

HCV 1 Biodiversity Value

HCV 1.3 Endemic Species

Any forest containing endemic species as identified by FRIM, MNS, SFC, Forestry Departments and published literature, particularly in high concentration or highly restricted distribution, can be considered HCV 1.3.

Findings	<ul style="list-style-type: none"> • The presence of considerably high number of endemic fauna and flora from both past research findings and the recent HCV assessment may conclude that this FMU unit is an important natural plant habitat or for wildlife nesting and foraging habitats.
Management Prescription	<ul style="list-style-type: none"> • Establish a long term biodiversity monitoring system for critical forest ecosystem, flora and fauna. • Migratory pathway of key wildlife species, i.e. Bornean pygmy elephant, tembadau and other keystone species on accessible roads, along streams or wildlife trails in the project area should be marked on the map. In addition, clear signage should be installed on strategic location to inform road, trail and river users to ensure wildlife are able to use them for movement within and between forest reserves.
Monitoring	<ul style="list-style-type: none"> • Periodical monitoring of forest ecosystem health once every three years by conducting re-enumeration of all the trees in the permanent sample plots to obtain indication of changes in tree structure and species assemblages (HCV 1.2, 1.3, 2 & 3) • Periodical monitoring of endangered, and endemic fauna species will be practiced using appropriate methodology. Any changes in terms of population count or ground staffs, the management team must be alerted. Similarly, this monitoring prescription also applies to endangered and endemic plant that are recorded in the PSPs or nature trails (HCV 1.2, 1.3 & 2)

A. Flora

Site perspective

Based on data compiled from previous studies and Sandakan Herbarium database, there is a total of 98 species that are recognized as endemics to Borneo, representing about 23 % of tree species known from the project area. Of these numbers, 6 species are endemic to Sabah.

A total of 9 endemic tree species are currently protected under Schedule 1 of the Forest Rules 1969, and 14 endemic plants are threatened and endangered under

the IUCN red list that consist of 7 species as critically endangered, 3 species as vulnerable and 4 species as endangered. However, the presence of these endemic flora may not be able to verify the stability of population. Therefore, the existing long-term monitoring activities by using permanent sample plots are useful to determine long-term population trends of increase or decrease that can be related to human disturbance or short term fluctuations caused by variations in weather or unpredictable natural catastrophic events.

The rationale for the identification of HCV attribute

In relation to the flora diversity and a number of outstanding conservation values, the assessment indicates that the assessment indicates that the whole area of UKW-SFM should be categorized as HCV 1.2 that indicates habitats for endemic flora in the project area area (Fig. 1).

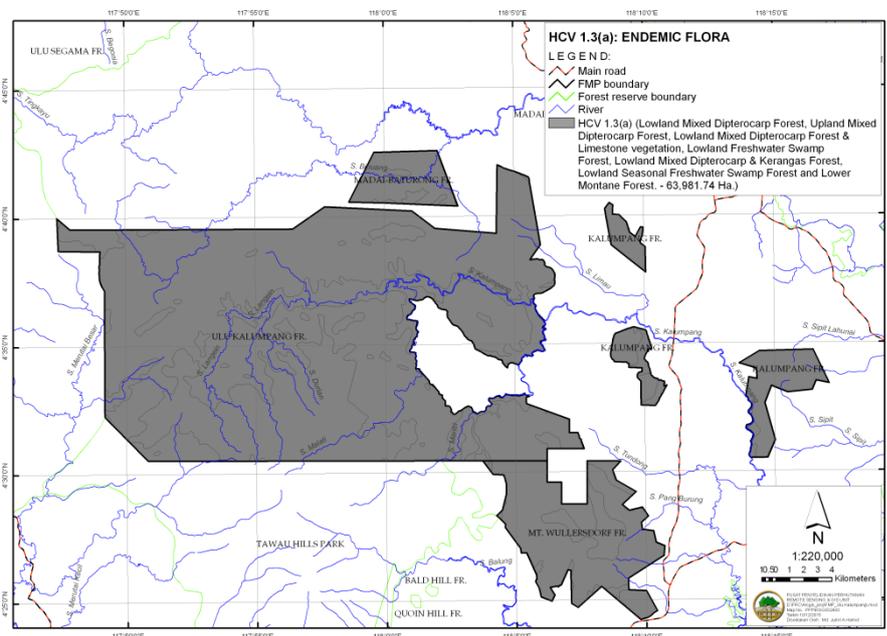


Figure 1. The entire UKW-SFM Project Area is categorised as HCV 1.3 that indicates habitats for endemic flora.

B. Fauna

Site perspective

At least 5 medium to large mammal species (including subspecies) recorded in UKW-SFM are endemic (Appendix III, Table A). Recent survey also found that at least 21 birds and 8 insects are endemic species in the project area (Appendix III).

The rationale for the identification of HCV attribute

The management indicates that the whole area lowland mixed dipterocarp (including those associated with kerangas and limestone vegetation), lowland seasonal freshwater swamp and lowland freshwater swamp forests should be categorised as

