

HCV	ID	GENERAL HCV MANAGEMENT OBJECTIVE	SPECIFIC HCV MANAGEMENT OBJECTIVE	MANAGEMENT TARGETS	MANAGEMENT STRATEGIES		OPERATIONAL MONITORING	STRATEGIC MONITORING	THREAT MONITORING
					AREAS	PRESCRIPTIONS			
1.1	64,953.74 ha Consisting of Ulu Kalumpang FR, Mt Wullersdorf FR, Kalumpang VJR 107 (C, D & E) FR and Madai Baturong VJR 107 F (Binuang) FR.	The whole project site remained protected from serious environmental or ecological threat.	Encroachment into the Project site is controlled and reduced.	No new encroachment cases within the identified existing encroached area surveyed.	Whole area	<ul style="list-style-type: none">No conversion of forests is permitted.No encroachment.No poaching.No illegal fellingNo illegal cultivationNo illegal occupationsConduct periodic patrolling and surveillance in accessible HCV areas.Demarcation of main Forest Reserves boundary especially conflicted sites shall be completed.Gazette map of all FR within UKW shall be updatedNo open burning within the UKW SFM as well as right nearby/ boundary of UKW SFMSignboards to prohibit any illegal activities to be erected and visibly maintained at the strategic location as well as all identified HCV area.	<ul style="list-style-type: none">Periodic monitoring and control should be carried out to prevent encroachment in the FMU.Quarterly progress reports in reporting of the progress of activities as prescribed in the approved AWP.Ground patrolling to be conducted at least once every week at all sites/ Forest Reserve.Aerial surveillance to be conducted twice yearly.Inspection of boundaries to be conducted at least once every week.Enforcement and monitoring through Forest Checking Station Sg. Mantri, Wullersdorf, Landau, Sapang, Tingkayu and Binuang.Signboards to prohibit any illegal activities erected and maintained at the strategic locations as well as all identified HCV area.Joint operation with relevant authority/ agency/NGO’s to combat encroachment, poaching, illegal felling as well as environmental issues and social issuesForest rehabilitation works as prescribed in the AWP	<ul style="list-style-type: none">Periodic monitoring and control should be carried out to prevent encroachment in the FMU.Quarterly progress reports in reporting of the progress of activities as prescribed in the approved AWP.To maintain all established PSP Plots every year.Periodic monitoring by conducting re-enumeration of all trees in the permanent sample plots and to be conducted once every three year to get indication of changes in tree structure and species assemblages.To procure updated remote sensing data, satellite images, and GIS data map for Forest Reserves within UKW SFM once every 3 years.Water Quality Sampling shall be done once every yearStakeholders consultation shall be completed at least once every year.Awareness sessions and consultations to be conducted at least once every year with neighbouring plantation/ mines owners as well as community regarding the protection status of UKW SFM, applicable laws, forest fire, biodiversity and habitats within.	<ul style="list-style-type: none">Periodic monitoring and control should be carried out to prevent encroachment in the FMU.Quarterly progress reports in reporting of the progress of activities as prescribed in the approved AWP.The number of new encroachment cases occurred within the Forest ReservesTo monitor the hectarage of new encroached area.To monitor forest fires hazards around the UKW SFM Project area
			Total hectarage of restoration area of degraded forest is increased.	Total percentage of restored area of the existing encroached area increased.		*Indicators: 1. Number of cases of encroachment/ illegal felling/ illegal cultivation's/ illegal occupations/ forest fire/ poaching 3. Total hectarage of restoration area.			
1.2	[Listed] Flora 26 species from 7 families of plants are rare, endangered or threatened plant species	Biodiversity in UKW is maintained or enhanced	Flora diversity in UKW is maintained	No deterioration detected in diversity and/or abundance of identified flora in UKW.	<ul style="list-style-type: none">Whole area14 permanent sample plots	<ul style="list-style-type: none">Conduct periodic patrolling and surveillance in designated HCV areas.No encroachment.No illegal felling and collecting trees speciesEstablish a long-term biodiversity monitoring system for critical forest ecosystem, flora and fauna.Marked on the ground and on the maps of high conservation value plant species discover in PSP Plots and nature trails in UKW SFM Project area.	<ul style="list-style-type: none">Periodic monitoring and control.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 know HCV attributes.Ground patrolling to be conducted at least once every week at all sites/ Forest Reserve.Aerial surveillance to be conducted twice yearly.Inspection of boundaries to be conducted at least once every week.	<ul style="list-style-type: none">Periodic monitoring and control.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 know HCV attributes.Periodic monitoring by conducting re-enumeration of all trees in the permanent sample plots and to be conducted once every three year to get indication of changes in tree structure and species assemblages.	<ul style="list-style-type: none">Periodic monitoring and control.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 know HCV attributes.The number of new encroachment cases occurred within the Forest ReservesTo monitor the hectarage of new encroached area.To monitor forest fires hazards around the UKW SFM Project area
			*Indicators: 1. Number of changes in tree structure and species assemblages	No cases of illegal felling of rare, threatened and endangered trees within UKW SFM					

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						<ul style="list-style-type: none"> Field staff is required to attend training courses on plants to further enhance their botanical knowledge on species that are currently listed in the threatened, endemic and forestry prohibited list 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. 	<ul style="list-style-type: none"> Signboards to prohibit any illegal activities erected and maintained at the strategic locations as well as all identified HCV area. Signboards of PSPs (No., Coordinate No, etc.), HCV 1.2 and list of RTEs species within the PSPs to be erected at the strategic locations. 	<ul style="list-style-type: none"> Awareness sessions and consultations to be conducted at least once every year with neighbouring plantation/ mines owners as well as community regarding the protection status of UKW SFM, applicable laws, forest fire, biodiversity and habitats within. 	
1.2	[Listed] Fauna 11 species of mammals, 4 species of birds	Biodiversity in UKW is maintained or enhanced	Fauna diversity in UKW is maintained *Indicators: 1. Number of poaching cases (arrests and prosecution) 2. Species composition presence and absence	No deterioration detected in presence and absence of identified fauna in UKW. No cases of poaching occurred within UKW SFM Project	Whole area	<ul style="list-style-type: none"> Conduct periodic patrolling and surveillance in designated HCV areas. Establish a long term biodiversity monitoring system for critical forest ecosystem, flora and fauna. 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. Field staff is required to attend training courses on wildlife to further enhance their wildlife knowledge on species that are currently listed in the threatened, endemic and forestry prohibited list 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. 	<ul style="list-style-type: none"> Periodic monitoring and control. 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 know HCV attributes. Periodic monitoring of endangered, endemic and migratory wildlife species will be practised using wildlife Management System adopted by the management team. Any changes in terms of population count or migratory pathways observed by either researches of ground staffs, the management team must be alerted. Ground patrolling to be conducted at least once every week at all sites/ Forest Reserve. Aerial surveillance to be conducted twice yearly. Signboards to prohibit any illegal activities erected and maintained at the strategic locations as well as all identified HCV area. Signboards of PSPs (No., Coordinate No, etc.), HCV 1.2 and list of RTEs species within the PSPs to be erected at the strategic locations. 	<ul style="list-style-type: none"> Periodic monitoring and control. 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 know HCV attributes. Periodic monitoring of endangered, endemic and migratory wildlife species will be practised using wildlife Management System adopted by the management team. Any changes in terms of population count or migratory pathways observed by either researches of ground staffs, the management team must be alerted. Periodic monitoring of camera trapping, recce walk/ transect line and opportunistic sightings at least once every 3 months/ quarterly Periodic monitoring of birds at least once every year Awareness sessions and consultations to be conducted at least once every year with neighbouring plantation/ mines owners as well as community regarding the protection status of UKW SFM, applicable laws, forest fire, biodiversity and habitats within. 	<ul style="list-style-type: none"> Periodic monitoring and control. 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 know HCV attributes. Monitoring of poaching threats, including traces of poachers (platforms, wildlife traps and snares, poachers camp, bullet shells etc) within and adjacent to UKW SFM Project

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1.3	[Listed] Flora 98 species endemics to Borneo- 6 of these endemic to Sabah.	Biodiversity in UKW is maintained or enhanced	Flora diversity in UKW is maintained *Indicators: 1. Number of changes in tree structure and species assemblages	No deterioration detected in in presence and absence of identified flora in UKW.	Similar to HCV 1.2 (Flora)	Similar to HCV 1.2 (Flora)	Similar to HCV 1.2 (Flora)	Similar to HCV 1.2 (Flora)	Similar to HCV 1.2 (Flora)
	[Listed] Fauna 5 species of mammals, 21 species of birds and 8 species of insects are endemic	Biodiversity in UKW is maintained or enhanced	Fauna diversity in UKW is maintained *Indicators: 1. Number of poaching / Species composition 2. Total number of animal poached / Species composition	No deterioration detected in in presence and absence of identified fauna in UKW.	Similar to HCV 1.2 (Fauna)	Similar to HCV 1.2 (Fauna)	Similar to HCV 1.2 (Fauna)	Similar to HCV 1.2 (Fauna)	Similar to HCV 1.2 (Fauna)
1.4	The limestone Karst in Madai Baturong VJR 107F (Binuang) - nesting site for swiftlet, bats and other troglafauna.	Biodiversity of Madai Baturong VJR 107F (Binuang) Baturong cave is maintained or enhanced Habitat function is maintained	The limestone Karst in Madai Baturong VJR 107F is maintained *Indicators: 1. Number of illegal entry 2. Habitat function	No illegal entry and encroachment within the area Habitat function is maintained	Madai Baturong VJR 107F (Binuang)	<ul style="list-style-type: none"> Conduct periodic patrolling and surveillance in designated HCV areas. Any salt licks and potential nesting sites found within NGR area in the future, demarcation of HCV Boundaries on the ground and installing clear signage along existing road, foot trails and navigable rivers/stream indicating critical values. 	<ul style="list-style-type: none"> Ground patrolling to be conducted at least once every week at all sites/ Forest Reserve. Aerial surveillance to be conducted twice yearly. Signboards to prohibit any illegal activities erected and maintained at the strategic locations as well as all identified HCV area. Signboards of PSPs (No., Coordinate No, etc.), HCV 1.2 and list of RTEs species within the PSPs to be erected at the strategic locations. 	<ul style="list-style-type: none"> Assessment of habitat suitability shall be done once every 3 years. The assessment shall include the flora and fauna survey specific for the limestone habitat Scientific expedition Awareness sessions and consultations to be conducted at least once every year with neighbouring plantation/ mines owners as well as community regarding the protection status of UKW SFM, applicable laws, forest fire, biodiversity and habitats within. 	<ul style="list-style-type: none"> Periodic monitoring and control. Periodic monitoring on any salt licks and potential nesting sites found within NGR area in the future. Monitoring any signs of activities such as illegal entry, poachers, encroachment, forest fire by patrolling
	Ulu Kalumpang, Mt. Wullersdorf and Madai Baturong (Binuang) form a continous forested landscape to support high conservation value.	Ulu Kalumpang, Mt. Wullersdorf and Madai Baturong (Binuang) project site remained protected from serious environmental or ecological threat.	Connectivity of the Forest Reserves is maintained. The functions of the Forest Reserves as a large forest landscape is maintained	No new forest fragmentation. Total percentage of restored area of the existing encroached area increased.	Ulu Kalumpang, Mt. Wullersdorf and Madai Baturong (Binuang)	<ul style="list-style-type: none"> Conduct periodic patrolling and surveillance in designated HCV areas. Establish a long term biodiversity monitoring system for critical forest ecosystem, flora and fauna. 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 	<ul style="list-style-type: none"> Periodic monitoring and control. 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 know HCV attributes. Ground patrolling to be conducted at least once every week at all sites/ Forest Reserve. Aerial surveillance to be conducted twice yearly. 	<ul style="list-style-type: none"> Periodic monitoring and control. 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 know HCV attributes. Periodic monitoring by conducting re-enumeration of all trees in the permanent sample plots and to be conducted once every three year to get indication of changes in tree 	<ul style="list-style-type: none"> Periodic monitoring and control. 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 know HCV attributes. To always monitor the landscape changes, as well as any proposed development projects that threatens to fragment the Forest Reserves.

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						within and between forest reserves.	<ul style="list-style-type: none"> • Signboards to prohibit any illegal activities erected and maintained at the strategic locations as well as all identified HCV area. • Signboards of PSPs (No., Coordinate No, etc.), HCV 1.2 and list of RTEs species within the PSPs to be erected at the strategic locations. • Inspection of boundaries to be conducted at least once every week. • Enforcement and monitoring through Forest Checking Station Sg. Mantri, Wullersdorf, Landau, Sapang, Tingkayu and Binuang. • Joint operation with relevant authority/ agency/NGO's to combat encroachment, poaching, illegal felling as well as environmental issues and social issues. • Forest rehabilitation works as prescribed in the AWP • 	structure and species assemblages. <ul style="list-style-type: none"> • Periodic monitoring of endangered, endemic and migratory wildlife species and plants. • Long term monitoring of NGR landscape using remote sensing technology and produce forest quality map to be conducted once every three years to detect changes within the reserve and also vicinity areas. If threats area detected, precautionary approached will be taken and potential mitigation measures will be incorporated in the management plan. • Awareness sessions and consultations to be conducted at least once every year with neighbouring plantation/ mines owners as well as community regarding the protection status of UKW SFM, applicable laws, forest fire, biodiversity and habitats within. 	
3	The forested area below 200. a.s.l of seasonal freshwater swamp and mixed dipterocarp, including association of limestone vegetation and kerangas forest with the mixed dipterocarp forest	Ecosystem and rich biodiversity in UKW SFM which is rich in significant diversity of ecosystem are maintained and enhanced.	The identified forested area below 200. a.s.l of seasonal freshwater swamp and mixed dipterocarp, including association of limestone vegetation and kerangas forest with the mixed dipterocarp forest quality maintained	No encroachment and forest clearing into HCV3 identified area No deterioration detected in in presence and absence of identified flora and fauna in UKW.	Whole area	<ul style="list-style-type: none"> • Conduct periodic patrolling and surveillance in designated HCV areas. • Establish a long term biodiversity monitoring system for critical forest ecosystem, flora and fauna. 	<ul style="list-style-type: none"> • Periodic monitoring and control to prevent encroachment in HCV areas. • Quarterly progress reports in reporting of the progress of activities as prescribed in the approved AWP, encompassing reporting of monitoring results of known HCV attributes. • Ground patrolling to be conducted at least once every week at all sites/ Forest Reserve. • Aerial surveillance to be conducted twice yearly. • Signboards to prohibit any illegal activities erected and maintained at the strategic locations as well as all identified HCV area. • Signboards of PSPs (No., Coordinate No, etc.), HCV 1.2 and list of RTEs species within the PSPs to be erected at the strategic locations • Inspection of boundaries to be conducted at least once every week. 	<ul style="list-style-type: none"> • Periodic monitoring and control to prevent encroachment in HCV areas. • Quarterly progress reports in reporting of the progress of activities as prescribed in the approved AWP, encompassing reporting of monitoring results of known HCV attributes. • Periodic monitoring by conducting re-enumeration of all trees in the permanent sample plots and to be conducted once every three year to get indication of changes in tree structure and species assemblages. • Awareness sessions and consultations to be conducted at least once every year with neighbouring plantation/ mines owners as well as community regarding the protection status of UKW SFM, applicable laws, forest fire, biodiversity and habitats within. 	<ul style="list-style-type: none"> • Periodic monitoring and control to prevent encroachment in HCV areas. • Quarterly progress reports in reporting of the progress of activities as prescribed in the approved AWP, encompassing reporting of monitoring results of known HCV attributes. • Periodic monitoring by conducting re-enumeration of all trees in the permanent sample plots and to be conducted once every three year to get indication of changes in tree structure and species assemblages.

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							<ul style="list-style-type: none"> Enforcement and monitoring through Forest Checking Station Sg. Mantri, Wullersdorf, Landau, Sapang, Tingkayu and Binuang. Joint operation with relevant authority/ agency/NGO's to combat encroachment, poaching, illegal felling as well as environmental issues and social issues 		
4.2	All areas with slopes >25° and 30 m riparian buffer zone	Areas with slopes >25° and river or streams banks are maintain to prevent soil erosion	Maintain the Areas with slopes >25° and riparian reserves to prevent soil erosion.	No encroachment, forest fire, poaching, illegal felling, illegal cultivation, and illegal occupation activities which are might contribute to soil erosion.	<ul style="list-style-type: none"> Slopes >25° 30m riparian zone 	<ul style="list-style-type: none"> Conduct periodic patrolling and surveillance in designated HCV areas. 	<ul style="list-style-type: none"> Periodic monitoring and control to prevent encroachment in HCV areas. Quarterly progress report in reporting of the progress of activities as prescribed in the approved AWP encompassing reporting of monitoring results of known HCV attributes. Ground patrolling to be conducted at least once every week at all sites/ Forest Reserve. Aerial surveillance to be conducted twice yearly. Signboards to prohibit any illegal activities erected and maintained at the strategic locations as well as all identified HCV area. Signboards of PSPs (No., Coordinate No, etc.), HCV 1.2 and list of RTEs species within the PSPs to be erected at the strategic locations Inspection of all identified slope area >25° and rivers 	<ul style="list-style-type: none"> Periodic monitoring and control to prevent encroachment in HCV areas. Quarterly progress report in reporting of the progress of activities as prescribed in the approved AWP encompassing reporting of monitoring results of known HCV attributes. Water quality sampling to be conducted twice yearly at all identified water sampling plots. Awareness sessions and consultations to be conducted at least once every year with neighbouring plantation/ mines owners as well as community regarding the protection status of UKW SFM, applicable laws, forest fire, biodiversity and habitats within. 	<ul style="list-style-type: none"> Periodic monitoring and control to prevent encroachment in HCV areas. Quarterly progress report in reporting of the progress of activities as prescribed in the approved AWP encompassing reporting of monitoring results of known HCV attributes.
4.3	100 m band of moderate to high forest structure inside the project area that border local communities land and oil palm estate are categorised as HCV 4.3.	Barriers to destructive fire are maintained and enhance.	Maintain the buffer zone along neighbouring boundaries of local communities and oil palm plantations	<p>No encroachment, fire, poaching, illegal felling, illegal cultivation, and illegal occupation activities which are might contribute to fire.</p> <p>Natural Forest cover maintained.</p>	100m band of buffer zone	<ul style="list-style-type: none"> Conduct periodic patrolling and surveillance in designated HCV areas. The Forest Fire Management Plan has to be updated periodically. Identification of low vegetation structure that is susceptible to catch fire, i.e grassland and shrubs along the 50 m band inside the FMU boundaries is crucial. Forest restoration of indigenous tree species as part of the remedial action to increase forest structural 	<ul style="list-style-type: none"> Periodic monitoring and control to prevent encroachment in the forest barrier. Twice yearly 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. Ensure that all fire prevention procedures (monitoring, fire drills, public awareness campaign etc.) to be practised on a regular basis (at least once a year), especially during the drought season. 	<ul style="list-style-type: none"> Periodic monitoring and control to prevent encroachment in the forest barrier. Twice yearly 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. Ensure that all fire prevention procedures (monitoring, fire drills, public awareness campaign etc.) to be practised on a regular basis (at least once a year), especially during the drought season. 	<ul style="list-style-type: none"> Periodic monitoring and control to prevent encroachment in the forest barrier. Twice yearly 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. Ensure that all fire prevention procedures (monitoring, fire drills, public awareness campaign etc.) to be practised on a regular basis (at least once a year)

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						diversity and mitigate any forest fire incidence spreading into the FMU core area, especially area dominated with lalang grassland and ferns.	<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> Awareness sessions and consultations to be conducted at least once every year with neighbouring plantation/ mines owners as well as community regarding the protection status of UKW SFM, applicable laws, forest fire, biodiversity and habitats within. 	<ul style="list-style-type: none"> a year), especially during the drought season.



