

Myanmar Criteria & Indicators for Forest Management Certification (2007)

Criteria 1: Enabling condition for Sustainable Forest Management

This criterion addresses the general institution requirements that are necessary to make sustainable forest management possible. Most of the related indicators cover the legal, policy and institutional frameworks and are mainly descriptive in nature.

Indicators	Activities				Standard of Performance
<i>Policy, legal and governance framework</i>					
1.1 Existence and implementation of policies, laws and regulations to govern forest management	(i) Record in table 1: the present (✓) or absence (×) of laws, policies and regulations which governed each of the elements (a) to (g).				(ii) Existing Policies Laws & Regulations 1. Myanmar Forest Policy, (1995) 2. Forest Law, (1992) 3. Protection of Wildlife and Wild Plants and Conservation of Natural Areas Law, (1994) 4. Forest Rules, (1995) 5. Protection of Wildlife and Wild Plants and Conservation of Natural Areas Rules, (2002) 6. Community Forestry Instruction, (1995) (iii) (a) national objectives for forest including production, conservation, protection and investment. • Myanmar forest policy, (1995) Chapter (5), "objective" • Myanmar Forest Policy, Policy statement, (1996)- Chapter (3) • Forest Laws, (1992)- Chapter II, "Basic Principle" • Protection of Wildlife and Wild Plants and Conservation of Natural Areas Law, (1994) - Chapter II, "Objective" (b) establishment and security of the PFE • Forest Law, (1992)- Chapter III, "Constitution of Reserved Forest and Declaration of Protected Public Forest"
	Table 1. Presence (✓) or absence (×) of laws, policies and regulations				
	<i>Framework governing</i>	<i>policies</i>	<i>laws</i>	<i>Regulations</i>	
	(a) national objective for forest including production, conservation, protection and investment (b) establishment and security of the Permanent Forest Estate (PFE) (c) forest tenure and property right in relation to forests (d) participation of local communities and other stakeholders in forest management (e) control of illegal activities in forest areas (f) control of forest management (g) health and safety of forest workers				

Indicators	Activities	Standard of Performance
	<p>(ii) List all relevant laws, policies and regulations and the date at which came into force.</p> <p>(iii) For each of the laws, policies and regulations, give a brief description of any sections that are significant in relation to categories (a) through (g)</p> <p>(iv) List any significant gaps in the coverage of laws, policies and regulations and indicate how it is proposed that these gaps will be filled.</p> <p>(v) List any significant changes that have been made to the laws, policies and regulations listed in the last assessment.</p>	<ul style="list-style-type: none"> • Protections of Wildlife and Wild Plants and Conservation of Natural Areas law,(1994)- Chapter IV, "Designation of Protected Areas and Establishment of Zoological Garden and Botanical Garden" Chapter VII, "Right to Establish Zoological Garden and Botanical Garden" • Forest Rule, (1995) - Chapter (2), "Constitution of Reserved Forest and Declaration of Protected Public Forest" <p>(c) Forest tenure and property rights in relation to forest</p> <ul style="list-style-type: none"> • Community Forestry Instructions - Section (12), (13), "Duration of land lease for the establishment of community forest" • Forest Law, (1992)-Chapter V, "Establishment of Forest Plantation", Section (14), (15) - Chapter VI, "Permission for Extraction of Forest Produce", Section (17) • Protection of Wildlife and Wild Plants and Conservation of Natural Areas Law, (1994)- Chapter VII, "Right to Establish Zoological Garden and Botanical Garden" • Forest Rules, (1995) - Chapter(3), Section (20), (30) <p>(d) Participation of local communities and other stakeholders in forest management</p> <ul style="list-style-type: none"> • Community Forestry Instructions, (1995) • Myanmar Forest policy, (1995)- Section (5.10), (6.10), "People Participation and Public Awareness" • Forest Law, (1992) - Chapter V, Section (15) "Establishment of village-own firewood plantation" <p>(e) control of illegal activities in forest areas</p> <ul style="list-style-type: none"> • Forest Law, (1992)-Chapter XII," Offences and Penalties" • Protection of Wildlife and Wild Plants and Conservation of Natural Areas Law,(1994)-Chapter IX", Administrative action taken", Chapter XI," Offences and Penalties" • National Code of Forest Harvesting in Myanmar,(2000)

Indicators	Activities	Standard of Performance
		(f) control of forest management <ul style="list-style-type: none"> • Myanmar Forest Policy, (1995) - Section (6.6), "Forestry Planning • Forest Law,(1992)- Chapter IV," Management of Forest Land" (h) health and safety of forest workers <ul style="list-style-type: none"> • Myanmar's labour laws and procedure • Workmen's compensation Act, (1923) and other relevant updated- Acts. • Social security Act, (1954)
1.2 Forest tenure and ownership	(i) Complete Table 2 with information on forest tenure and ownership and ownership situation according to the Forest Laws.	
	Table 2 : Extent of forest tenure and ownership of forests	
	<i>Class</i>	<i>Category</i>
	PFE	Public Private Indigenous communities
Non-PFE	Public Private Indigenous communities	<ul style="list-style-type: none"> • Section (2.3), " Forest Resource Base" of Management Plan for this Forest Management Unit (FMU) • Community Forestry Instructions, (1995) Para (12), (13), "Duration of Land Lease for the Establishment of Community Forest"
<i>Economic Framework</i>		
1.3 Amount of funding in forest management, administration, research and human resource development	(i) Provide annual budget of this Management Unit (FMU) for forest management, administration, research and human resource development by government, international organization and private sources in Table 3.	<ul style="list-style-type: none"> • Annual budget allotment by the government for this FMU • Funding from the international organization • Contribution from private sources, e.g. Wood-based industries, Environmental organizations, etc.

Indicators	Activities				Standard of Performance	
	Table 3: Amount of funding for the latest available year					
	<i>Source</i>	<i>year</i>	<i>Funding(Kyat)</i>	<i>Comments</i>		
	Government source - National government - Sub-national government					
	International development partners - Grant - Loan					
	Private sources - Domestic - Foreign					
1.4 Existence and implementation of economic instruments and other incentives to encourage sustainable forest management	(i) Give the economic instrument and other incentives being implemented to encourage Sustainable Forest Management (SFM).				<ul style="list-style-type: none"> • Forest Law, (1992)-Section (13) (14), "Establishment of Forest Plantation" • Myanmar citizens Investment Law,(1994)-Chapter VII," Exemptions and Reliefs from Taxes • The establishment of forest Plantation in this FMU in joint venture with the government and any organization or any person. • The establishment of forest plantation by any organization or any person 	
<i>Institution framework</i>						
1.5 Number of profession and technical personnel at all levels to perform and support forest management	(j) Provide the number of professional and technical personnel at all levels to perform and support forest management in table 4.				<ul style="list-style-type: none"> • Annual report of forest Department (FD) and Myanmar Timber Enterprise (MTE) • District fact sheet • Organization chart of the FMU • Sanctioned and existing staff of FMU 	
	Table 4: Personal implementing and supporting forest management					
	<i>Category of personnel</i>	<i>Number</i>				
		<i>Governmental</i>	<i>Non-governmental</i>			
	Professionals (university or technical qualification)					
	Trained forest workers, full-and part-time					
Others						
Total						

Indicators	Activities	Standard of Performance
<p>1.6 Existence of communication strategies and feedback mechanisms to increase awareness of sustainable forest management.</p> <p>1.7 Existence of, and ability to apply, appropriate technology to practice sustainable forest management and the efficient utilization and marketing of forest products.</p>	<p>(i) Give a description of the communication strategies and feedback mechanism to increase awareness of sustainable forest management.</p> <p>(i) Describe the forest engineering and harvesting technology used to enhance sustainable forest management and the effects of using such technology.</p> <p>(ii) Describe the application of modern technology in downstream processing of forest products.</p> <p>(iii) Describe any recent change in the technology used.</p>	<ul style="list-style-type: none"> • The dissemination of information of SFM through television, radio, newspapers, posters, signboards and leaflet. • Annual seeding distribution programme of FD. • Conducting the Seminar, Workshop and Training for the local community. • Forest Policy, Section (6.4.1.1), " Forest Industry " • National Code of Forest Harvesting in Myanmar(2000) • Promotion of Cottage Industries Law, (1991) • Plans and implementation of activities on wood-based industries
<i>Planning framework</i>		
<p>1.8 Capacity and mechanisms for planning sustainable forest management and for periodic monitoring, evaluation and feedback on progress.</p>	<p>(i) Describe the mechanism used for planning sustainable forest management (including periodic monitoring, evaluation and feedback on progress).</p> <p>(ii) Describe the capacity available and institutions responsible for these purposes .</p> <p>(iii) List the major constraints encountered in planning.</p>	<ul style="list-style-type: none"> • 30-year National Forest Master Plan. • 10-year Management Plan for this FMU drawn based on the management guidelines and format. • Bago Yoma Greening and Rehabilitation Plan • Annual Plan for this FMU.

Indicators	Activities	Standard of Performance			
1.9 Public participation in forest management planning, decision-making, data collection monitoring and assessment	(i) List the institutions responsible for these processes. (ii) Describe the processes of public participation, indicating the parties involved and their level of involvement. (iii) Identify any constraint of the public participation.	<ul style="list-style-type: none"> • Forest Department, Myanmar Timber Enterprise, Dry Zone Greening Department, District and Township authority, Public. 			
1.10 Existence of forest management plans	(i) Provide the areas of production forest and protected forest under forest management plan (ii) Describe the effectiveness of implementation of forest management plan (iii) Identify any constraint in implementing the management plan	<ul style="list-style-type: none"> • Management Plan Manual (1996) • Guidelines for the collection of data for drawing up the Forest Management Plan (1996) • Management Plan for this FMU and documents. • Bago Yoma Greening and Rehabilitation Plan. • Annual Report, records of FMU. 			
	Table 5: Areas in (ha) of Production and Protected Forests under the Management Plan				
			<i>PFE</i>	<i>Non-PFE</i>	<i>Total</i>
	Production forests				
	Protected forests				

Criterion 2 : Extent and condition of forests

This criterion lays the basic foundation for sustainable forest management within production and protection forests. It considers the extent and percentage of land under natural and planted forests, the need for the conservation of biological diversity through the maintenance of a range of forest types, and the integrity and condition of forest resources.

Indicators	Activities	Standard of Performance																		
2.1 Extent (area) and percentage of total land area under management plan.	(i) Provide the areas and percentage of total land area under forest, agriculture and other lands in Table 6. (ii) Prepare land use and forest cover map at appropriate scale. Table 6: Extent (area) & percentage of total land area. <table border="1"> <thead> <tr> <th><i>Land use type</i></th> <th><i>Area (ha)</i></th> <th><i>% of Total Land Area</i></th> </tr> </thead> <tbody> <tr> <td>Forest Land</td> <td></td> <td></td> </tr> <tr> <td>Agriculture Land</td> <td></td> <td></td> </tr> <tr> <td>Other Land</td> <td></td> <td></td> </tr> <tr> <td>Total</td> <td></td> <td></td> </tr> </tbody> </table>	<i>Land use type</i>	<i>Area (ha)</i>	<i>% of Total Land Area</i>	Forest Land			Agriculture Land			Other Land			Total			<ul style="list-style-type: none"> Section (2.2), "Land use" of Management Plan, Part 1 of this FMU. Forest cover and Land Use Map at the appropriate scale. 			
<i>Land use type</i>	<i>Area (ha)</i>	<i>% of Total Land Area</i>																		
Forest Land																				
Agriculture Land																				
Other Land																				
Total																				
2.2 Extent (area) of forest committed to production and Protection	(i) Provide the area of Natural and Planted forest for Production forest and Protection forest in Table 7. Table 7: Extent (area) of natural and planted forests for production and protection. <table border="1"> <thead> <tr> <th></th> <th><i>Production (ha)</i></th> <th><i>Protection(ha)</i></th> </tr> </thead> <tbody> <tr> <td>Natural forest, total</td> <td></td> <td></td> </tr> <tr> <td>- PFE *</td> <td></td> <td></td> </tr> <tr> <td>- Non-PFE</td> <td></td> <td></td> </tr> <tr> <td>Planted forests, total</td> <td></td> <td></td> </tr> <tr> <td>- PFE *</td> <td></td> <td></td> </tr> </tbody> </table>		<i>Production (ha)</i>	<i>Protection(ha)</i>	Natural forest, total			- PFE *			- Non-PFE			Planted forests, total			- PFE *			<ul style="list-style-type: none"> Section (2.3), "Forest Resource Base" of Management Plan, Part 1 of this FMU. Record of gazette reserved forests and protected public forests.
	<i>Production (ha)</i>	<i>Protection(ha)</i>																		
Natural forest, total																				
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- Non-PFE																				
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Indicators	Activities					Standard of Performance
	<i>Production (ha)</i>		<i>Protection (ha)</i>			
	Total - PFE * - Non-PFE					
	* include reserved forests, protected public forest and protected area Systems					
2.3 Extent (area) and percentage of total land area under each forest type	(i) Provide area and percentage of total land area under each forest type in Table 8.					<ul style="list-style-type: none"> • Section (2.3.1.1), "Natural Forest" of Management Plan. • Forest type map of this FMU. • Brief description of the standard forest types encountered in this FMU.
	Table 8: Area and percentage of total land area under each forest type					
	<i>Forest type</i>	<i>Total(ha)</i>	<i>%</i>	<i>PFE(ha)</i>	<i>Non-PFE(ha)</i>	
	(ii) Describe briefly the classification of standard forest types with species composition.					

Indicators	Activities	Standard of Performance																					
2.4 Percentage of PFE with boundaries physically demarcated	<p>(i) Determine the extent and percentage of external boundaries in this FMU demarcated or clearly defined by natural or physical features.</p> <p>(ii) Complete the information required in Table 9.</p> <p>Table 9: External limits of the PFE</p> <table border="1"> <thead> <tr> <th><i>PFE Class</i></th> <th><i>Area(ha)</i></th> <th><i>Percentage demarcated(%)</i></th> <th><i>Comments on effectiveness of demarcation</i></th> </tr> </thead> <tbody> <tr> <td>Production</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Protection</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	<i>PFE Class</i>	<i>Area(ha)</i>	<i>Percentage demarcated(%)</i>	<i>Comments on effectiveness of demarcation</i>	Production				Protection				<ul style="list-style-type: none"> Section (9.7.1.1), "Reserve boundary" of management plan. Program for the maintenance of external foundries of reserved and protected public forest. Manual Standing Orders for Subordinate (M.S.O.S) - Chapter 6 (1), "Boundary Repair" 									
<i>PFE Class</i>	<i>Area(ha)</i>	<i>Percentage demarcated(%)</i>	<i>Comments on effectiveness of demarcation</i>																				
Production																							
Protection																							
2.5 Changes in forested area	<p>(i) Provide the information on changes in forest area between (200--) to (200--) in Table 10.</p> <p>Table 10: Changes in forested Area</p> <table border="1"> <thead> <tr> <th></th> <th><i>PFE (ha)</i></th> <th><i>Non-PFE (ha)</i></th> </tr> </thead> <tbody> <tr> <td>Area at last reporting (give date)</td> <td></td> <td></td> </tr> <tr> <td>Area formally converted to agriculture</td> <td></td> <td></td> </tr> <tr> <td>Area formally converted to settlements and infrastructural development</td> <td></td> <td></td> </tr> <tr> <td>Area formally converted for other purposes (please specify)</td> <td></td> <td></td> </tr> <tr> <td>Area formally added</td> <td></td> <td></td> </tr> <tr> <td>Area converted illegally (estimate)</td> <td></td> <td></td> </tr> </tbody> </table>		<i>PFE (ha)</i>	<i>Non-PFE (ha)</i>	Area at last reporting (give date)			Area formally converted to agriculture			Area formally converted to settlements and infrastructural development			Area formally converted for other purposes (please specify)			Area formally added			Area converted illegally (estimate)			<ul style="list-style-type: none"> Section (2.2.3), " Land use Changes " of Management Plan The forest resource assessments conducted periodically. Report of regular forest inventory carried out by Planning and Statistic Division of FD.
	<i>PFE (ha)</i>	<i>Non-PFE (ha)</i>																					
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Area formally converted for other purposes (please specify)																							
Area formally added																							
Area converted illegally (estimate)																							

Indicators	Activities	Standard of Performance		
2.6 Forest condition	(i) Complete the information as required in Table 11.	<ul style="list-style-type: none">• Management Plan of this FMU Section (2.2.2), " Status of forest cover "• Report on the forest resource assessment• Forest inventory report• Forest cover and land use map		
	Table 11: Forest condition			
			<i>PFE (ha)</i>	<i>Non-PFE (ha)</i>
	Closed Forest			
	Open Forest			
	Other Wooded Lands			
	Other Land Cover			

Criterion 3 : Forests ecosystem health

This criterion relates to healthy biological functioning of forest ecosystems. This can be affected by a variety of human actions such as encroachment, illegal harvesting, human-induced fire and pollution, grazing, mining, poaching, etc, and by natural phenomena such as fire, insect attacks, diseases, severe winds and rainfall, flooding, drought, etc.

Indicators	Activities					Standard of Performance
3.1 Extent and nature of forest encroachment, degradation and disturbance caused by humans and the control procedures applied.	(i) Provide five human activities most damaging to the PFE and non- PFE in Table 12.					<ul style="list-style-type: none"> • Field inspection reports. • Forest Record (1)-"Register of forest offences and properties seized for this FMU" • Departmental instructions for control of forest encroachment. • Section (9.7), "Protection" of Management Plan of this FMU. • Forest Law, (1992) <ul style="list-style-type: none"> - Chapter X, "Search, Arrest and Administrative Action" - Chapter XII, " Offences and Penalties"
	Table 12: The five human activities most damaging to the PFE and Non-PFE					
	<i>Five major activities</i>	<i>Area affected(ha)</i>	<i>Control procedures</i>	<i>Area of control(ha)</i>	<i>Estimated effectiveness</i>	
	(ii) For each activities describe the control procedures and expected estimated effectiveness. (iii) Indicate institutions responsible for implementing control procedures. (iv) List constraints in implementing control procedures and any proposed improvement.					

Indicators	Activities					Standard of Performance
3.2 Extent and nature of forest degradation and disturbance due to natural causes and the control procedures applied.	(i) Provide five natural causes most damaging to the PFE and non-PFE in Table 13.					<ul style="list-style-type: none"> • Field inspection report by beat forest officer • Section (9.7), "Protection" of Management Plan of this FMU"
	Table 13: The five natural causes most damaging to the PFE and non-PFE					
	<i>Five major activities</i>	<i>Area affected(ha)</i>	<i>Control procedures</i>	<i>Area of control(ha)</i>	<i>Estimated effectiveness</i>	
	<p>(ii) For each activities describe the control procedures and expected estimated effectiveness.</p> <p>(iii) Indicate institutions responsible for implement control procedures.</p> <p>(iv) List constraints in implement control procedures and any proposed improvement.</p>					

Criterion 4 : Forests production

This criterion is concerned with forest management for the production of wood and non-wood forest products. Such production can only be sustained in the long term if it is economically and financially viable, environmentally sound and socially acceptable.

Indicators	Activities	Standard of Performance																																									
<i>Resource assessment</i>																																											
4.1 Extent and percentage of forest for which inventory and survey procedures have been used to define the quantity of the main forest products	(i) Provide forest areas inventoried by product in Table 14. Table 14: Forest area inventoried by product <table border="1"> <thead> <tr> <th rowspan="2">Product</th> <th colspan="2">PFE</th> <th colspan="2">Non-PFE</th> <th colspan="2">Total</th> </tr> <tr> <th>ha</th> <th>%</th> <th>ha</th> <th>%</th> <th>ha</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Industrial round wood</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Fuelwood</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Non-wood forest products</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Total</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Product	PFE		Non-PFE		Total		ha	%	ha	%	ha	%	Industrial round wood							Fuelwood							Non-wood forest products							Total							<ul style="list-style-type: none"> Management Plan, Section(2.3),"Forest Inventory reports by planning and Statistics Guidelines to collect information by sample survey.
Product	PFE		Non-PFE		Total																																						
	ha	%	ha	%	ha	%																																					
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4.2 Actual and sustainable harvest of wood and non-wood forest products	(i) Provide the harvesting level of the principle forest products in Table 15. Table 15: Harvesting level of the principal forest products <table border="1"> <thead> <tr> <th rowspan="2">Product</th> <th rowspan="2">Entire forest area Total number of species harvested</th> <th colspan="2">PFE</th> <th colspan="2">Non-PFE</th> </tr> <tr> <th>Annual total harvest</th> <th>Annual sustainable harvest(AAC)</th> <th>Annual total harvest</th> <th>Annual sustainable harvest(AAC)</th> </tr> </thead> <tbody> <tr> <td>Industrial round wood</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Fuelwood</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Non-wood forest products</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> (ii) Give a description of the method of estimating the sustainable level of harvest.	Product	Entire forest area Total number of species harvested	PFE		Non-PFE		Annual total harvest	Annual sustainable harvest(AAC)	Annual total harvest	Annual sustainable harvest(AAC)	Industrial round wood						Fuelwood						Non-wood forest products						<ul style="list-style-type: none"> Management Plan, Section (9.1), (9.2), (9.3), (9.4),(9.5), Management Planning for natural production forests, planted production forests, local supply forests, watershed forests, non- wood forest products. Management Plan, Section(4.1),"Past Production" Estimation of the level of sustainable harvest (yield/year) for each wood and non wood product for different forest types categories (working circle). Annual reports and departmental - records 													
Product	Entire forest area Total number of species harvested			PFE		Non-PFE																																					
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Non-wood forest products																																											

Indicators	Activities	Standard of Performance		
4.3 Composition of harvest	(i) Provide the quantity of the most important species or species' group and most important non-wood forest products harvested in this FMU in Table 16.	<ul style="list-style-type: none"> • Management Plan. Section (4.1), "Past production" • Annual reports and departmental records 		
	Table 16: The most important species or species' groups harvested			
	<i>Products</i>		<i>Harvesting quantity</i>	<i>Forest from which harvested</i>
			<i>PFE</i>	<i>Non-PFE</i>
	1/ Teak			
	2/ Non-Teakwood G I			
	3/ ----- `----- G II			
	4/ ----- `----- G III			
	5/ ----- `----- G IV			
	6/ ----- `----- G V			
	Fuelwood:			
	Non-wood forest Products			

Indicators	Activities	Standard of Performance		
4.4 Total amount of carbon stored in forest sands.	(i) Provide the estimate of carbon stock in forest in Table 17.	<ul style="list-style-type: none"> Stem volume of the FMU is utilized to estimate the biomass stock and then the carbon stock by applying the standard formulae. 		
	Table 17: Estimate of carbon stock in forests.			
			<i>PFE</i> (<i>'000 tonnes</i>)	<i>Non-PFE</i> (<i>'000 tonnes</i>)
	Above-ground (forest vegetation carbon stock)			
	Soil carbon stock			
<i>Planning and control procedures</i>				
4.5 Existence and implementation of, (a) forest harvesting/operational plans (with forest management plan); and (b) other harvesting permits (small-, medium- and large-scale permits without forest management plans)	(i) Give the description of the procedures and processes for formulating plans and assessing the effectiveness of implementation of: (a) harvesting (operational) plans (within forest management plans) (b) harvesting permits of (without forest management plans within and outside the PFE).	<ul style="list-style-type: none"> Harvesting plan of Myanmar Timber Enterprise. Annual plan of operation of Forest Department. Control of harvesting timber by FD and MTE. 		

Indicators	Activities	Standard of Performance					
4.6 Extent of compartments/ coupes harvested according to: (a) harvesting/ operational plans (b) any other harvesting/ cutting permits	Provide average annual harvest area in Table 18.	<ul style="list-style-type: none"> • Forest Management Plan for this FMU Section (4.1), " Production • Departmental and annual reports and return of FD and MTE for this FMU 					
	Table 18: Average annual harvest area						
	<i>Type of permits</i>		<i>PFE</i>		<i>Non-PFE</i>		<i>Total</i>
			<i>Number of permits</i>	<i>ha</i>	<i>Number of permits</i>	<i>ha</i>	
	Operational plans within a FMP)						
	Permit type 1 (specify)						
	Permit type 2 (specify)						
	Permit type 3 (specify)						
Total							
4.7 Existence of a log-tracking system or similar control mechanisms	(i) Give a brief description of the log tracking system applied by Forest Department and Myanmar Timber Enterprise	<ul style="list-style-type: none"> • Forest Law, (1992) - Chapter VII, "Removal of forest produce" • Departmental Instructions for Forest Officer in Myanmar (D.I), Section , (203-207), "Issue and check of Removal Pass" • M.S.O.S, Section (227-239), "Removal Pass" 					
4.8 Long-term Projections, strategies and plans for forest production	(ii) Elaborate the strategies and plans for projecting the production of wood and non-wood forest product in this forest management unit in line with the long term strategies of the master plan for forestry sector.	<ul style="list-style-type: none"> • 30 years master plan for Forest Sector. • Management Plan for this FMU, Chapter VIII, "Management goal and Objective" 					
4.9 Availability of historical records on the extent, nature and management of forests	(iii) List and give a description of the past management plans and departmental records; extent, nature and the effectiveness of using historical records (Past Management Plans) in managing the forests in this FMU.	<ul style="list-style-type: none"> • Description of the extent and nature of historical records and the effectiveness of using them in managing forests • Management Plan of this FMU - Chapter IV, "Past Management", - Chapter V, "Review of Past Efforts of Management Unit" 					

Indicators	Activities	Standard of Performance		
<i>Silvicultural and harvesting guidelines</i>				
4.10 Availability and implementation of silvicultural guidelines for timber and non-wood forest products	(i) Describe the recommend silvicultural systems and/or management measures to supplement natural regeneration for timber and non-wood forest products to be harvested in this FMU and measures to supplement natural regeneration. (ii) Describe post-harvesting surveys to assess the effectiveness of silvicultural activities.	<ul style="list-style-type: none"> • Forest Policy Statement "Forest regeneration and Afforestation" • M.S.O.S, Chapter VI, "Forest Operations" • "Silvicultural system for different types of forests" of Chapter XI, "Management Planning" 		
4.11 Availability and implementation of harvesting guidelines for timber and non-wood forest products	(i) Describe the recommended harvesting systems and/or guidelines (ii) Describe post-harvesting surveys to assess the effectiveness of harvesting activities.	<ul style="list-style-type: none"> • Standing Orders for Extraction Staff of MTE • National Code of Forest Harvesting (2000) • MTE Extraction Manual • D.I, Section (165), "Inspection of works of Extraction agency" 		
4.12 Area over which silvicultural and harvesting procedures are effectively implemented	(i) Complete the information as required in Table 19.			
	Table 19: Implementation of silvicultural and harvesting procedures			
	<i>Silvicultural and harvesting Procedures</i>	<i>PFE(ha)</i>	<i>Non PFE(ha)</i>	<i>Total(ha)</i>
Total			<ul style="list-style-type: none"> • Areas of silvicultural and harvesting activities for different forest categories (working circles) are presented. 	

Criterion 5 : Biological diversity

This criterion relates to the conservation and maintenance of biological diversity, including ecosystems, species and genetic diversity. The general principles and definitions used here are those established by the Convention on Biological Diversity and the World Conservation Union (IUCN).

Indicators	Activities	Standard of Performance																
<i>Species diversity</i>																		
5.1 Existence and implementation of procedures to identify and protect endangered, rare and threatened species of forest-dependent flora and fauna	<p>(i) Complete the information as required in Table 20.</p> <table border="1"> <thead> <tr> <th colspan="4">Table 20: Forest area surveyed for biodiversity</th> </tr> <tr> <th></th> <th><i>Production PFE (ha)</i></th> <th><i>Protection PFE (ha)</i></th> <th><i>Non-PFE (ha)</i></th> </tr> <tr> <td>Flora</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Fauna</td> <td></td> <td></td> <td></td> </tr> </thead> </table> <p>(ii) Describe procedures to identify, list and protect endangered, rare and threatened species of forest flora and fauna.</p> <p>(iii) List the institutions responsible.</p> <p>(iv) Describe any recent changes in the procedures.</p> <p>(v) Give a brief description, if there are any constraints to introducing improvements.</p>	Table 20: Forest area surveyed for biodiversity					<i>Production PFE (ha)</i>	<i>Protection PFE (ha)</i>	<i>Non-PFE (ha)</i>	Flora				Fauna				<ul style="list-style-type: none"> • Forest Law,(1992),Section(8) (b),"Declaration of reserved trees", Chapter XII, "Offences and Penalties" Section, (40) • Protection of Wildlife and Wild Plants and Conservation of Natural Areas Law, (1994),Chapter V, "Protected Wildlife and Wild Plants "Section (15),(16). • Notification No.(583/94), "Wildlife species which are to be protected from extinction" to be protected from extinction" • List of reserved trees, declared by FD.
Table 20: Forest area surveyed for biodiversity																		
	<i>Production PFE (ha)</i>	<i>Protection PFE (ha)</i>	<i>Non-PFE (ha)</i>															
Flora																		
Fauna																		
5.2 Number of endangered, rare and threatened forest-dependent species	(i) Complete the informations as required in Table 21.	<ul style="list-style-type: none"> • Forest Law, (1992)- Section (8) (b), "Declaration of reserved trees", Chapter XII, "Offences and Panalties" Section (40) • Protection of Wildlife and Wild Plants and Conservation of Natural Areas Law, (1994)-Chapter V, "Protected Wildlife and Wild Plants"Section (15) (16) • Notification No.(583/94),"Wildlife species which are to be protected from extinction" • List of reserved trees, declared, by FD. 																

Indicators	Activities					Standard of Performance
	Table 21: Number of endangered, rare and threatened forest-dependent species					
	<i>Forest-dependent species' group</i>	<i>Total species (number)</i>	<i>Of which</i>			<i>List the five most important species</i>
			<i>endangered</i>	<i>legally protected at national level</i>	<i>endemic species</i>	
	Trees					
	Flowering plants					
	Ferns					
	Mammals					
	Birds					
	Reptiles					
	Amphibians					
	Freshwater fish					
	Butterflies					
Others (specify)						
Procedures for biodiversity conservation in production forests						
<p>5.3 Existence and implementation of procedures for the protection and monitoring of biodiversity in production forests by:</p> <p>(a) retaining undisturbed areas;</p> <p>(b) protecting rare, threatened and endangered species;</p>	<p>(i) Describe the procedure for the protection and monitoring of biodiversity in production forests</p> <p>(ii) Provide the effectiveness of the procedure being implemented.</p> <p>(iii) Describe procedure for assessing changes in production areas compared to control areas.</p>					<ul style="list-style-type: none"> • Myanmar Selection System • Seed Source Areas of this FMU

Indicators	Activities	Standard of Performance	
(c) protecting features of special biological interest(eg nesting sites, seed trees, niches, keystone species, etc);			
5.4 Extent and percentage of production forest that has been set aside for biodiversity conservation	(i) Complete the information as required in Table 22.		
	Table 22: Area set aside for biodiversity conservation in production forests		
	<i>Area (ha)</i>		<i>%</i>

Criterion 6 : Soil and water protection

This criterion deals with the protection of soil and water in the forest. The important of this criterion is two-fold. First, it has a bearing on maintaining the productivity and quality of soil and water within the forest and its related aquatic ecosystems (and therefore on the health and condition of the forest-Criterion 3); secondly it also plays a crucial role outside the forest in maintaining downstream water quality and flow and in reducing flooding and sedimentation.

Indicators	Activities	Standard of Performance		
<i>Extent of protection</i>				
6.1 Existence and percentage of total forest area managed exclusively for the protection of soil and water	(i) Complete the information as required in Table 23.	<ul style="list-style-type: none"> Management Plan of this FMU. Section, (9.4), "Watershed Forest" 		
	Table 23: Forest area managed exclusively for soil and water protection			
	<i>Forest</i>		<i>Area(ha)</i>	<i>%</i>
	- Total forest area (PFE and non-PFE)			
	- Forest area managed exclusively for the protection of soil and water			
	- of which protection PFE			
	Total			
6.2 Procedures to ensure the protection of downstream catchment values	(i) Describe the procedure to ensure protection of downstream catchment values.	<ul style="list-style-type: none"> Management Plan of this FMU, Section, (9.4), Watershed Forest" 		

Indicators	Activities	Standard of Performance		
<i>Protective functions in production forests</i>				
6.3 Procedures to protect soil productivity and water retention capacity within production forests	(i) Describe the procedure to protect soil productivity and water retention capacity within production forests. (ii) Provide the provision to prevent contamination of forest soil and water. (iii) Assess the effectiveness of the activities to protect soil productivity and retain water.	<ul style="list-style-type: none"> National Code of Forest Harvesting in Myanmar (2000) Forest Law, (1992), Section (40) (c) and (d), "Penalties for causing damage to soil and water" 		
6.4 Procedures for forest engineering, including (a) drainage requirement; (b) conservation of buffer strips along streams and rivers (c) protection of soil from compaction by harvesting machinery; and (d) protection of soil from erosion during harvesting operations	(i) Describe the recommended forest engineering procedures in regard to the protection of soil and water (ii) Assess the effectiveness of the recommended forest engineering activities to protect soil and water.	<ul style="list-style-type: none"> National Code of forest Harvesting in Myanmar (2000), Chapter (4), "Management Zoning" 		
6.5 Extent and percentage of areas in production PFE that have been defined as environmentally sensitive (eg, very steep or erodible) and protected	Complete the information as required in Table 24.		<ul style="list-style-type: none"> National Code of Forest Harvesting in Myanmar (2000) 	
	Table 24: Area defined as ecologically vulnerable			
	<i>Area Characteristic</i>	<i>Area (ha)</i>		<i>%</i>
	Slopes > %			
	Poor drainage			
	Buffer strips			
	Other characteristics, to be specified			
* According to the norms specified in the country				

Criterion 7 : Economic, social and cultural aspects

This criterion deals with the economic, social and cultural aspects of forests.

Indicators	Activities	Standard of Performance																															
<i>Socioeconomic aspects</i>																																	
7.1 Value of domestically produced wood, non-wood forest products and environmental services in; (a) domestic markets; (b) export markets; and (c) informal markets including subsistence and illegal activities (estimate)	(i) Complete the information as required in Table 26. Table 26: Estimated market value of forest products and services <table border="1"> <thead> <tr> <th rowspan="2"><i>Goods and services</i></th> <th colspan="3"><i>Market (Kyat)</i></th> </tr> <tr> <th><i>Domestic</i></th> <th><i>Export</i></th> <th><i>Informal</i></th> </tr> </thead> <tbody> <tr> <td>Timber products</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Fuelwood</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Non-wood forest products</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Water</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Carbon</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Others (specify)</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	<i>Goods and services</i>	<i>Market (Kyat)</i>			<i>Domestic</i>	<i>Export</i>	<i>Informal</i>	Timber products				Fuelwood				Non-wood forest products				Water				Carbon				Others (specify)				<ul style="list-style-type: none"> • Annual outturn of timer extracted by MTE. • Annual outturn of non-wood forest products permitted by FD • Annual outturn of Pole+Post permitted by FD. • FD-Forest Record(1) [case register] Register of forest offences and related forest products seized.
<i>Goods and services</i>	<i>Market (Kyat)</i>																																
	<i>Domestic</i>	<i>Export</i>	<i>Informal</i>																														
Timber products																																	
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Non-wood forest products																																	
Water																																	
Carbon																																	
Others (specify)																																	
7.2 Forest products' industry structure and efficiency	(i) Complete the information as required in Table 27. Table 27: Forest production capacities <table border="1"> <thead> <tr> <th><i>Processing Sector</i></th> <th><i>Number of Companies</i></th> <th><i>Log input (m³)</i></th> <th><i>Conversion efficiency(%)</i></th> <th><i>Installed capacity</i></th> <th><i>Employment</i></th> </tr> </thead> <tbody> <tr> <td>Timber harvesting</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Primary transformation</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Secondary transformation</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Tertiary Transformation</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> (ii) Indicate units and sources.	<i>Processing Sector</i>	<i>Number of Companies</i>	<i>Log input (m³)</i>	<i>Conversion efficiency(%)</i>	<i>Installed capacity</i>	<i>Employment</i>	Timber harvesting						Primary transformation						Secondary transformation						Tertiary Transformation						<ul style="list-style-type: none"> • List of different kinds of power utilized by MTE. • Register of saw mills in this F.M.U. 	
<i>Processing Sector</i>	<i>Number of Companies</i>	<i>Log input (m³)</i>	<i>Conversion efficiency(%)</i>	<i>Installed capacity</i>	<i>Employment</i>																												
Timber harvesting																																	
Primary transformation																																	
Secondary transformation																																	
Tertiary Transformation																																	

Indicators	Activities	Standard of Performance				
7.3 Existence and Implementation of mechanisms for the equitable sharing of the costs and benefits of the forest management	(i) List any mechanisms for the distribution of incentives and the fair and equitable sharing of costs and benefits among the parties involved	<ul style="list-style-type: none"> Annual budget allotment for forest management and revenue collected by this F.M.U. 				
7.4 Existence and implementation of conflict-resolution mechanisms for resolving disputes between forest stakeholders	(i) List any mechanisms for conflict-resolution	<ul style="list-style-type: none"> Forest Law,(1992)-Chapter XII, "Offences and Penalties" Section (40). List any conflict between forest stakeholders and give the description for resolving this disputes. (e.g encroachment into reserved forest) Open dialogue 				
7.5 Number of people depending on forests for their livelihoods	(i) Complete the information as required in Table 28.				<ul style="list-style-type: none"> Estimation of number of people depending on forest and forest products for their livelihoods in this F.M.U. 	
	Table 28: Forest-dependent people					
		<i>Total number</i>	<i>Male</i>	<i>Female</i>		<i>Migrants</i>
	Employed in forest operations					
	Employed in forest products' industry					
	Other indirect employment					
Subsistence						
7.6 Training, capacity-building and manpower development programs for forest workers	(i) Indicate the number of main focus of universities, technical institutions, etc, with a formal program on SFM (ii) List short-and medium-term training programs for forest manager over the last year				<ul style="list-style-type: none"> Training programmes at the university Training programmes at the Myanmar Forest School and Central Forestry Development Training Centre. 	

Indicators	Activities	Standard of Performance			
7.7 Existence and implementation of procedures to ensure the health and safety of forest workers	(i) Describe the mechanisms which are in place to ensure the health and safety of forest workers	<ul style="list-style-type: none"> List and description of measure taken to implement the health and safety of forest workers. Workman's compensation Act (1923) report on the measures undertaken to implement the procedure Clinics established at the forest camp by FD and MTE 			
7.8 Area of forests upon which people are dependent for subsistence uses and traditional and customary lifestyles	(i) Complete the information as required in Table 29.				
	Table 29: Forest areas for subsistence and traditional uses				
		<i>PFE(ha)</i>	<i>Non-PFE(ha)</i>	<i>Total (ha)</i>	
	Indigenous peoples' reserves				
	Community forests				
	Other reserved areas				
	Other forested areas				
	Other (specify)				
Total					
<ul style="list-style-type: none"> Forest areas including community forest under local supply working cycle of Management Plan of this FMU. 					
	Cultural aspects				
	7.9 Number of important archaeological, cultural and spiritual sites identified and protected	(i) Complete the information as required in Table 30.			
		Table 30: Forests with cultural and spiritual value.			
		<i>Type</i>	<i>Number of forests</i>	<i>Area(ha)</i>	<i>Protection Status</i>
		Archaeological			
		Cultural			
		Sacred forests			
Others (specify)					
	(ii) Provide an overall assessment of whether the integrity of such areas is protected and how				

Indicators	Activities	Standard of Performance
<i>Community and indigenous peoples' rights and par</i>		
7.10 Extent to which tenure and user rights of communities and indigenous peoples over publicly owned forests are recognized and practiced	(i) Describe the tenure and user rights recognized and practiced	<ul style="list-style-type: none"> • List and give the description of the rights and privileges given to the local community when a reserved forest or a protected public forest was constituted. • List of exclusion areas for the local communities in Reserve. • List of local supply and community Forests
7.11 Extant to which indigenous knowledge is used in forest management planning and implementation	(i) Describe the indigenous knowledge which is used in forest management planning and implementation.	
7.12 Extent of involvement of indigenous peoples, local communities and other forest dwellers in forest management capacity-building, consultation processes, decision making and implementation	(i) Describe the extent of involvement in forest management of: <ul style="list-style-type: none"> - capacity - building - consultation processes; - decision making; and - implementation (e.g financial and economic aspects of forest utilization) (ii) Indicate the legal basis of this involvement (iii) Describe short comings and proposals for improvement	<ul style="list-style-type: none"> • Section (9.3.2.2) and (9.4.2.2), "People' participation "in Management Plan of this FMU. • Give the description of the participation of local community in establishing the community forest.