

HCV 3 (ECOSYSTEMS AND HABITATS)

The HCV definitions under the HCVRN (2013): Rare, threatened, or endangered ecosystems, habitats or refugia.

Findings on HCV Attribute

Based on the Sabah Forestry Department archival data of natural forest resources, currently several natural forest ecosystems in the state, namely lowland kerangas, lowland mixed dipterocarp, combination of kerangas within lowland mixed dipterocarp, lowland seasonal freshwater swamp and upland freshwater swamp forests have lost 70% of their historical extend. Only lowland mixed dipterocarp, combination of kerangas within lowland mixed dipterocarp, and lowland seasonal freshwater swamp were observed in USM, but large extend underwent severe disturbances from timber extraction and forest fire. These remaining forest ecosystems harbour threatened and endemic species as mentioned earlier in HCV 1 sub-section.

Justification of HCV Area	The forests categorized as old-growth and advance-growth forests in lowland mixed dipterocarp, lowland seasonal freshwater swamp and combination of kerangas within lowland mixed dipterocarp forests are regionally threatened ecosystems that appropriate to be categorised as HCV 3 (Figure 1).
Potential Threats	<p>Forest simplification - About 5 % of the total reserve area is secondary vegetation with various degrees of degradation. These areas are very much degraded with low diversity and productivity and so the threat of forest simplification may be inevitable. The simplification of the forest after severe disturbance could have a direct impact to the physical and terrestrial (biological) ecosystem throughout the forest landscape.</p> <p>Encroachment - Illegally harvesting of timber, clearing of vegetation for agricultural development and wildlife poaching are threats to the ecological well-being of the project area.</p> <p>Forest Fire - Degraded forest is more susceptible to forest fire during drought. If forest fire occurs, simplification of the forest could have a direct impact to the physical and terrestrial (biological) ecosystem throughout the forest landscape.</p>
Management Implications	Similar as HCV 1 under the pretext of Protected Area, forest protection programme that address the threats of encroachment and forest fire should be implemented. All surveillance records should be placed in the main base office. Rehabilitation activities are required in areas that are critically needed for habitat restoration to avoid forest simplification and increase ecosystem structural quality.
Actions	<ul style="list-style-type: none"> • Perimeter boundary patrol by ground and aerial surveillance executed by monthly basis • Monitoring and control at 9 FCS executed at full time basis • Dismantling unnecessary road access (case-by-case) • Boundary clearance executed at problematic areas (case-by-case)

