

Executive Summary

Trusan Sugut Forest Reserve involving a total area of 8,680 hectares forest, lies in the northern part of east coast Sabah. It was reclassified as a Class I (Protection) Forest Reserve from Class II (Production) Forest Reserve in November 2014. This forest reserve, despite its relatively small size, harbours significant diversity of forest types, plants and animal species.

Field surveys to document various wildlife taxa were conducted to feed into the preparation of the forest management plan for Trusan Sugut FR. The data from these surveys also formed the basis for this HCV assessment report, which is prepared according to the guidelines of the HCV Resource Network. Surveys were conducted on terrestrial mammals, orangutan, proboscis monkey, birds, fish, and flora. Forest cover and conditions were mapped, forest connectivity was assessed, and social baseline assessments were conducted. All types of HCVs were found present in Trusan Sugut FR and the findings are summarised in Table 1.

Surveys confirmed that the biodiversity values (HCV 1 & 3) are indeed significant and diverse, with many species (fauna) currently listed as critically endangered, endangered or vulnerable in the IUCN Red List of Threatened Species (2015). Endangered forest types (freshwater swamp, lowland Kerangas and lowland mixed dipterocarp forest) are also present in Trusan Sugut FR.

Trusan Sugut FR is one of the last few places in Sabah where naturally occurring unique species, forest types and ecosystems can be found within a small protected reserve. Unfortunately, due to past logging and fires, some parts of the reserve have been degraded and need to be rehabilitated. Trusan Sugut FR currently remains connected to the forests of the Sugut Forest Reserve to the west and north, and to the mangrove forest reserves to south and north. This reserve is thus currently a HCV 2 (landscape level forest) but may become isolated in the long run as more lands surrounding the forest reserve get converted to non-forest land-use. It is crucial that Trusan Sugut FR stays connected to other forested habitats so that animal/ plant populations can use and disperse into.

Due to its downstream location, Trusan Sugut FR does not provide clean water to local

communities although it is crucial in providing shelter and habitat for aquatic life especially fish species which are a staple diet of the local communities surrounding the forest reserve. Trusan Sugut FR also borders the Sg. Sugut along its western boundary, and therefore plays a role in erosion control along the riverbanks (HCV 4.2). Rivers running within and parallel to the forest reserve have been identified as barriers to destructive fires (HCV 4.3). The surrounding areas have been burnt during the 1997-98 El Nino drought event and are still at risk as it is surrounded partly by oil palm plantations and a few human settlements.

In terms of social values (HCV 5 and 6), Trusan Sugut FR is potentially important for local communities as a source of forest produce, mainly wood for their basic needs. The village that relies most heavily upon forest produce from Trusan Sugut FR and adjacent forests is *Kg. Pantai Boring*, which is closest to the reserve. A system of fulfilling the basic wood needs of local communities may be developed by the reserve management in consultation with local communities. Several cultural sites which are significant to the local communities have also been identified in and near Trusan Sugut FR. Similarly, the reserve management should consult the local communities further to develop a system of allowing them access to the relevant sites in the reserve.

Although Trusan Sugut FR itself is a protection forest, threats have been identified during the surveys and management recommendations have been made to reduce these threats and to maintain and enhance the HCVs. In short, some of the management and monitoring recommendations are applicable to more than one HCV such as conducting patrolling to detect illegal encroachment, hunting and to prevent catastrophic fires. Thus it would be easier to maintain and/or enhance the HCVs identified when these prescribed activities are carried out.

A composite map of locations and extent of HCVs 1 and 3 shows that the whole reserve is covered by HCVs (Figure 1). Furthermore, the whole reserve is considered a HCV 1.1, HCV 2, HCV 4.1 and HCV 4.2. On the whole, the overlapping extent of various types of HCVs over the entire area of Trusan Sugut FR point to the great importance of the reserve as a HCV area, and underline the crucial need for managing the whole reserve effectively and carefully.

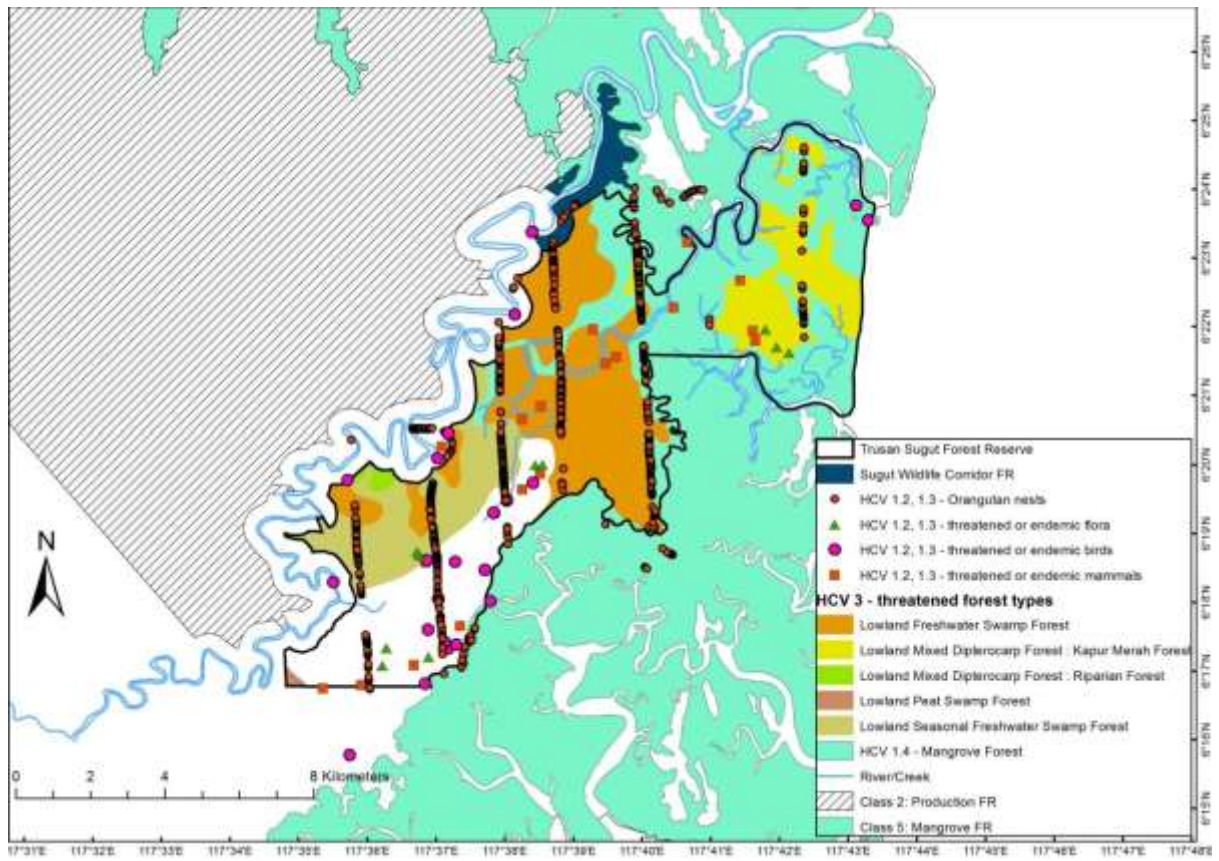


Figure 1 Composite map of HCV 1.2 -1.4 and HCV 3. Map courtesy of Yoganand Kandasamy.

Table 1 Summary of HCVs found in Trusan Sugut Forest Reserve

HCV	Attributes	Findings	Management Recommendations	Monitoring Recommendations
1.1	Protected Areas	Present	Border demarcated and marked; regular awareness sessions conducted	Patrolling carried out frequently according to a SMART ¹ -based enforcement plan
1.2	Threatened and Endangered Species – Flora	Present	Safeguards against fires in place; restoration of degraded areas to improve forest tree diversity and structure carried out; patrolling to monitor for illegal logging	Setting-up of permanent sample plots; using satellite imagery to monitor forest cover condition Monitoring forest health by remeasure of all PSPs every 3-5 years to detect changes in stand dynamic
1.2	Threatened and Endangered Species - Fauna	Present	Patrolling carried out frequently according to a SMART-based enforcement plan; degraded orang utan habitat restored; Fig trees included in enrichment planting for helmeted and other hornbills.	Patrolling carried out frequently and as per prescribed in the zoning plan (section 4 of FMP); monitoring of indicator species sensitive to environmental change
1.3	Endemism - Flora	Present	Safeguards against fires in place; restoration of degraded areas carried out; patrolling to monitor for illegal logging	Setting-up of permanent sample plots; using satellite imagery to monitor forest cover and health; Monitoring forest health by remeasure of all PSPs every 3-5 years to detect changes in stand dynamic
1.3	Endemism - Fauna	Present	Patrolling carried out frequently according to enforcement plan;	Patrolling carried out frequently; monitoring of indicator species sensitive to environmental change
1.4	Critical Temporal use	Present	Raise awareness amongst local communities to utilize mangrove spp. sustainably; patrolling at mangrove area to deter illegal activities	Satellite imagery to determine the health of mangrove forests; patrolling conducted frequently according to zoning plan (Section 4, FMP)
2	Landscape- Level Forest	Present	Ensure TSFR remains connected to other larger patches of forests; rehabilitation of areas which are degraded	Satellite images to monitor changes in forest cover and condition/ health
3	Ecosystems	Present	Rehabilitation of degraded areas; safeguards against fire in place	Satellite images to monitor changes in forest cover and condition/health; Monitor stand dynamic in restoration area

4.1	Watershed protection	Present	Construction must take into account watersheds and soil movement minimized.	Water monitoring conducted on a monthly basis to ensure good quality
4.2	Erosion control	Present	Regular patrols to prevent encroachment; protection and restoration of riparian forests according to DID guidelines	Regular patrolling as prescribed in Section 4 of the FMP to deter encroachment; Satellite images to monitor any encroachment; water bodies monitored on monthly basis to ensure minimal soil erosion
4.3	Barriers to destructive fires	Present	Identify and record nearest fire break/ water bodies; restore forest structure by restoration planting to increase resistance to spreading of fire.	Monthly patrolling to monitor if water bodies are in good condition Satellite images to monitor changes in forest cover and condition/health; Monitor stand dynamic in restoration area
5	Basic needs of local communities	Present	A system of fulfilling the basic wood needs of local communities may be developed further by the reserve management in consultation with local communities.	Monitoring system to be developed after further consultation with local communities
6	Cultural identities of local communities	Present	Reserve management should consult the local communities further to develop a system of allowing them access to the relevant sites in the reserve	Monitoring system to be developed after further consultation with local communities

¹ SMART refers to Spatial Monitoring and Reporting Tool used by enforcement agencies to measure and improve the effectiveness of wildlife law enforcement patrols and site-based conservation activities. For details visit www.smartconservationsoftware.org