

Sarawak hornbill conservation initiatives – engaging the society

OSWALD BRAKEN TISEN^{1*}, SIM LEE KHENG¹ and FRANCIS GOMBEK¹

Abstract: Sarawak, one of the Malaysian states on the island of Borneo, is known as the “Land of the Hornbills”. It prides itself on having eight species of hornbills in its avifauna inventory. Hornbills play significant roles in the ecosystem of Sarawak’s forests and the culture of its people. Such is the importance of hornbills to the extent that the Rhinoceros Hornbill is depicted in the State’s emblem. A legal framework for the protection and conservation of hornbills is in place in Sarawak. Hornbill habitats are protected by the establishment of national parks and wildlife sanctuaries. The eight hornbill species found in Sarawak are also accorded protection by the law by being listed as “Totally Protected Species” under the Wild Life Protection Ordinance, 1998. However, information critical to hornbill conservation is lacking. Sarawak has taken steps to collect population status data by engaging various interest groups, including all park wardens, to inventorise hornbills in the State, especially in national parks. A hornbill workshop conducted in October 2012 brought together scientists, wildlife managers and interest groups to share their knowledge on hornbills. The information gathered thus far forms baseline data. Furthermore, the workshop recommendations provide guidelines for management and conservation of hornbills. Steps are now being taken to implement these recommendations.

Keywords: hornbills, Sarawak initiatives, society, conservation, Land of the Hornbills

INTRODUCTION

Sarawak, one of the Malaysian states on the island of Borneo, is also known as “Land of the Hornbills”. With a land area of 124,449 km², and located between latitudes 0°50’-5°N, longitudes 109°36’-115°40’E, it has a high annual rainfall with no distinct seasons, and thus is covered with lush tropical rainforests. Sarawak shares its borders in the northeast with Sabah, another Malaysian state and with Kalimantan (Indonesia) in the south. Sarawak is ranked twelfth on the world’s list of mega diversity areas. Its forest biomes include the highlands, coastal forests comprising

¹Sarawak Forestry Corporation, Lot 218, KCLD, Jalan Tapang, Kota Sentosa, 93250 Kuching, Sarawak, Malaysia.

*Corresponding author email: oswaldtisen@sarawakforestry.com

freshwater swamps and peat swamps, hill forests and limestone forests. Of the 625 species (Smythies 1999) in its avifauna inventory, 50 are endemic to Borneo; which is approximately 8%, and eight are hornbill species. Sarawak has a population of 2,286,067 people from various ethnic groups and cultures (Department of Statistics 2013). There are 27 ethnic groups with the main groups being Malays, Chinese, and Dayaks.

Hornbills play significant roles in the ecosystem of Sarawak's forests and the culture of its people. Rhinoceros Hornbill is depicted even in the State's emblem. *Gawai Kenyalang*, literally meaning "Rhinoceros Hornbill Festival", is a big ceremony celebrated by one of the main tribes of Sarawak, the Dayaks. In the ceremony, a Rhinoceros Hornbill statue, which is thought to represent the chief of worldly birds, is used to welcome the god of augural birds, the *Singalang Burung*, to the feast in a celebration of humankind. The ceremony is considered the highest order of war ritual and held for several reasons (Datu N.S. pers. comm.); for victory over enemies or to arouse 'spirit beings' before going to war in the olden days. Hornbills are also featured in Orang Ulu (one of the ethnic groups) dances where each dancer is adorned with the tail feathers of Rhinoceros Hornbills. Old feathers were obtained from the wild in the past before State wildlife legislations were passed but in modern days, management authorities have obtained artificial feathers or turkey feathers to be used for this purpose. In the past, hornbill ivory carved from casques of Helmeted Hornbills was a valuable trade item, exported to China besides edible birds' nests (Smythies 1999). Today these are banned from being harvested as the helmeted hornbill is a totally protected species in Sarawak.

Hornbill conservation in Sarawak

Eight species of hornbills inhabit Sarawak's forests; the Rhinoceros *Buceros rhinoceros*, Helmeted *Rhinoplax vigil*, White-crowned *Berenicornis comatus*, Bushy-crested *Anorrhinus galeritus*, Wreathed *Rhyticeros undulatus*, Wrinkled *R. corrugatus*, Black *Anthracoceros malayanus* and Oriental Pied Hornbills *A. coronatus*. A legal framework for the protection and conservation of hornbills is in place in Sarawak. All eight are accorded protection by law, being listed as "Totally Protected Species" under the Wild Life Protection Ordinance, 1998 (Sarawak Government Gazette 1998). Hornbill habitats are protected by the establishment of national parks and wildlife sanctuaries with specific management prescriptions. Totally Protected Areas (TPA), comprising an area of 740,850 ha, include different categories such as Wildlife Sanctuaries, National Parks and Nature Reserves for the purpose of conservation, tourism, recreation and research (Figure 1). Timber harvesting is prohibited in these areas. Besides TPA, Permanent Forest Estates (PFE) have been established where controlled timber harvesting is permitted. PFE consist of Protected Forests (PF), Forest Reserves (FR)

and Communal Forests (CF). Even within an area where harvesting is allowed, an area of 100 m radius around salt licks and hornbill nest trees are not to be disturbed as clearly spelt out in the harvesting plan (Anon. 1996).

Sarawak initiatives

Sarawak recognises the importance of public involvement in conserving wildlife. The following projects are some examples of how society from all walks of life is being engaged in the conservation of hornbills.

(i) Hornbill surveys

Sarawak has embarked on surveys to collect population status data especially in TPAs since 2010. Various interest groups including park wardens have been engaged to inventory hornbills in the TPAs and elsewhere. The monitoring surveys will continue until sufficient information has been gathered on the hornbills in Sarawak. A hornbill workshop conducted in October 2012 brought together scientists, wildlife managers and interest groups to share their knowledge on hornbills. The information gathered thus far forms baseline data as shown in Table 1. In some parks, all eight hornbill species were recorded; in others, several or a few were recorded. Other aspects of hornbill conservation were also presented such as hornbills in captivity and the importance of hornbills in culture, tourism and conservation awareness.

(ii) Piasau hornbills

A hornbill monitoring project started some time in 2006 in a wooded residential area in Miri City, which was leased to Sarawak Shell Berhad. The monitoring was a collaborative effort of Sarawak Forestry, Sarawak Shell Berhad and the Malaysian Nature Society. A small population of Oriental Pied Hornbills was breeding in the area and this had caught the attention of the local people who in turn urged the government to establish a hornbill park in the area. A member of the public who is also an Honorary Wild Life Ranger has taken up the task of monitoring the nesting hornbills on a daily basis and updating information via Facebook for interest groups to follow (<http://facebook.com/musa.musbah>). The formation of this urban park has taken off and the earth breaking ceremony will be in May 2014. The pair of Oriental Pied Hornbills has been breeding here as early as 2006 and has been using the same site which has been well protected by residents in the area.

(iii) Hornbills in Santubong National Park

This is a component of the Sarawak Hornbill Programme for Santubong National Park, which is located in the vicinity of Kuching City. A small population of Rhinoceros Hornbills occurs here and the project is a

collaboration of major stakeholders; the State Government (Sarawak Forestry Corporation), local institutions of higher learning (Universiti Malaysia Sarawak) and a local resort proprietor (Permai Rainforest Resort). The presence of these stately birds in the park has aroused interest in developing the park as a hornbill-based ecotourism site whilst maintaining a sustainable population of birds. The team will continue to monitor the population to better understand the status of hornbills in the park and the limiting factors for long-term survival of hornbills in small protected areas such as Santubong National Park; as well as to determine possible ways to enhance their survival.

The Park which is a newly gazetted national park is now ‘full-fledged’ as recently Sarawak Forestry has placed management presence in the area. With that we should expect better visitor management as well as issues pertaining to law enforcement.

(iv) Kubah hornbills

Kubah National Park, about 22 km from Kuching City is another site of a hornbill monitoring survey. The project also looks into habitat improvement or rehabilitation of degraded areas by planting figs for the hornbills and other wildlife. The Bushy-crested and Black Hornbills have been recorded here. Hornbill surveys to understand their distribution are supplemented by surveys on the vegetation, so as to ascertain areas suitable for replanting fig trees. This project involves participation of personnel from various disciplines throughout the corporation, research groups, and park personnel.

(v) Mulu guides indicator programme

Gunung Mulu National Park in the northern region of the state of Sarawak is one of the oldest and largest national parks (Hazebroek and Abg Morshidi 2000). The park was inscribed as a “World Heritage Site” in 2000. As part of a monitoring programme, park guides participate in data collection on birds sighted while on the move. Data is entered in standardised data collection forms and park personnel assist in data collation, which has resulted in useful information on hornbills in the park.

(vi) Hornbills in captivity

Another aspect that is being considered is captive hornbills, although our emphasis is on in-situ conservation. There is indication of certain parties who are in favour of ex-situ conservation, to not discount confiscated birds, which are excellent subjects for conservation education. Matang Wildlife Centre has been established for confiscated wildlife, including

birds. Initially the Centre was set up solely for the rehabilitation of confiscated Orang-utans and personnel are involved in training the Orang-utans to fend for themselves in the wild. Captive hornbills, which had been confiscated or surrendered, are kept in Matang Wildlife Centre, and could be excellent candidates for conservation awareness as well as future release programmes.

(vii) Conservation awareness

It is recognised that any conservation programme is incomplete without awareness programmes. Examples of the programme are:

a) Special Parks Committee (SPC) and Special Wildlife Committee (SWC)

These are committees established at park level and within TPAs with functions in biodiversity conservation. Members consist of park personnel and representatives of local communities and interest groups. The roles of SPC and SWC are to assist in providing input for sound management of TPAs. They report issues such as poaching and encroachment within areas of their jurisdiction. Thus both SPC and SWC are channels for participative approaches in biodiversity conservation.

b) Honorary Wild Life Rangers (HWLR)

The subject of creating Honorary Wild Life Rangers (HWLRs) was first proposed in the 1980s by the Select Committee for Flora and Fauna of the State Legislative Assembly (Amin 2000). Under the Wild Life Protection Ordinance 1990, the interpretation of Wild Life Officers includes Honorary Wild Life Rangers and their key role was to enforce the provisions of the ordinance. Thus in the early days HWLRs were also legally considered to be enforcement officers. However, an evaluation survey carried out 2000 to assess the effectiveness of the program prompted a formulation of a new concept where HWLR is about “volunteering, awareness and the love for nature” (Ahmad et al. 2008).

HWLRs are members of the public, who are over 18 years of age elected from headmen of villages, for instance *Tuai Rumahs* or *Penghulus*. These villages are usually within the vicinity of key areas or protected areas and HWLRs represent their communities in conservation issues. They function as ‘eyes and ears’ specific to their regions pertaining to issues on poaching, encroachment and so forth. Participation is on a voluntary basis and the members motivate others by working outside their regions. Members are also motivated to improve their knowledge on biodiversity conservation, thus this is an avenue for participative management. In short, HWLRs are “ambassadors” of conservation to help cascade the message of conservation to others.

c) Junior Wildlife Rangers (JWR)

Junior Wildlife Rangers is a conservation education programme where members of the public who are less than 18 years of age are invited to participate. Activities are drawn up for those who have enrolled, aimed at changing of attitudes and to instil love for nature. Programmes conducted in schools include Nature & U, Adventure with Wildlife, Friends of Nature.

(viii) Sarawak Hornbill Workshop 2012

Sarawak has been engaging communities in tourism and also biodiversity conservation programmes (participatory approaches or community based programmes). Eight resolutions have been drawn up from the Sarawak Hornbill Workshop 2012:

1. To establish the Hornbill Foundation Fund.
2. To step up research and development work on hornbills with a view to establish a central database that can be readily accessed for enhanced action for hornbill conservation in Sarawak.
3. To promote the conservation of hornbills through Communication, Education and Public Awareness (CEPA).
4. To enhance capacity building in areas of research, husbandry, protection, CEPA, interpretation and tourism.
5. To develop and promote hornbill-based tourism particularly involving rural communities in the Community-based Ecotourism (CBET) sector.
6. To identify and protect high conservation areas for hornbills outside TPAs, working at all levels of societies to protect and enhance the population of hornbills such as in Piasau Camp and wildlife corridors.
7. To develop a Strategic Management Plan for hornbills in Sarawak.
8. To bid for the opportunity to host the International Hornbill Conference in 2017.

CONCLUSIONS

Sarawak is enthusiastic about living up to the tag of “Land of the Hornbills” and serious efforts are undertaken for the conservation of hornbills in the State, whilst gearing up for the next International Hornbill Conference (IHC) in 2017. The State government has taken steps to implement recommendations from the previous Hornbill Workshop, which is for Sarawak to host the upcoming International Hornbill Conference in 2017, by sending representatives to attend the IHC in Manila to bid for the 2017 IHC.

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Table 1. Hornbill species in Totally Protected Areas of Sarawak.

Site	Mulu NP	Niah NP	Lambir NP	Similajau NP	Gunung Gading NP	Kubah NP	Batang Ai NP	Loagan Bunut NP	Tanjung Datu NP	Maludam NP	Santubong NP	Gunung Buda NP	Pulong Tau NP	Samunsam WS	Lanjak Entimau WS	Sibuti WS
Area (ha)	52,865	3,138	6,949	7,064	4,106	2,230	24,040	10,736	1,379	43,147	1,140	6,235	63,700	22,801	168,758	678
Species																
White-crowned Hornbill	+		+	+									+	+	+	
Bushy-crested Hornbill	+			+		+	+		+	+			+	+	+	
Wrinkled Hornbill	+	+		+										+	+	
Wreathed Hornbill	+		+			+	+		+				+	+	+	
Black Hornbill	+	+	+	+		+	+	+	+	+			+	+	+	+
Oriental Pied Hornbill	+	+	+	+	+			+	+				+	+		+
Rhinoceros Hornbill	+		+	+	+		+		+	+	+		+	+	+	
Helmeted Hornbill	+						+	+	+			+	+	+	+	

(Abbreviations: NP = National Parks; WS = Wildlife Sanctuary)

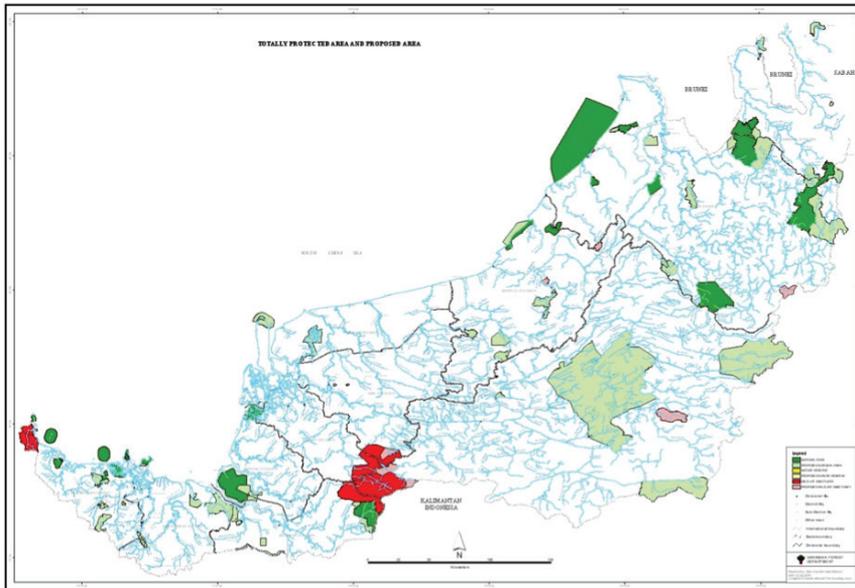


Figure 1. Map of Totally Protected Areas (TPAs) in Sarawak.
 (Source: Forest Department Sarawak)