

## HCV 1 Biodiversity Value

### HCV 1.2 Threatened and Endangered Species

#### Definition

Any species categorized as either Critically Endangered (CR), Endangered (EN) or Vulnerable (VU) on the IUCN Red List, Appendix I of CITES or listed as protected under Malaysian legislation (federal or state), is HCV 1.2. However, for practical reasons forest managers may want to limit field surveys of fauna to mammals (particularly large ones, over 20kg in weight), birds and herpetofauna, unless literature indicates that there are other species in the area which require specific attention. This does not mean that other taxa are unimportant, and wherever possible, if the expertise and survey protocols are available there should be covered too. It is also recommended to cross check the IUCN Red list with the Malaysian Red Data Book, once that is available. Where there may be difference between the Malaysian Red Data Book and the IUCN Red List, the Malaysian Red Data Book should always take precedence.

Findings	The presence of considerably high number of high conservation significant fauna and flora from both past research findings and the recent HCV assessment may conclude that PSFR is an important natural plant habitat or for wildlife nesting and foraging habitats.
Management Prescription	<ul style="list-style-type: none"><li>• Conduct periodic patrolling and surveillance in all designated HCV areas to curb illegal activities, such as encroachment and poaching.</li><li>• Establish a long term biodiversity monitoring system for critical forest ecosystem, flora and fauna.</li><li>• If the management team discover high conservation value plant species (IUCN red list, prohibited species under Sabah Forestry Department, CITES and Sabah Wildlife Enactment) as listed in Appendix II, in permanent sample plots and nature trails in PSSFM area, they should be clearly marked on the ground and on the maps.</li><li>• Migratory pathway of wildlife on logging roads, along streams or wildlife trails in the forest should be marked on the map and kept to ensure wildlife are able to use it for movement within and between forest reserves.</li><li>• Collaboration amongst department, private land owners and individuals surrounding the proposed wildlife crossing is crucial in setting up connectivity that will allow movement of wildlife between Block A and Block B of PSFR.</li><li>• Field staff is required to attend training courses on plants and wildlife to further enhance their botanical and wildlife knowledge on species</li></ul>

that are currently listed in the threatened, endemic and forestry prohibited lists to ensure they do not harvest or damage and also for monitoring purposes.

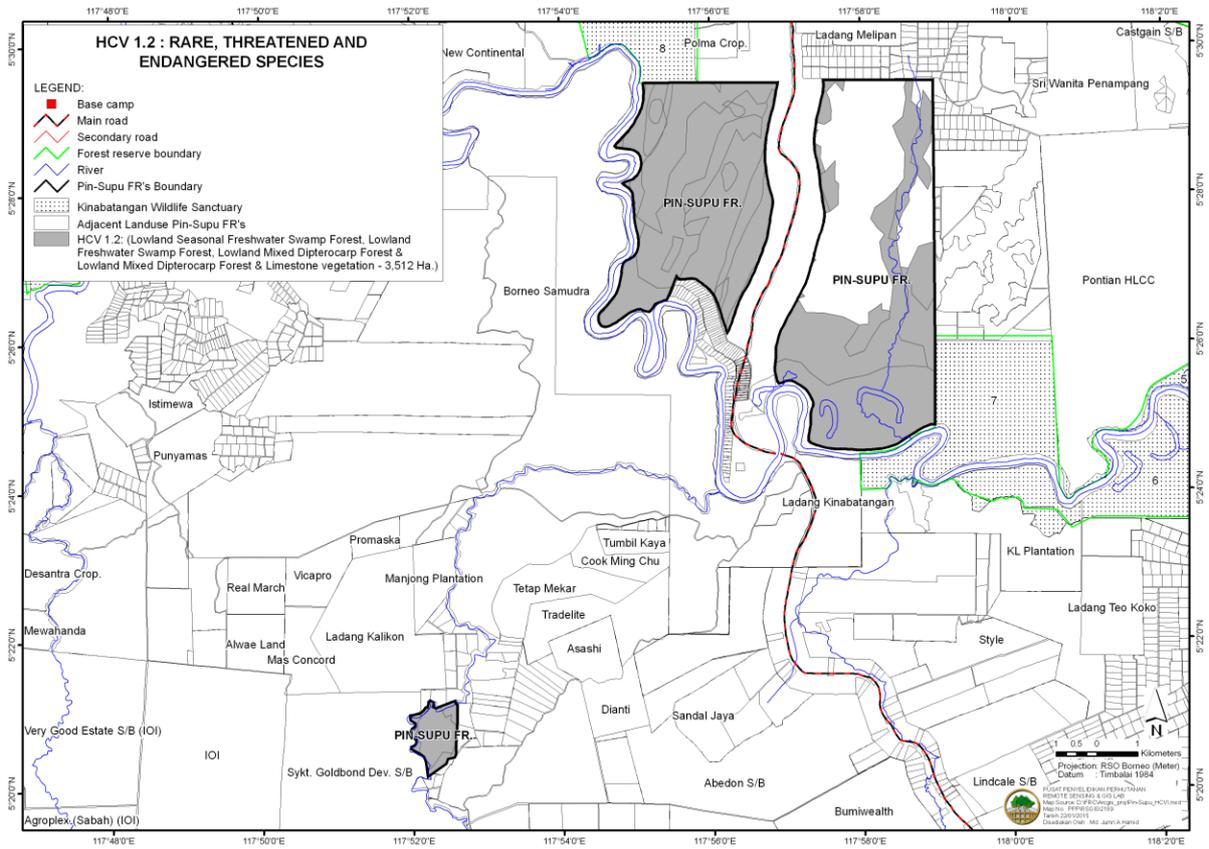
- Update current biodiversity conservation status to management team of the upgrade or downgrading of threat status locally and globally.

#### Monitoring

- Periodic monitoring and control should be carried out to prevent encroachment in the buffer zone. Any signs of encroachment should be reported and dealt with immediate actions.
- Quarterly progress reports in reporting of the progress of activities as prescribed in the approved Annual Work Plan (AWP), encompassing reporting of monitoring results of known HCV attributes.
- Periodical monitoring by conducting re-enumeration of the trees in the permanent sample plots to be conducted once every three years to get an indication of changes in tree structure and species assemblages.
- Periodical monitoring of endangered, endemic and migratory wildlife species will be practiced using Wildlife Management System adopted by the management team. Any changes in terms of population count or migratory pathways observed by either researchers or ground staffs, the management team must be alerted. Similarly, this monitoring prescription also applies to endangered and endemic plant.

#### ***Rationale for HCV Boundary Delineation***

In relation to the flora diversity and a number outstanding conservation values, the assessment indicates that the whole area of previously mixed dipterocarp, seasonal freshwater swamp and freshwater swamp forest should be categorised as HCV 1.2 that indicates habitats for threatened and endangered flora in PSFR (Fig. 2).



**Figure 8.** The previously mixed dipterocarp, seasonal freshwater swamp and freshwater swamp forests in PSFR area should be designated as HCV 1.2 due to its important habitats for high conservation value flora and fauna.