumilar et al., 2022).

Communities residing in forested areas play a crucial role in forest conservation, given their generational knowledge and sustainable forest management practices. However, conflicts often arise due to agricultural expansion, leading to forest degradation and tensions between local communities and forest management authorities (Qodriyatun, 2019).

While theoretically, Grand Forest Parks (Taman Hutan Rakyat/TAHURA) aim at conserving nature for research, education, and recreational purposes (Anjelita et al., 2023; Rafiuddin et al., 2023), complexities persist due to the presence of neighboring communities, often implicated in forest encroachment (Qodriyatun, 2019). Effective management of grand forest park conservation areas necessitates preserving protective, utilitarian, collection, and restoration functions, along with institutional arrangements (Bsilhk.menlhk.go.id, 2018).

Moreover, stakeholder knowledge and perceptions significantly influence forest area management. Factors such as understanding the benefits of forest functions, community involvement, socialization intensity, and conservation training participation play pivotal roles (Novayanti et al., 2017). Stakeholder perceptions, shaped by cognitive and psychological processes, profoundly impact Tahura management. Perception becomes a series of cognitive and psychological tools that are shaped by the influence of long-term evolution from the external environment which is visible in the structure of abilities extracted in information (Gibson, 1979). Perception includes the process of selecting, organizing, and interpreting certain stimuli that are organized into existing structures and patterns and interpreted based on previous experience (Payne, 2001). Stakeholders encompass individuals or groups with vested interests and influence over organizational performance, including community members, NGOs, and local government entities (Adhianty et al., 2023; Suleman & Apsari, 2017).

In the context of Riau Province, the Sultan Syarif Hasyim Forest Park (*TAHURA SSH*) has been designated as a conservation area pursuant to the Decree of the Minister of Forestry Number 349/Kpts-II/1996, dated 05 July 1996, covering an initial area of 5,920 hectares. Subsequently, following the delineation process led by the Pekanbaru Sub-Division of the Directorate General of Forestry Planning and Environmental Management (Sub-BIPHUT) and subsequent meetings to establish definitive boundaries, the area of this Great Forest was expanded to 6,172 hectares. This adjustment was formalized through the Decree of the Minister of Forestry and Plantation Number 348/Kpts-II/1999, dated 26 May 1999. Notably, this area underwent a functional transformation from Forest Minas Tourism, covering an area of 1,821 hectares, to Limited Production Forest, encompassing 4,099 hectares. Administratively situated within Minas District, Siak Regency, Tapung Hilir District, Kampar Regency, and Rumbai District, Pekanbaru City, its geographic scope is illustrated in Figure 1.

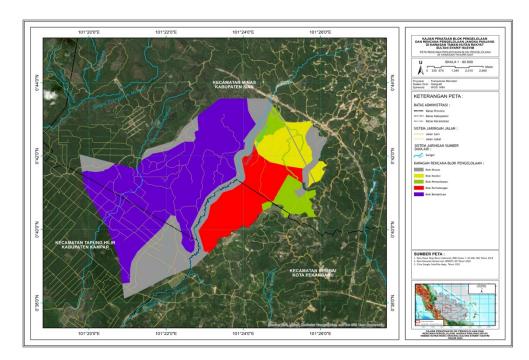


Figure 1. Map of the *Tahura* SSH area, Riau Province Source: (Dinaskehutanan.riau.go.id, 2023)

In the process, of the 6,172 areas of the Sultan Syarif Hasyim Grand Forest Park in the border area of Pekanbaru City, only 2000 hectares remained in 2015. This condition is believed to be getting worse due to the large amount of forest encroachment and destruction of remaining natural resources in the conservation area (Budiarto & Marta, 2017). Besides, in the context of land use controlled by the community in the Sultan Syarif Hasyim Grand Forest Park (*Tahura* SSH) Riau Province area, the process still has problems, which can be seen in Table 1.

Table 1. Problems Related to Land Use around the Controlled Tahura SSH Area

No.	Village/	Disctrict/	
	Sub-	District/	Controlled Land Use Problems
	District	City	
1.	Garo	Tapung	The regional boundary between Garo City and Rantau Bertuah is not yet
	City	Hilir/Kamp	definitive.
	Village	ar	The practice of issuing SKGR for land in the <i>Tahura</i> SSH area is still
			occurring.
			There are business groups/corporations in the form of oil palm plantations
			that do not yet have clear legality.
			There are people who are in the <i>Tahura</i> SSH area but do not have the
			identity as Indonesian citizens/local residents.
			There are community settlements in the <i>Tahura</i> SSH area.
			There are facilities for places of worship (church, prayer room) in the
			Tahura SSH area.
			There was a tenure conflict between KTH in the Garo City area and KTH
			in the Rantau Bertuah area.
			There are established businesses (oil palm platforms, oil palm plantations,
			daily shops) in the <i>Tahura</i> SSH area that do not yet have legality.
2.	Suka	Tapung	The boundary signs for the <i>Tahura</i> SSH area in the Sukamaju Village area
	Maju	Hilir/Kamp	were not found in the field.
	Village	ar	Some businesses have built oil palm plantations for residents of Sukamaju
			Village in the <i>Tahura</i> SSH area.
			The people of Sukamaju Village work as laborers in the business of
			building oil palm plantations in the <i>Tahura</i> SSH area.
3.	Minas	Minas/Siak	There are community groups (KTH or "Forest Farmers Group" and

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Sub- Disctrict Rantau Bertuah Sub- Sub- Bertuah Sub- Sub- Bertuah Sub- Sub- Sub- Sub- There are efforts to build community oil palm plantations in the <i>Tahura</i> SSH area. 4. Rantau Bertuah Sub- There was a tenure conflict between KTH in the Garo City area and KTH in the Rantau Bertuah area. There are people who are in the <i>Tahura</i> SSH area but do not have the identity as Indonesian citizens/local residents.				
There are efforts to build community oil palm plantations in the <i>Tahuro</i> SSH area. 4. Rantau Minas/Siak Bertuah Sub- Sub- Disctrict There was a tenure conflict between KTH in the Garo City area and KTH in the Rantau Bertuah area. There are people who are in the <i>Tahura</i> SSH area but do not have the identity as Indonesian citizens/local residents. 5. Rantau Rumbai Panjang Barat/Peka Sub- Sub- Sub- Sub- Sub- Sub- There are community groups (KTH and <i>Pokdarwis</i>) who do not yet have		Jaya		Pokdarwis or called "Tourism Awareness Group") who do not yet have
SSH area. 4. Rantau Minas/Siak Bertuah Sub- The regional boundary between Garo City and Rantau Bertuah is not ye definitive. There was a tenure conflict between KTH in the Garo City area and KTE in the Rantau Bertuah area. There are people who are in the Tahura SSH area but do not have the identity as Indonesian citizens/local residents. 5. Rantau Panjang Barat/Peka Within the Tahura SSH Area are not yet known. There are community groups (KTH and Pokdarwis) who do not yet have		Sub-		legal access (partnership) in the <i>Tahura</i> SSH area.
4. Rantau Minas/Siak Bertuah Bertuah Sub- Disctrict The regional boundary between Garo City and Rantau Bertuah is not ye definitive. There was a tenure conflict between KTH in the Garo City area and KTH in the Rantau Bertuah area. There are people who are in the Tahura SSH area but do not have the identity as Indonesian citizens/local residents. 5. Rantau Rumbai Panjang Barat/Peka within the Tahura SSH Area are not yet known. Sub- Sub- Sub- There are community groups (KTH and Pokdarwis) who do not yet have		Disctrict		There are efforts to build community oil palm plantations in the <i>Tahura</i>
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5. Rantau Rumbai The administrative boundaries of the Rantau Panjang Subdistrict area within the <i>Tahura</i> SSH Area are not yet known. Sub- nbaru There are community groups (KTH and <i>Pokdarwis</i>) who do not yet have				There are people who are in the Tahura SSH area but do not have the
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Sub- nbaru There are community groups (KTH and <i>Pokdarwis</i>) who do not yet have	5.	Rantau	Rumbai	The administrative boundaries of the Rantau Panjang Subdistrict area
		Panjang	Barat/Peka	within the <i>Tahura</i> SSH Area are not yet known.
		Sub-	nbaru	There are community groups (KTH and Pokdarwis) who do not yet have
		Disctrict		
6. Muara Rumbai The administrative boundaries of the Muara Fajar Barat Subdistrict area	6.	Muara	Rumbai	The administrative boundaries of the Muara Fajar Barat Subdistrict area
Fajar Pesisir/ within the <i>Tahura</i> SSH Area are not yet known.		Fajar	Pesisir/	
Barat Pekanbaru There are community groups (KTH and Pokdarwis) who do not yet have		Barat	Pekanbaru	There are community groups (KTH and Pokdarwis) who do not yet have
Sub- legal access (partnership) in the <i>Tahura</i> SSH area.		Sub-		legal access (partnership) in the <i>Tahura</i> SSH area.
Disctrict		Disctrict		•

Source: Data Identification Processed by Authors, 2023

Table 1 underscores the intricate nature of land use issues within the Sultan Syarif Hasyim Grand Forest Park (TAHURA SSH) area, persisting due to a multitude of challenges requiring systematic and comprehensive addressal by all relevant stakeholders. The issuance of Land Rights Title Certificates (SKGR) within the TAHURA SSH area remains a prevalent practice, stemming from the absence of a delineated boundary map between the villages and the TAHURA SSH area. Rectifying this deficiency is imperative to effectively manage the fundamental issue of illegal land utilization surrounding the TAHURA SSH area, aligning with pertinent legislative provisions (Suhada et al., 2019). Consequently, the paramount importance of conducting this research lies in its pivotal objective to analyze prevailing conditions and factors influencing community perceptions regarding the management of the Sultan Syarif Hasyim Grand Forest Park conservation area in Riau Province.

METHODS

This study uses a qualitative research approach to investigate the phenomena systematically and case studies that occur (Busetto et al., 2020). The data in this research is primary and secondary data, where the results of observations and interviews with key informants are the primary data used. In contrast, secondary data is obtained from various sources such as books, government websites, conferences, and appropriate research journals. This study focuses on collecting information about the existing conditions of management of the Sultan Syarif Hasyim (SSH) Grand Forest Park Conservation area (*Tahura*) in six villages and sub-districts bordering the *Tahura* SSH conservation area in Riau Province which includes Garo City Village, Suka Maju Village, Kelurahan Minas Jaya, Rantau Bertuah Village, Rantau Panjang Village and Muara Fajar Barat Village through a combination of observation, documentation and in-depth interview techniques.

Furthermore, the data analysis technique employed in this research utilizes Nvivo 12 Plus software, leveraging crosstab queries, group queries, and word frequency queries to elucidate variables influencing the research objectives, explicate informant perceptions of concepts, and visualize data through pivotal combinations (O'neill et al., 2018; Woolf & Silver, 2018). In the process, The research data analysis unfolds in two distinct stages. Initially, data undergoes scrutiny utilizing group query analysis, crosstab queries, and word frequency queries to ascertain the percentage of concepts (nodes) and informant perceptions grounded in variables, coupled with data visualization pertinent to the research context. Subsequently, the findings are synthesized and interpreted, encapsulating both primary and secondary data. Hence, this article endeavors to elucidate prevailing conditions and factors influencing community perceptions in managing the Sultan Syarif Hasyim Grand Forest Park conservation area in Riau Province.

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RESULT AND DISCUSSION

Existing Conditions of Management of the Tahura SSH Conservation Area in Riau Province

Based on the principles of forest park management (*Tahura*), which have been prepared by the Indonesian Environmental and Forestry Instrument Standardization Agency, the principles of *Tahura* management include aspects of preserving the protection function, preserving the utilization function, preserving the collection function, preserving other functions (restoration), and management institutional arrangements (Bsilhk.menlhk.go.id, 2018). Then, the principle of Tahura management in the process aims to maintain and develop collections of natural or non-natural plants or animals, native or non-native species, which are not invasive and are used for research, science, education, supporting cultivation, culture, tourism, and recreation (Lahandu et al., 2016). Based on the results of interviews that have been analysed through the group query feature in Figure 2, it was found that each stakeholder has various perceptions of the existing conditions of *Tahura* SSH management in Riau Province.

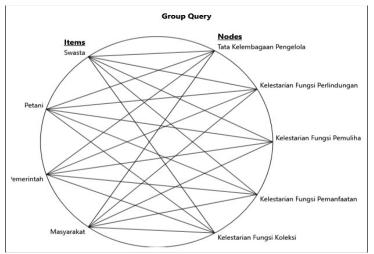


Figure 2. Public Perception of *Tahura* SSH Management Source: Group Query Analysis Using Nvivo 12 Plus Software, 2023

The analysis presented in Figure 2 depicts respondents' perceptions mapped through group query analysis, visually represented by interconnected lines and nodes. Each essential dimension in the management principles of Sultan Syarif Hasyim Grand Forest Park (TAHURA SSH) in Riau Province is delineated, with arrow areas indicating recommendations from various stakeholders—government, private sector, farmers, and the community. These stakeholders collectively identify five pivotal dimensions in TAHURA SSH management: preservation of the protection function, utilization function, collection function, restoration of other functions, and institutional management principles.

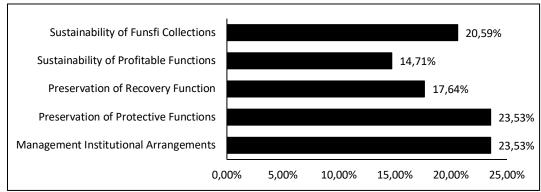


Figure 3. Public Perceptions Around the Area on the Existing Conditions of *Tahura* SSH Management

Source: Crosstab Query Analysis Using Nvivo 12 Plus Software, 2023

Figure 3 illustrates public perceptions regarding the existing conditions of TAHURA SSH management in Riau Province. Notably, the predominant focus lies on preserving the protection function and institutional management principles (23.53%), followed by the collection function (20.59%), restoration function (17.64%), and sustainability of utilization functions (14.71%). A comprehensive examination reveals that stakeholders concur on significant challenges, particularly regarding institutional governance and protection function preservation. The absence of clearly marked regional boundaries exacerbates issues, hindering effective management and documentation efforts. Furthermore, organizational structures related to roles and responsibilities are perceived as inadequate, contributing to delayed response times regarding wildlife disturbance incidents.

Concerning the collection function, stakeholders express concerns over the lack of facilities and infrastructure, deficient management plans, and inadequate security measures to address wildlife disturbances effectively. Despite the appreciation for alternative forest restoration plans, governance aspects require bolstering to ensure transparency and supervision. In terms of utilization function preservation, stakeholders highlight a lack of regular socio-economic monitoring documentation and valid policies to address activities such as animal hunting and forest product utilization comprehensively.

Furthermore, regarding the principle of preserving the utilization function in the process, each respondent around the *Tahura* SSH area does not yet clearly know the documentation of the results of monitoring the socio-economic conditions of the community around the *Tahura* SSH area on a regular basis, where despite animal hunting activities (birds, partridges, pigs, etc) and the use of forest products (rattan, small wood), as well as fishing, still occurs in the *Tahura* SSH Area. However, on the other hand, the public considers that there is no valid policy regarding how this needs to be dealt with and improved comprehensively, as seen in Figure 4.



Figure 4. Word Frequency Analysis in the Existing Conditions of *Tahura* SSH Management Source: Word Frequency Query Analysis Using Nvivo 12 Plus, 2023

Figure 4 underscores the frequency of pertinent words in TAHURA SSH management discussions, with "Tahura" and "Community" emerging as the most recurrent topics. This emphasizes the community's indispensable role in forest product utilization, necessitating enhanced management principles. Moreover, socio-economic considerations of farmers and communities are pivotal for fostering conservation partnerships while adhering to legal provisions.

In conclusion, effective communication is paramount in addressing and enhancing TAHURA SSH management. Clear communication channels facilitate stakeholder understanding of conservation area extents and responsibilities, ensuring timely incident reporting and maintaining public trust. Moreover, transparent communication of resource needs and investment priorities fosters stakeholder support and advocacy for conservation management improvements. A robust communication strategy that periodically assesses and meets community needs fosters cooperation and sustainable resource utilization, ultimately enhancing conservation efforts.

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Influence Community Perceptions Factors in Management's Tahura SSH in Riau Province

The community is a crucial partner for *Tahura* SHH managers, where the success of *Tahura* SSH management activities is largely determined by the will and role of the surrounding community (Suhesti & Hadinoto, 2019; Putri et al., 2021; Zamhasari & Gafar, 2021). Based on the results of interviews with respondents who had been coded using Nvivo 12 Plus software, the results were found to be several factors that influence public knowledge and perceptions in managing the *Tahura* SSH conservation area in Riau Province, as shown in Figure 5.

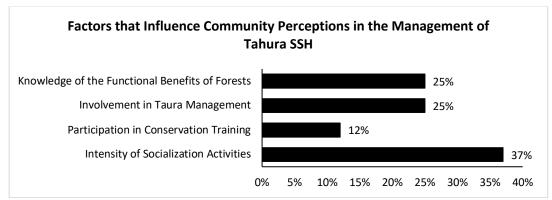


Figure 5. Factors that Influence Community Perceptions in the Management of *Tahura* SSH Source: Crosstab Query Analysis Using Nvivo 12 Plus Software, 202

Figure 5 provides insights into the various factors influencing community knowledge and perceptions regarding the management of the Tahura SSH conservation area in Riau Province. These factors predominantly include the intensity of socialization activities (37.5%), knowledge of the benefits of forest functions (25.0%), community involvement in Tahura management (25.0%), and participation in conservation training (12.5%).

Delving deeper into each factor, stakeholders emphasize the significance of socialization activities in fostering a sense of belonging between Tahura SSH management and the local community. Enhanced outreach efforts are essential for clarifying permissible and prohibited actions within the Tahura SSH area, although current efforts often fall short of community comprehension.

Regarding knowledge of forest functional benefits, the community recognizes forests as vital resources generating goods and services beneficial to livelihoods, thus supporting the forestry sector's potential for employment generation. Financial incentives are deemed crucial for stakeholder engagement in forest management initiatives.

Community involvement in Tahura management is deemed indispensable for ensuring area sustainability, as no single entity can achieve this alone. Collaboration between the Natural Resources Conservation Agency, Riau Province Production Forest Management Unit (KPHP), and local communities is vital, although challenges persist due to community skepticism and resistance.

Participation in conservation training remains limited for some individuals, constraining community knowledge and engagement in Tahura SSH conservation efforts. Encouraging participation in training activities and fostering local groups can enhance information dissemination effectiveness, empowering communities to assume responsibility for conservation.

In summary, effective communication strategies, community engagement, and capacity building initiatives play pivotal roles in bridging knowledge gaps, garnering community support, and achieving sustainable conservation outcomes in the Tahura SSH conservation area. These efforts encompass intensifying socialization activities, fostering understanding of forest benefits, promoting community involvement in management decisions, and facilitating participation in conservation training. Cultivating local groups further enhances peer-to-peer learning and information exchange within communities, augmenting the efficacy of conservation initiatives.

CONCLUSION

The research findings offer a comprehensive appraisal of the current management landscape within the Tahura SSH conservation area in Riau Province, delineating key principles and areas necessitating enhancement. These insights illuminate the multifaceted nature of conservation management and underscore the imperative of addressing diverse principles to bolster overall efficacy. Primarily, the study identifies prevailing management principles applicable in the Tahura SSH conservation area. Notably, the principles of preserving protective functions and institutional management emerge as dominant, collectively constituting 23.53% of the total management framework. This underscores the paramountcy of upholding ecological integrity within conservation areas and fortifying institutional frameworks to underpin effective management practices. Additionally, the research underscores the significance of other pivotal principles, encompassing the maintenance of collection functions (20.59%), recovery functions (17.64%), and sustainability of utilization functions (14.71%). These principles collectively underpin holistic conservation area management, addressing vital facets such as biodiversity preservation, habitat restoration, and sustainable resource utilization.

Furthermore, the study elucidates several factors influencing community knowledge and perception regarding Tahura SSH conservation area management in Riau Province. These factors are predominantly characterized by the intensity of socialization activities (37.5%), knowledge of forest function benefits (25.0%), community involvement in Tahura management (25.0%), and participation in conservation training (12.5%). Essentially, community members residing around the Tahura SSH area advocate for heightened outreach activities to facilitate better community understanding of permissible actions within the area. This, they posit, would optimize existing conditions for Tahura SSH management, ensuring the preservation of the remaining forests within the area.

In essence, the research underscores the criticality of addressing diverse management principles and enhancing community engagement to foster effective conservation management practices within the Tahura SSH conservation area in Riau Province. By prioritizing ecological integrity, institutional fortification, and community involvement, stakeholders can collectively work towards the preservation of the invaluable forests within the Tahura SSH area.

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