

**Document of  
The World Bank**

Report No: ICR0000195

**IMPLEMENTATION COMPLETION AND RESULTS REPORT  
(TF-28898)**

**ON A**

**GRANT FROM THE**

**GLOBAL ENVIRONMENT FACILITY TRUST FUND**

**IN THE AMOUNT OF SDR 5.3 MILLION  
(US\$ 6.75 MILLION EQUIVALENT)**

**TO THE**

**REPUBLIC OF MALAWI**

**FOR A**

**MULANJE MOUNTAIN BIODIVERSITY CONSERVATION PROJECT**

March 6, 2009

Environment and Natural Resources Management Unit  
Country Department 2  
Africa Region

## CURRENCY EQUIVALENTS

Exchange Rate Effective June 30, 2008

Currency Unit = Malawi Kwacha (MK)

MK 1.00 = US\$ 0.0069

US\$ 1.00 = MK 145

## FISCAL YEAR OF BORROWER

January 1 – December 31

## ABBREVIATIONS AND ACRONYMS

CAS	Country Assistance Strategy
DNA	Deoxyribonucleic acid
DFID	U.K. Department for International Development
EMP	Ecological Monitoring Program
FD	Forest Department
FRIM	Forest Research Institute of Malawi
GBR	Global Biosphere Reserve
GEF	Global Environment Facility
GEO	Global Environmental Objective(s)
GoM	Government of Malawi
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
IAS	International Accounting Standard
ICR	Implementation Completion and Results Report
ISR	Implementation Status Report
MGDS	Malawi Growth and Development Strategy
MK	Malawi Kwacha
MODIS	Moderate Resolution Imaging Spectroradiometer
M&E	Monitoring and Evaluation
MMBCP	Mulanje Mountain Biodiversity Conservation Project
MMCT	Mulanje Mountain Conservation Trust
MMFR	Mulanje Mountain Forest Reserve
MoU	Memorandum of Understanding
MTR	Mid-Term Review
NGO	Non-Governmental Organization
PAD	Project Appraisal Document
PPP	Public Private Partnership
QEA	Quality at Entry
SOE	Statement of Expenditures
TAM	Trust Administration Manual
TAU	Trust Administration Unit

UNESCO	United Nations Educational, Scientific and Cultural Organization
VNRMC	Village Natural Resources Management Committees
WCS	Wildlife Conservation Society
WESM	Wildlife and Environmental Society of Malawi
WB	World Bank

Vice President:	Obiageli Katryn Ezekwesili
Country Director:	Michael Baxter
Sector Manager:	Marjory-Anne Bromhead
Project Team Leader:	Cary Anne Cadman
ICR Team Leader:	Cary Anne Cadman

# MALAWI

## MULANJE MOUNTAIN BIODIVERSITY CONSERVATION PROJECT

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<b>A. Basic Information</b>			
Country:	Malawi	Project Name:	Mulanje Mt. Biodiversity Conservation Project
Project ID:	P035917	L/C/TF Number(s):	TF-28898
ICR Date:	03/03/2009	ICR Type:	Core ICR
Lending Instrument:	SIL	Borrower:	REPUBLIC OF MALAWI
Original Total Commitment:	USD 6.8M	Disbursed Amount:	USD 6.8M
<b>Environmental Category: C</b>		<b>Global Focal Area: B</b>	
<b>Implementing Agencies:</b> Mulanje Mountain Conservation Trust			
<b>Cofinanciers and Other External Partners:</b>			

<b>B. Key Dates</b>				
Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	01/15/1998	Effectiveness:		08/15/2001
Appraisal:	04/10/2000	Restructuring(s):		
Approval:	04/17/2001	Mid-term Review:	09/01/2006	
		Closing:	06/30/2008	06/30/2008

<b>C. Ratings Summary</b>	
<b>C.1 Performance Rating by ICR</b>	
Outcomes:	Moderately Satisfactory
Risk to Global Environment Outcome	Substantial
Bank Performance:	Moderately Satisfactory
Borrower Performance:	Moderately Satisfactory

<b>C.2 Detailed Ratings of Bank and Borrower Performance</b>			
Bank	Ratings	Borrower	Ratings
Quality at Entry:	Satisfactory	Government:	Moderately Unsatisfactory
Quality of Supervision:	Moderately Satisfactory	Implementing Agency/Agencies:	Moderately Satisfactory
<b>Overall Bank Performance:</b>	Moderately Satisfactory	<b>Overall Borrower Performance:</b>	Moderately Satisfactory

<b>C.3 Quality at Entry and Implementation Performance Indicators</b>			
<b>Implementation Performance</b>	<b>Indicators</b>	<b>QAG Assessments (if any)</b>	<b>Rating</b>
Potential Problem Project at any time (Yes/No):	Yes	Quality at Entry (QEA):	Highly Satisfactory
Problem Project at any time (Yes/No):	No	Quality of Supervision (QSA):	None
GEO rating before Closing/Inactive status	Moderately Satisfactory		

<b>D. Sector and Theme Codes</b>		
	<b>Original</b>	<b>Actual</b>
<b>Sector Code (as % of total Bank financing)</b>		
Agricultural extension and research		20
Forestry	97	70
General education sector	2	10
Other social services	1	
<b>Theme Code (Primary/Secondary)</b>		
Biodiversity	Primary	Primary
Environmental policies and institutions	Primary	Primary
Export development and competitiveness	Secondary	Not Applicable
Participation and civic engagement	Secondary	Primary
Rural non-farm income generation	Secondary	Secondary
Rural services and infrastructure		Primary

<b>E. Bank Staff</b>		
<b>Positions</b>	<b>At ICR</b>	<b>At Approval</b>
Vice President:	Obiageli Katryn Ezekwesili	Callisto E. Madavo
Country Director:	Michael Baxter	Darius Mans
Sector Manager:	Marjory-Anne Bromhead	Roger C. Sullivan
Project Team Leader:	Cary Anne Cadman	Nathalie Weier Johnson
ICR Team Leader:	Cary Anne Cadman	
ICR Primary Author:	Cary Anne Cadman	

## F. Results Framework Analysis

### Global Environment Objectives (GEO) and Key Indicators(as approved)

1. Maintain Mulanje Mountain ecosystem, including globally significant biodiversity and vital ecological services.

2. Increase awareness, understanding and appreciation of the value of the Mulanje Mountain ecosystem at local and national levels.

3. Improve sustainability of biological resource use and enhance the value of the Mulanje Mountain ecosystem to local communities.

4. Establish long-term income stream and institutional capacity to ensure continuation of 1-3; Mulanje Mountain Conservation Trust (MMCT) appreciated and respected by stakeholders at local, national and international levels. Demonstrate the appropriateness of Conservation Trust Fund as financing mechanism for biodiversity conservation.

### Revised Global Environment Objectives (as approved by original approving authority) and Key Indicators and reasons/justifications

(As approved by original approving authority); (the system displays entries in Section 6)

Not applicable. GEO was not revised during the life of the Project.

#### (a) GEO Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
<b>Indicator 1 :</b>	Invasive species eradicated.			
Value (quantitative or Qualitative)	100% MMFR has invasives	90% of all invasives eradicated.		66% of all invasive species eradicated
Date achieved	01/01/2002	06/30/2008		06/30/2008
Comments (incl. % achievement)	See ICR for comments.			
<b>Indicator 2 :</b>	MMCT established and functioning on income being generated by endowment fund.			
Value (quantitative or Qualitative)	no endowment	100% from endowment.		0% from endowment
Date achieved	01/01/2002	06/30/2008		06/30/2008
Comments (incl. % achievement)	See ICR for comments.			
<b>Indicator 3 :</b>	Community awareness and appreciation of ecosystem improved and valued.			
Value (quantitative or Qualitative)	0% aware of servies and values of MMFR.	80 %		72%

Date achieved	01/01/2002	06/30/2008		06/30/2008
Comments (incl. % achievement)	See ICR for comments.			
<b>Indicator 4 :</b>	Proportion of MMFR resources under co-management			
Value (quantitative or Qualitative)	0%	50 %		25%
Date achieved	01/01/2003	06/30/2008		06/30/2008
Comments (incl. % achievement)	See ICR for comments.			

**(b) Intermediate Outcome Indicator(s)**

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
<b>Indicator 1 :</b>	M&E providing information for management and conservation planning			
Value (quantitative or Qualitative)	No baseline or monitoring	M&E providing input on majority of key species management		Baseline completed, 3rd data collection campaign completed. Timeline record is now becoming available. Two publications.
Date achieved	01/01/2002	06/30/2008		06/30/2008
Comments (incl. % achievement)	See ICR for comments.			
<b>Indicator 2 :</b>	Attitudes towards the MMFR improved and conservation activities increased			
Value (quantitative or Qualitative)	No conservation actions by FD or communities	50 % of communities engaged in conservation activities		10% of communities engaged in conservation activities
Date achieved	01/01/2002	06/30/2008		06/30/2008
Comments (incl. % achievement)	See ICR for comments.			
<b>Indicator 3 :</b>	VNRMCs and other relevant community structures operational. Co-management pilot activities underway.			
Value (quantitative or Qualitative)	No VNRMCs established	12 co-management MoU functioning		6 co-management MoU functioning



Date achieved	01/01/2002	06/30/2008		06/30/2008
Comments (incl. % achievement)	See ICR for comments.			

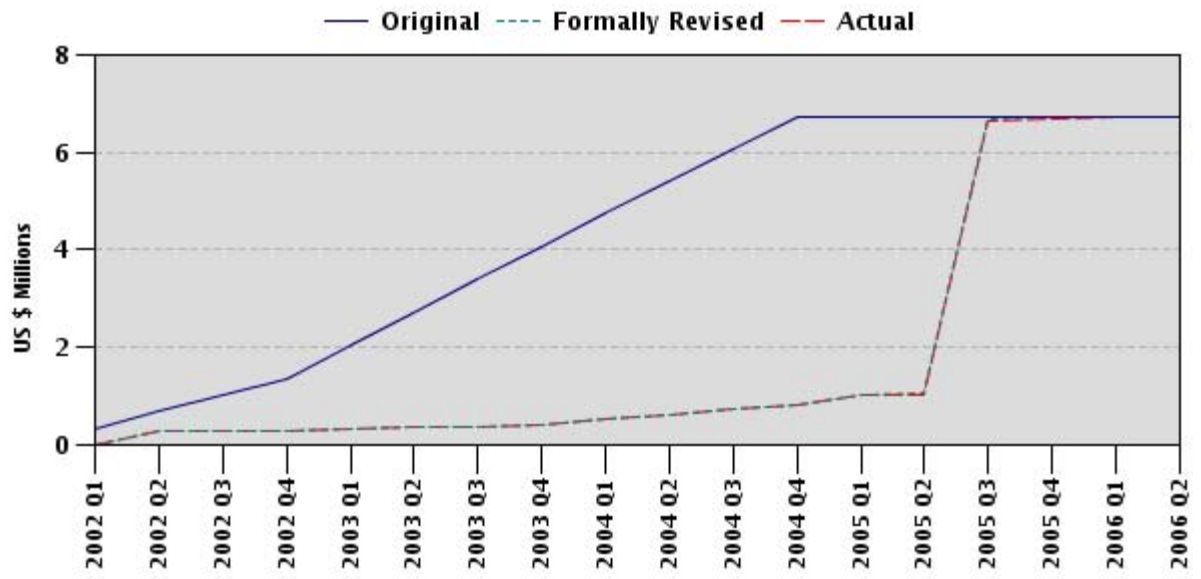
### G. Ratings of Project Performance in ISRs

No.	Date ISR Archived	GEO	IP	Actual Disbursements (USD millions)
1	06/27/2001	Satisfactory	Satisfactory	0.00
2	12/20/2001	Satisfactory	Satisfactory	0.30
3	05/14/2002	Satisfactory	Satisfactory	0.30
4	12/20/2002	Satisfactory	Satisfactory	0.35
5	05/30/2003	Satisfactory	Satisfactory	0.40
6	11/25/2003	Satisfactory	Satisfactory	0.61
7	05/28/2004	Satisfactory	Satisfactory	0.88
8	11/26/2004	Satisfactory	Satisfactory	1.06
9	06/24/2005	Satisfactory	Satisfactory	6.72
10	12/20/2005	Satisfactory	Satisfactory	6.75
11	12/01/2006	Satisfactory	Satisfactory	6.75
12	03/21/2007	Moderately Unsatisfactory	Moderately Satisfactory	6.75
13	09/07/2007	Moderately Unsatisfactory	Moderately Unsatisfactory	6.75
14	05/10/2008	Moderately Satisfactory	Moderately Unsatisfactory	6.75

### H. Restructuring (if any)

Not Applicable

## I. Disbursement Profile



**1. Project Context, Development Objectives [or Global Environment Objectives] and Design** (this section is descriptive, taken from other documents, e.g., PAD/ISR, not evaluative):

*1.1 Context at Appraisal (brief summary of country and sector background, rationale for Bank assistance):*

**Country Context**

At appraisal, Malawi faced a number of formidable challenges to growth and poverty reduction. It was one of the poorest countries in the world with an estimated 65% of the population living below the poverty line. In 2000, it ranked fourth from the bottom according to the United Nations Human Development Report.

Malawi also had one of the highest population densities in Africa, with an average of 105 inhabitants per square kilometer of arable land, and an average growth rate of 2.8% (1998 census). Most of the population (85%) lived in rural areas where subsistence farming was the dominant livelihood activity. Indeed, in and around Mulanje Mountain, the population density was the highest overall across the country and small-land holdings constituted some of the smallest in the country.

The Phalombe and Mulanje districts supported over 800,000 people; half of whom lived in the immediate areas surrounding Mulanje Mountain. The mountain was completely surrounded by villages and small-scale cultivation on customary land and large commercial tea and coffee estates. The Mulanje region was characterized by high poverty and chronic food insecurity.

The main livelihood base for poor households (typically 5.5 persons) was small-scale agriculture (maize, sweet potato, cassava) on farms of, on average, 0.4 hectares. Within the matrilineal society, most of the farms were managed by women and men worked on the neighboring tea plantations. Tea estates were the main source of formal employment in the region (e.g., one estate employed on average 5,000 workers).

The mountain's boundary communities depended on the forest for firewood (domestic use and for sale) and collection of other non-timber forest products (medicine, grass for thatch, wild fruit, mushrooms, honey, and fiber). Hunting was illegal, but was traditionally practiced. At Project inception, it was established that the mountain resources used by local communities were acquired on an unsustainable basis, generating significant adverse environmental impacts as population growth accelerated.

Agricultural encroachment also presented a serious threat on the lower slopes of the mountain as did fires set by hunters. The threat posed by these fires was particularly significant with respect to the survival of Mulanje Cedar and the high plateau grassland ecosystem.

Against this backdrop, at Project inception, limited development had taken place around the mountain restricting availability of alternative livelihoods in the area, thus further exacerbating the pressure placed on the mountain's resources.

On a national scale, high transport costs resulting from Malawi's landlocked position and poor infrastructure links through Mozambique acted as a tax on exports. And, the legacy from the first 30 years of independence (1964-94) under one government was one of inequality and inadequate attention to human resource development.

Recurring droughts and the rapid spread of Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) presented additional constraints to development.

Between 1995 and 1997, the economy grew at an annual average rate of more than 9% with growth more broad-based than before presenting positive trends in policy changes. Although slippages in macroeconomic management occurred in early 1998, the government took bold action to ameliorate the situation.

### **Sector Context**

By appraisal it was evident that Malawi's rapidly growing population was putting enormous pressure on its limited and deteriorating natural resource base, notably land and forests. Fertilizer use and irrigation capacity were low. Land distribution was unequal; and more than 40% of smallholder households were cultivating on less than 0.5 hectares. Population pressure on land available for smallholder use led to reduced soil fertility, stagnant or declining yields, encroachment on estate and public land, and overuse of Lake Malawi's coastal resources. Chronic environmental degradation disproportionately affected the rural poor, whose consumption and production were largely dependent on the natural resource base.

At the time, Malawi had a total area of 26,428 km<sup>2</sup> forest cover (28% of total land area) consisting of 88 forest reserves, national parks, wildlife reserves and customary land forests. Due to insecure land tenure and pervasive poverty, many rural households viewed forests as their only option for obtaining income through the sale of forest resources.

One of the forest reserves was (and is) located on Mulanje Mountain situated in the south-eastern corner of Malawi. Mulanje is the highest mountain in south-central Africa at 3001m above sea level.

Due to its species richness and high levels of endemism<sup>4</sup>, Mulanje Mountain was identified by the World Wildlife Fund as one of 200 global eco-regions in the world for the conservation of biodiversity and designated as an Afro-montane Regional Centre of Endemism. In 2000, the United Nations Educational, Scientific and Cultural Organization (UNESCO) designated the mountain as a Global Biosphere Reserve (GBR) for its important ecological and socio-economic value.

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<sup>4</sup> Mulanje Mountain is home to six different plant communities. The vegetation ranges from miombo woodlands at its base to fire induced grasslands on the plateau as well as Afro-montane evergreen forests and *Widdringtonia* forests on the plateaus. Vegetation varies with altitude, relief and aspect; rock form, soil and incidences of fire. The Afro-montane ecosystem includes a large number of endemic species, many of which are endangered or threatened with extinction. Known figures include: 1,330 species of plants of which more than 70 are strict endemic species; 180 bird species (1 endemic subspecies, 6 near endemic species); 250 butterfly species (8 endemic, 3 near endemic); 32 amphibian species (3 endemic, 3 near endemic); and 55 species of reptiles (2 endemic chameleons, 2 endemic geckos, 1 skink, 1 lizard) and the probability of one or two endemic bat species. It is well documented that Mulanje Mountain is one of Africa's important sites for threatened bird species forming part of the Tanganyika-Nyasa Mountain Group Endemic Bird Area.

In addition, the mountain served as a catchment to nine major perennial river systems, providing surrounding communities with clean water throughout the year. Village communities also derived various forms of livelihood from the mountain resources, including: Mulanje Cedar timber, fuel wood and non-timber forest products such as honey, mushrooms and medicinal plants.

### **Rationale for Bank Assistance**

The Government of Malawi (GoM) requested World Bank support for the Global Environment Facility (GEF) Mulanje Mountain Biodiversity Conservation Project (MMBCP) in view of the alarming rate of deforestation and loss of biodiversity in the Mulanje Mountain Forest Reserve.

At the time, the Forest Department held primary responsibility for managing the country's forest reserves including Mulanje Mountain Forest Reserve, all of which were established to ensure adequate watershed protection and plantation timber production. However, the FD lacked sufficient financial and human resources to properly manage its forest reserves, in particular Mulanje Mountain Forest Reserve which exhibited rich biodiversity and was home to a significant number of endemic species.

The Forest Department recognized that its mandate and expertise was principally in the area of forest management and less in biodiversity conservation. Establishing a formal partnership with the newly created NGO, Mulanje Mountain Conservation Trust, would address this gap in one of its prime forest reserves.

The GEF recognized that long-term financing would be essential to ensure sustainable conservation of the mountain's ecosystem and unique biodiversity and provided a \$6.75 million grant of which \$5.5 million capitalized an endowment.

The Project's activities to improve environmental management and community welfare were consistent with the Bank's central focus of poverty reduction outlined in the Malawi Country Assistance Strategy (CAS), 1998 - 2000. One of the objectives and main themes of the CAS was Fostering Environmental Sustainability. The CAS recognized that Malawi suffered from loss of its natural capital, severe deforestation and soil erosion, increased vulnerability to drought and lower growth due to environmental health hazards. The CAS recognized that sustainable management of natural resources was essential for poverty reduction.

The approach adopted in the Project design was to pilot a new institutional and financial structure for forest management and biodiversity conservation for high biodiversity status areas with the view to replicating the model, if successful, to other high biodiversity status areas in Malawi and elsewhere.

The Project became effective in August 2001. Final disbursement into the endowment occurred in March 2004. The Project closing date was June 30, 2008.

*1.2 Original Project Development Objectives (PDO) [or Global Environmental Objectives (GEO)] and Key Indicators [as approved]:*

The Project's four original Global Environmental Objectives and ten Key Indicators as approved in the Project Appraisal Document (PAD) were as follows:

**1. Maintain the Mulanje Mountain ecosystem, including globally significant biodiversity and vital ecological services.**

Key indicators:

- Biodiversity conservation aspects of MMFR Management Plan under implementation
- Ecosystem of MMFR maintained in good condition
- Decrease in FD/Community conflict relating to Reserve access and use

**2. Increase awareness, understanding and appreciation of the value of the Mulanje Mountain ecosystem at local and national levels.**

Key indicators:

- Community knowledge and appreciation increased with respect to target messages
- Allocation of funds for Reserve management

**3. Improve sustainability of biological resource use and enhance the value of the Mulanje Mountain ecosystem to local communities.**

Key indicator:

- Proportion of MMFR resources under co-management

**4. Establish the long-term income stream and institutional capacity to ensure continuation of 1-3; Embedded in this GEO is the expectation that the Non-Governmental Organization, Mulanje Mountain Conservation Trust, is appreciated and respected by stakeholders at local, national and international levels and that the Project demonstrates the appropriateness of the Conservation Trust Fund as a financing mechanism for biodiversity conservation.**

Key indicators:

- Effective biodiversity conservation program maintained over time in the face of changing circumstances
- Local stakeholders aware of and positive toward MMCT and its objectives
- Contribution to the MMCT
- MMCT cited as positive example and model by GEF and other conservation supporters

*1.3 Revised PDO [GEO] (as approved by original approving authority) and Key Indicators, and reasons/justification:*

Although the GEO and key indicators were not formally revised and remain valid at ICR, during Project implementation, the Bank, Borrower and Implementing Agency recognized that the original set of Project indicators were qualitative in nature and, thus, difficult to measure. As

such, the original set of GEO, intermediate outcome, outcome and output indicators were refined during Project implementation into quantitative proxy indicators.

To improve overall monitoring and evaluation of the Project, MMCT prepared a refined Results Framework in mid-2006 (at MTR) reflecting the new set of quantitative indicators that served as proxies for the original set of key indicators.

The proxy indicators did not replace nor depart from the initial intent or focus of the original set of key indicators; rather they facilitated accurate measurement of what had previously been highly descriptive key indicators. Between 2006 and Project closing, the proxy indicators were systematically measured by MMCT. The Bank used the proxy indicators in its ISRs and the MTR.

For the ICR, the original set of key indicators and their proxies were used to assess achievement of the Projects' Global Environmental Objectives at closing. Annex 2 provides a full treatment of the Project's outcome and output indicators, including proxies.

*1.4 Main Beneficiaries (original and revised; briefly describe the "the primary target group" identified in the PAD and as captured in the PDO[GEO], as well as any other individuals and organizations expected to benefit from the Project):*

The Project did not have a primary target group of beneficiaries per se; rather it was designed to generate local, national and global benefits for a number of beneficiaries, including:

- **Local communities adjacent to MMFR** benefited from the Project through direct employment (beekeepers, small-holder crop and horticulture producers) and through increased community participation in the conservation and management of the natural resources on the mountain. By improving the ability of local communities to earn income from sustainable harvesting of natural resources, the Project contributed toward poverty alleviation.
- The **Citizens of Malawi** benefited from the conservation of regionally and locally endemic species and through preservation of the unique Mulanje ecosystem.
- Maintenance of water quality of major rivers from Mulanje headwaters flowing into Mozambique provided a significant benefit to the **Citizens of Mozambique**.
- **National, regional and international scientists, tourists and private citizens** benefited from the conservation of endemic species on the mountain. Increased tourism in the Reserve contributed to increased local income in and around MMFR. Increased scientific research on the mountain contributed to important scientific findings.

### *1.5 Original Components (as approved):*

The Project was organized in five components (original amounts allocated):

**Component 1: Trust Administration (US\$ 0.58 million):** The Trust Administration Unit (TAU) was established to be responsible for (i) developing the content for each of the three components: Biodiversity Conservation, Research and Monitoring; Environmental Education; and Forest Co-management and Livelihoods; (ii) working in collaboration with the FD and suitable NGOs to implement the three programs in (i) above; (iii) submitting annual work plans and budgets for approval; (iv) disbursing approved funds and ensuring that proper disbursement, procurement and supervision procedures were followed; (v) maintaining financial records and accounting and reporting; and (vi) ensuring ongoing monitoring and evaluation of all work receiving MMCT funding.

**Component 2: Biodiversity Conservation, Research and Monitoring (US\$ 0.94 million):** This component was designed to support activities to identify, protect, manage, and monitor the status of biodiversity and ecosystem health in the Reserve, and to reduce the impacts of human pressure on the ecosystem and its biological resources.

**Component 3: Environmental Education (US\$ 0.14 million):** An environmental education program was developed under this component targeting local communities and FD officers working on Mulanje Mountain.

**Component 4: Forest Co-management and Sustainable Livelihoods (US\$ 0.86 million):** The purpose of this component was to increase the share of the benefits from the Reserve going to local communities on a sustainable basis.

**Component 5: Conservation Trust Fund (US\$ 5.5 million):** This component was designed to provide sustainable in-country funding for biodiversity conservation of the Mulanje Mountain and surrounding area, in the context of ecologically sustainable development. The MMCT Fund was established as the financing mechanism for the aforementioned Project components.

### *1.6 Revised Components:*

Not applicable. Project components were not revised.

### *1.7 Other significant changes (in design, scope and scale, implementation arrangements and schedule, and funding allocations):*

The Project experienced significant changes with respect to implementation schedule and funding allocations.

### **Implementation Schedule**

The Project's original implementation schedule was affected by the extended delay in Project implementation post-effectiveness. It took one year and one month for Project implementation to begin after effectiveness due to delays in the establishment of the Special Account.



The Project was initially designed as a seven year engagement; however, due to the delay in the implementation start date, the Project's life was curtailed by one year.

At ICR, it became apparent that the GoM and MMCT understood that the original Project closing date would be adjusted according to the actual implementation start date in order to allow MMCT and the FD to achieve the original targets for each GEO and intermediate outcome indicator as well as the PAD key indicators.

Given that the Project was designed to continue in perpetuity, the question on length of Project life post-effectiveness should be framed in the sense of the length of Bank involvement and direct implementation support, not disbursement. As such, achievement of the various indicators may not have been possible during the life of the Project, but this was due to a number of factors unrelated to the Project's original closing date and Bank involvement. It is expected that if the persistent institutional and financial challenges faced by the Project are overcome, then the original targets set for most indicators may be achieved in the long-term.

### **Funding Allocations**

Funding allocations at appraisal differed from those allocations that actually materialized during implementation.

Government of Malawi: financial (US\$1.27 million) and human resources commitments for the Project never materialized. This had a significant impact on Project implementation, in particular, MMCT's ability to deliver on agreed outputs, throughout the life of the Project. Throughout Project implementation, FD district staff (both districts combined) received less than US\$10,000 in financial resources for management of MMFR.

The U.K. Department for International Development (DFID): At appraisal, DFID provided US\$800,000 to support development of the management plan for MMFR along with other Project preparation activities, including consultancy support to delineate the institutional arrangements and analyses of the social data. This support was directly linked to the development of the Project proposal.

At the same time, DFID was also implementing a five year, US\$25 million program to the Forest Sector in Malawi. DFID had committed to support the Project directly by providing US\$500,000 for the forest co-management and livelihoods component. This aid was to help consolidate the poverty alleviation elements of the Reserve management plan and complement support provided via the Forest Sector program.

At ICR, these commitments had not materialized. DFID did not renew support for the FD due to Government lack of commitment to implement its policy with respect to community management of forests.

DFID's decision not to co-finance the Project in addition to the Forest Department's failure to allocate funds to MMFR management adversely affected Project implementation.

To compensate for these significant gaps in funding, MMCT reallocated Project funding towards management activities of the Forest Reserve (salaries for MMFR field labor), thus reducing funds earmarked for MMCT administrative costs by up to 20% annually. These early shortfalls in Project co-financing impacted the amount of time and capacity that the TAU staff had available for activity planning and delivery throughout Project implementation.

On a positive note, in the final year of Project implementation, the Royal Norwegian Embassy provided significant resources (US\$5 million) to co-finance the Project through to 2012 to enable the endowment capital to grow thereby enhancing its long-term conservation financing potential post-closure.

## **2. Key Factors Affecting Implementation and Outcomes**

*2.1 Project Preparation, Design, and Quality at Entry (including whether lessons of earlier operations were taken into account, risks and their mitigation identified, and adequacy of participatory processes, as applicable):*

Despite the Highly Satisfactory Quality at Entry (QEA) rating received in June 2001, there were a number of factors during Project preparation and in Project design that adversely affected Project implementation and the expected outcomes. The under-rating of some of the risks identified at appraisal also affected Project implementation and hindered achievement of the expected outcomes.

### **Project Preparation**

Length of Project Preparation: Project preparation was extensive and involved a broad-based participatory consultative process. Project design was based on solid analytical work carried out over several years by a number of partners (DFID, National Herbarium and Botanical Gardens of Malawi). Indeed, the Quality at Entry assessment noted that although Project preparation was costly in time and budget, the panel felt that this was preferable to hurrying a Project which needed strong local ownership and was closely linked with a parallel forest sector investment by DFID; the latter of which closed in the early stages of Project implementation. Despite the lengthy consultative preparatory process, throughout the life of the Project, several misconceptions persisted, including the view held by local communities that the Government of Malawi had sold Mulanje Mountain to MMCT.

### **Design Constraints**

Although Project design incorporated important lessons from a number of operations, all of which were extensively examined during Project preparation, including a site visit to the GEF-sponsored Uganda Mgahinga and Bwindi Impenetrable Forest Conservation Trust Project, at ICR, the Project exhibited a number of design constraints. Specifically:

#### Capitalization of the Endowment Fund

The Quality at Entry report noted under the section on Risk Assessment and Management that “most Project risks have been well appraised and candidly reported, but the panel suspects that the risk of disappointing trust fund performance may be somewhat greater than had been thought by the preparation team. More generally, the risk is of either a revenue shortfall or that MMCT’s

actual expenses may be greater than projected. In either case, MMCT's range of activities would be severely curtailed."

Indeed, this was the case with the trust fund underperforming in years 1 and 2 and showing increased vulnerability during the 2007-08 global financial crisis. These factors had a significant impact on MMCT's ability to deliver on a range of activities as well as their success in establishing the Conservation Trust Fund as a viable long-term financing mechanism for conservation.

The initial investment attracted steady returns for the first two years, but with quarterly draw-downs for Project implementation, the endowment income was insufficient to cover the TAU's administrative and program costs. As a result, in year 1 following receipt of the endowment fund, the annual funding available for TAU operations decreased by 50% from US\$400,000 to US\$200,000. To address this gap, TAU staff focused their efforts on fundraising rather than on delivery of the Project's core activities.

This design failure was identified in the Quality at Entry assessment report, but was not adequately mitigated prior to and directly after endowment funds were released. The Bank was aware that the endowment would not generate sufficient resources to finance the Project's running costs and from the outset it was clear that the design of the endowment required that aggressive fundraising efforts run parallel release of funds for establishment of the endowment.

At the time that the endowment was established, MMCT expected an average annual return of 6.5% which was considered sufficient to cover all costs of the TAU as well as delivery of Project activities. However, MMCT was not aware that vigorous fundraising was a necessary element to achieve this level of income. MMCT grasped this need in the latter part of Project implementation and has since carried out this role extraordinarily well, securing more than three times the funds allocated through the trust.

The original design of the endowment also did not ensure adequate mitigation of the fund's vulnerability to risks associated with the 2007-08 global financial crisis. A risk that continues to threaten the health of the fund at ICR.

Biodiversity Challenges of socio-economic origin were not emphasized sufficiently in Project design. In particular, the need to adopt a sustainable livelihoods approach to ensure that the Project achieved its objectives was not given sufficient weight at appraisal. During implementation, as this gap became clear, MMCT shifted their focus to address this challenge so as to achieve the expected outcomes under Component 2.

Invasive Species represent a threat to endemic species. Project design and preparation identified key invasive species to be eradicated during Project implementation. Indeed, one of the Project indicators tracked eradication of one of the identified invasive species extant on the mountain. However, the Project failed to identify brackenfern (*Pteridium aquilinum*) as a major wild-flower biodiversity conservation challenge at appraisal. This species is a serious threat to the endemic biodiversity on Mulanje Mountain. It also poses a problem in Nyika which may impact the Nyika GEF Project currently under preparation. The challenge faced by FD and MMCT is

the difficulty associated with eradication of this particular species; a challenge that persists at ICR.

The Project's co-management and sustainable livelihoods component was originally allocated US\$860,000 (11% of total expected Project funding or 2% of GEF funding). In actuality, due to lack of co-financing, the component received only US\$64,115.86 by Project closing. Given the significance of these interventions to the overall success of the Project's Global Environmental Objectives, it would have been prudent to have allocated additional resources to this component at Project design. Project design should have placed more weight on the significance and importance of poverty alleviation efforts to ensure the sustainable use of MMFR resources. The critical importance of the interventions under this Component will need to be prioritized in the post-closure operation if the Project is to be successful in maintaining the Mulanje Mountain ecosystem and globally significant biodiversity in the long-term.

### **Project Risks**

Although Project risks were correctly identified at design, the significance of two, in particular, was underestimated. The two Project risks that rose to significance during implementation were:

**A. Lack of Forest Department capacity or commitment to effectively manage the MMFR and maintain its biodiversity and ecological values, or to collaborate with MMCT in these objectives.** This risk rose to significance from the outset to become the principal challenge to Project implementation.

The Risk Mitigation Measures proposed in the PAD for this risk were "Support for building FD capacity and strengthening policy under this project and others, includes a major sector program which emphasizes sustainable resource management and co-management aspects; FD has participated actively in the design of MMCT and project preparation and expressed strong commitment to it; international support for MMCT will increase local and national appreciation of the significance of Mulanje's biodiversity."

Despite these measures, some of which did not materialize (e.g., closure of the US\$25 million forest sector program), the FD failed to allocate sufficient human capacity and financial resources for management of the MMFR during Project implementation and failed to collaborate with MMCT to meet the objectives of the Project.

To understand why the FD failed to commit to the Project or collaborate with Project partners, it is important to note the institutional context regarding management of MMFR. Management of the Reserve has not changed since appraisal. The Forest Department is mandated through the Forestry Act (1997) to manage all forest reserves in Malawi including the allocation of extraction permits.

At appraisal, it was anticipated that measures would be taken to allow local communities to enter into co-management arrangements that would enable them to benefit from sustainable use of Reserve resources, as provided for in the Act. Furthermore, the FD was expected to establish a transparent system of issuing permits and to monitor extraction of resources such as Mulanje Cedar timber.

During Project implementation, there were many challenges that affected these expectations. For example, delayed approval by the FD of the co-management agreements frustrated progress of the co-management and sustainable livelihoods component.

The Cedar Management Plan was also delayed resulting in the arbitrary opening and closing of Cedar harvesting. At ICR, it was confirmed that although the Cedar season had not been formally reopened, in early 2008, the FD had issued clearance for extraction of dead Mulanje Cedar for production of artisanal fisher canoes as part of a Lake Malawi fisheries project. Confirmation was received at ICR that only 22 to 30 of the expected 350 Mulanje Cedar canoes (70 boats per year for 5 years) had been delivered as part of the Lake Malawi Project's deliverables. And, although harvesting was to be for a finite time period, as late as January 2009, harvesting had not stopped and may not have been limited to dead Cedar.

Such issues led to increased conflict between MMCT and FD. Two additional constraints further complicating FD's commitment to the Project were:

- The apparent differences regarding the use of Project proceeds from the endowment. Even though the Grant Agreement specified that the recipient will make available the proceeds of the endowment to MMCT, it was clear that the confusion surrounding the use of the proceeds was the cause of major disagreement between MMCT and FD throughout Project implementation.
- The actual and perceived disparity in staff salaries between district-level FD staff (e.g. District Forestry Officer) and MMCT employees also aggravated the growing tension among Project partners, particularly at the local level.

On average, MMCT support and technical staff earned between three to ten times that of FD staff at the district level<sup>5</sup>. However, the salaries and benefits earned by FD headquarter staff was actually higher than the salaries earned by MMCT staff in similar positions. The skills set and qualifications of MMCT staff were significantly superior to that of the district level FD staff implying that the disparity in salaries was more of a perception issue at the district level rather than an actual disparity in salaries based on skills set and tertiary education.

For example, a senior technical officer at MMCT and a technical FD headquarters staff such as a Deputy Director earned on average (non-salary benefits excluded) a monthly salary of Malawi Kwacha (MK) 200 – 250,000. However, a District Forest Officer received a monthly salary equivalent to MK 20 – 30,000. Although real, the difference in salaries is a perception issue as there are no valid comparators at the district level in terms of qualifications and skills set between FD and MMCT staff. Regardless, this perception led to considerable friction at the district level and further exacerbated the growing tension between MMCT and the FD Director.

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<sup>5</sup> FD Deputy Director (Malawi Kwacha 200 – 250,000/month) which is the same salary as an MMCT senior technical program officer (excluding FD staff benefits). FD District Forest Officer earns Malawi Kwachas 20 – 30,000/month (lacks degree and specialized skill set). FD District Typist earns Malawi Kwacha 5 – 10,000/month whereas MMCT support staff earn Malawi Kwacha 15 – 20,000.

Although these challenges were identified by Project partners early in Project implementation, there was limited capacity within FD to address them. In addition, the FD Deputy Director who committed 40% of his time to MMFR unfortunately passed away during implementation. Although these challenges were brought to the attention of the Ministry during Bank supervision missions, the numerous changes to the institutional structure of the host ministry delayed progress. Further aggravating the situation, budget resources agreed to within the original Project contracts never materialized. This resulted from FD receiving lower than expected annual budgets throughout the life of the Project.

FD's lack of commitment to the Project was also one of the reasons DFID ended support for this Project. The additional gaps and delays only served to further degrade the already tense working relationship between FD and MMCT.

This conflict was evident from the outset, from Project preparation throughout implementation and up to the final year of implementation when the current FD Director came on board. At the time of entry of the new Director in 2007, the working relationship among Project stakeholders improved dramatically; which bodes well for the post-closure operation.

**B. MMCT's endowment will not be adequate to generate an income stream sufficient to support critical conservation and co-management activities.**

The Risk Mitigation Measures proposed in the PAD for this were "DFID Forest Sector support program will provide substantial co-financing for implementation of co-management/sustainable livelihoods aspects of MMCT program: Phase I activities and objectives will include active fundraising, demonstrating effectiveness of MMCT in order to attract support; administrative and program costs are kept as low as possible to match realistic expectations of income stream from the anticipated endowment."

At appraisal, this risk was not rated sufficiently high nor was it appropriately described. During Project implementation, it became clear that very few donors can or will finance endowment funds. Some, such as Norway, opted for the next best option and began financing MMCT's full administrative and program costs in the final year of Project implementation thus affording the endowment time to grow without further draw downs. In effect, this crucial five-year (2007-2012) relationship has afforded MMCT US\$5 million in additional funding; indirectly increasing endowment capitalization in the post-closure period. In addition, the TAU also raised considerable funds (US\$10 million) to finance parallel activities on MMFR and surrounding areas related to the original Project objectives.

At ICR, MMCT's fundraising success has been exceptional for Project activities, but not for direct capitalization of the endowment fund. MMCT's fundraising efforts have essentially tripled the amount used to establish the endowment fund (US\$15 million) to finance parallel activities within the scope of the original Project components.

The Quality at Entry report correctly identified this risk and advised the Project team and the Borrower accordingly. At ICR, MMCT continues to fundraise to ensure that the investment income of the trust will sustain Project activities over the long-term. However, this risk remains

significant as the endowment has decreased as a result of the 2007-08 global financial crisis. At ICR, it is unknown whether the endowment will be able to grow sufficiently by 2012 to generate a sustainable income stream sufficient to support critical conservation and co-management activities on the Mountain.

## *2.2 Implementation (including any Project changes/restructuring, mid-term review, Project at Risk status, and actions taken, as applicable):*

A number of factors affected Project implementation and achievement of the Project's Global Environmental Objectives, including: institutional arrangements, implementation performance and procurement.

### **Institutional Arrangements**

At Mid-Term Review, it became clear that the institutional arrangements for management of the MMFR were faulty and unlikely to improve. The FD did not have the capacity or the resources to properly manage the Reserve. To address the situation, Project partners agreed to five critical changes in Project approach at MTR.

It was expected that implementation of the recommended changes would begin with the signing of a new MoU between the Ministry of Mines, Natural Resources and Environment, Ministry of Finance and MMCT. This MoU (or Bridging Cooperation Agreement) was signed in October 2007 and would remain in effect until such time as the Public Private Partnership (PPP) Agreement was signed.

The PPP agreement would, in effect, permit MMCT to formally manage the MMFR with support from FD staff seconded to MMCT. It was agreed by all Project partners that the PPP approach would function to improve day-to-day management of the Reserve, affording sufficient capacity and resources through MMCT, while maintaining management oversight by government through department staff assignments to MMCT. *At ICR, the PPP remains unsigned.*

The five changes agreed by all Project partners at the Mid-Term Review were:

Reserve management system. The MMFR will be administered as a single unit, with an institutional arrangement that empowers a single local management entity. That entity must be held accountable and must be given the financial and human resources required by its mission. *At ICR, this action has not been adopted. Currently, MMFR is managed as per FD policy, there is an interim Director for the MMFR, and a senior director will be recruited in the future to manage MMFR.*

FD/MMCT Partnership. The MMFR will operate under a Public Private Partnership whereby MMCT will become, by delegation, manager of the MMFR; FD will second staff to MMCT with skills and numbers commensurate with the task. The PPP will be sealed by an MoU or Partnership Agreement. *Contrary to the MTR agreement, this is not the case today at ICR. At ICR, the Bridging Cooperation Agreement signed in October 2007 remains intact and in force. If and when the PPP is signed, however, management of MMFR will not be delegated to MMCT; rather the FD will continue to manage the MMFR once the PPP is signed. This change presents a significant deviation in the nature of the agreement related to the PPP as discussed and agreed*

*at MTR. Going forward, the FD must clarify its understanding of the relative roles and responsibilities of the key stakeholders formally involved in the PPP for MMFR.*

Financing of the PPP. Tourism, plantation logging and non-timber forest product revenues would be collected by MMCT and deposited in a Trust Fund to be established under Part VI of the Public Finance Management Act as agreed with Treasury and the Accountant-General's Department. A percentage would fund the Mulanje and Phalombe District Council for community forest support. *At ICR this action has not been adopted as the PPP has not been signed.*

Co-management of MMFR. FD would speed up approval of the submitted co-management agreements because they are the core basis of the Project to which Government and the WB subscribed. Furthermore, MMCT will scale-up establishment of the co-management arrangements in order to ensure equity in sustainable access to resources around the Reserve. *At ICR, 6 of the original 12 expected co-management agreements have been signed.*

Planning, Monitoring and Evaluation. MMCT would prepare new planning, M&E, reporting and procurement guidelines to be adopted by its Board in a revised Trust Administration Manual (TAM) by June 2007. *At ICR, MMCT prepared new planning, M&E reporting and a revised TAM based on the original operating structure given that the PPP was not signed. In addition, MMCT developed a new five year management plan, strategic plan, budgeted work plan, as well as a new performance indicator matrix for post-closure operations. At ICR, drafts of these documents were reviewed. The Bank and Norway provided detailed feedback to MMCT on how they might improve each document in subsequent revisions.*

*Unfortunately, at ICR, actions agreed at MTR were not adopted as detailed above. As such, the Project Risk to Development Outcome remains significant for the post-closure operation. The ICR Risk to Development Outcome rating is also related to the two main risks identified at appraisal that remain critical issues affecting post-closure implementation of the original Project activities as stated in section 2.1 above.*

An additional institutional arrangement issue that needs to be considered in light of the aforementioned challenges is the establishment of the Mulanje Mountain Workers Association. MMCT fostered establishment of this Association to account for the gap in FD human resources assigned to work on the mountain. This Association employs members of the local communities to carry out the daily maintenance work on the mountain required to manage MMFR.

This Association, in essence, duplicates the role of the FD to manage the day-to-day responsibilities related to management of the MMFR. Clarity with respect to the roles and responsibilities of local FD staff and the Worker's Association is required to avoid igniting any conflicts between the FD, the Worker's Association and MMCT in the future.

At ICR, the FD was carrying out a functional review. It is expected that this review will determine how many local FD staff are and will remain working on the mountain and with surrounding communities and how these staff might interact with laborers hired through the Worker's Association. (Current records indicate that some 700 FD staff are assigned to work in the MMFR. It remains unclear what these staff actually do with respect to managing the MMFR.)



## **Implementation Performance**

Implementation success is a consequence of implementation partners' performance. At ICR, Project partner implementation performance was as follows:

**World Bank.** Some of the internal Project management challenges faced by MMCT from MTR to closing may have been mitigated had the Bank provided additional support to MMCT staff who lacked adequate knowledge and experience with respect to Bank financial management and procurement procedures. Although the Bank provided relevant training and ongoing support in both areas, MMCT noted that additional direct support from the Bank may have helped improve Borrower and Implementing Agency understanding of and compliance with Bank policies.

**Forest Department.** The recent improvement in the relationship between MMCT and FD complemented by the FD's renewed efforts to appoint senior staff to manage MMFR as well as the renewed commitment to earmark resources for management of MMFR are positive signs for the post-closure operation. What is now needed is resolution on the Public Private Partnership issue.

**GoM.** The GoM financial commitment to the Project never materialized. And, although the relationship between MMCT and FD has started to improve, the vast majority of issues flagged during the last set of supervision missions have still not been adequately addressed, indeed, the key actions agreed by all at MTR on Project institutional arrangements have not been adopted to date, 2 years after the MTR.

**MMCT.** Management performance on procurement issues, in particular, has not improved. Going forward, financial management and procurement aspects of MMCT require particular attention so that the misunderstandings (as detailed in the ISRs and MTR) encountered during Project implementation are avoided in post-closure operations.

On a positive note, MMCT's governance structure and institutional bodies functioned extremely well throughout Project implementation, significantly aiding overall Project implementation. At ICR, MMCT structures were fully functional showing great resilience to the many responsibilities taken on by the TAU throughout Project implementation. The original cohort of TAU staff recruited in 2002 remain employed at TAU today, with the exception of an Administrative Secretary whose position has been replaced three times.

Exhibiting close to 100% staff retention during the life of the Project is rare and exemplary and MMCT is to be commended for adopting successful human resource policies such that it has retained the vast majority of its staff. This fact also bodes well for the post-closure operations as TAU staff retain the institutional history of the Project since inception – a key factor to guarantee long-term success. Note, the existence of the endowment fund was also a strong factor in the high staff retention rate.

MMCT's Board was also stable. The Board met 44 times, 34 times for regular meetings and a further 10 on an extraordinary basis to review key instruments and to interact with the endowment asset manager.

The Board established a Finance and Administration Sub-Committee that, although inadequately constituted with limited membership, met nine times to assist in the annual budgeting process, quarterly expenditure and work-planning process, to review administrative issues and the endowment's performance as well as to analyze the audit. A Research Sub-Committee was also established to guide and coordinate an agenda of research activities.

Such stability of the Board bodes well for the post-closure operation.

### **Procurement**

In early 2008, the Bank carried out a procurement review of the Project. The review noted that MMCT had neither complied with the provisions of the legal agreements nor had it followed the recommendations of previous Bank procurement reviews.

The review also noted that MMCT was not operating with a procurement plan and the Trust Administration Manual (TAM) did not include a section on procurement. This has significant implications for proper management of the Trust. MMCT is an organization that currently operates mainly on grants from other organizations. As such, the review strongly recommended that it develop and abide by an unequivocal set of procurement procedures.

It was agreed that MMCT would update the Trust Administration Manual to include a section on procurement and seek approval from the WB.

The draft TAM informally submitted to the Bank and Norway in September 2008 (at ICR) confirmed that MMCT has developed its own procurement procedures. However, the Bank's procurement team did not receive a formal version of the revised TAM prior to Project closing nor at ICR. If and when the TAM is approved by the Board, MMCT will be able to operate according to its own procurement rules. This represents significant progress based on the recommendations made during the final set of Bank supervision missions.

### *2.3 Monitoring and Evaluation (M&E) Design, Implementation and Utilization:*

Monitoring and Evaluation is the proper planning of expected outcomes, outputs, activities, budget and procurement procedures as well as proper monitoring of Project implementation. M&E should guide decision-making by management (TAU, MMCT Board, FD). At ICR, it was clear that proper design of the Project's Monitoring and Evaluation framework was a dimension overlooked by the Project preparation team.

As noted above and in Annex 2, the Results Framework prepared for the Project suffered in terms of utility because the indicators were qualitative rather than quantitative in nature.

MMCT was designed to contract M&E work for the Project. However, throughout Project implementation, funds were insufficient to finance this work. Considering capital costs, MMCT had less than US\$150,000 per year available to finance all Project activities, including M&E reporting by third parties.

As a result, MMCT paid District Forest Department staff to collate data for the M&E framework. Unfortunately, FD staff lacked the capacity to collect and report on these data. Hence, MMCT took over lead responsibility to develop a refined Results Framework with quantitative indicators and for generating the data to track these proxy indicators.

Although MMCT produced Annual Work Plans and budgets, designed a refined quantitative Results Framework and contracted Wildlife Conservation Society (WCS) to design an ecological monitoring system to collect annual data, these tools were not used to systematically inform management. Prior to 2006 (MTR), the Project did not monitor results systematically.

Comprehensive treatment of the monitoring and evaluation design, implementation and utility of the Project's original and refined Results Framework is provided in Annex 2.

#### *2.4 Safeguard and Fiduciary Compliance (focusing on issues and their resolution, as applicable):*

##### **Safeguard Policies**

At Appraisal, the Project was classified as a Category C Project. However, both the Quality at Entry assessment and MTR highlighted the fact that the Project should have been classified as a Category B Project due to nature of the investments. From MTR to closing, the Project category was not changed and, as such, no safeguard tools were developed for the Project.

At ICR, it is clear that the Project emphasized activities that would generate positive environmental and social impacts. It is also known that earlier generation operations, such as this Project, which were mostly about establishing trust funds, were typically classified as Category C projects. In hindsight, however, Project investments would likely have triggered Safeguard Policies on natural habitats, forests, involuntary resettlement and environmental assessment.

Going forward, future operations of a similar nature should monitor the appropriateness of the original Project classification during regular supervision missions to ensure that the Project complies with Bank safeguard policies.

##### **Fiduciary Compliance**

Prior to closing, the Financial Management Rating for MMCT was moderately satisfactory.

MMCT made use of zero-based budgeting which worked well. The accounting was according to International Accounting Standards (IAS). The Project accountant carried out most of the duties associated with financial management making "segregation of duties" difficult. This challenge was partially mitigated by the fact that MMCT employed a secretary with some accounting background.

The Project's disbursement method was based on Statements of Expenditure (SOE) and exhibited no serious issues. The Grant Agreement did not make submission of unaudited Interim Financial Reports a requirement and as such the Project did not submit any.

MMCT did submit its external audit reports on time as per the Grant Agreement except the final one for the year ended June 30, 2008 which was submitted in February 2009; one and half months after it was due.

The 2007 and 2008 Financial Statements were qualified by auditors due to the fact that the Project had not applied IAS 16 which governs the valuation of Property, Plant and Equipment. This was not a serious issue considering that production of a Balance Sheet was optional in the Agreement. There were no issues that would have affected the reliability of the financial statements. Issues raised in management letters were resolved and clarifications given to the WB were appropriate. The Special Account is expected to be cleared in March 2009.

*2.5 Post-completion Operation/Next Phase (including transition arrangement to post-completion operation of investments financed by present operation, Operation & Maintenance arrangements, sustaining reforms and institutional capacity, and next phase/follow-up operation, if applicable):*

The MMCT was designed as a long-term mechanism to support improved MMFR management and local community livelihoods. As such, it will continue to function post-closure based on the successful delivery of a number of activities to date, its staff and growing portfolio as well as the essential strength of its endowment.

The advantage of overhead costs being internally financed affords MMCT a leveraged position to collaborate with other developmental partners, donors and local commercial organizations. At ICR, it was clear that the endowment was instrumental in attracting the vast majority of parallel conservation investments in and around Mulanje Mountain.

Through its 2008-2012 Strategic Plan, MMCT aims to consolidate and expand future work in five areas. Such efforts seek to:

Raise the international and national status of the MMFR through:

- Attainment of World Heritage Site accreditation;
- Consolidation of the trans-boundary aspects of the GBR;
- Developing the relationship with Lake Chilwa GBR;
- Seeking official name change from Mulanje Mountain to Mount Mulanje;
- Re-classification of MMFR to a more prominent forest sector profile.

to profile the mountain appropriately for Project development potential and to boost local income generation to support local communities who work in the nascent tourism industry as well as to address the main biodiversity conservation challenges.

Enable endowment capital to grow to an ideal size of US\$10m by:

- Utilizing Project funds such as the five-year US\$5m Norwegian support to reduce draw-downs,
  - Seeking additional capitalization from other donors,
- to have in place a reliable income stream that covers principal costs and reduces the bureaucratic overhead of donor Project administration.

Develop an optimal conservation and development working alliance through:

- Attracting complimentary conservation and research agency support;
- Enabling further NGO and micro-credit agency involvement in socio-economic development around the mountain;
- Encouraging commercial investment to bring added value to products with appropriate fair trade, organic, and other eco-labeling.

to have locally available expert thinking and action in key aspects of biodiversity conservation, natural resource management and socio-economic development.

Adopt an ecosystem approach to ecological and biodiversity conservation by:

- Enabling concerted agency action across a broader ecological area;
- Seeking and recommending appropriate solutions to the variety of challenges affecting similar mountains across the region;
- Determine the potential to establish an expert research centre locally. to achieve meaningful conservation results by seeking solutions against identified threats to the endemic biodiversity and unique ecology, beyond the issues faced only on one mountain.

Develop payment for environmental services opportunities:

- Analyze basis for water, energy and tourism income;
- Ensure government modality for MMFR funds retention in place;
- Seek Water Catchment Management Area status;
- Catalyze Mulanje tourism marketing and other commercial activities;
- Develop carbon sequestration funding potential;
- Redevelop the exotic plantation potential and commercial management.

Given that the appropriate policy framework may exist in the near term (pending Parliament approval), revitalization of the PPP arrangement may be possible in the medium to long term:

- As a priority seek meaningful response from government to develop a negotiated working solution to the proposed PPP for MMFR;
- Further develop synergy with FD to achieve new local MMFR leadership, technical capacity, management systems and enforcement deployment.

to optimize the mandated roles and management capacities of government sector agencies, complimented by innovate financing solutions and broader expertise available through new partnerships.

At ICR, the transition arrangements outlined in MMCT's Annual Work Plan 2008-2009, Management Plan 2004 – 2009 and Strategic Plan 2008-2012 confirm that appropriate provisions exist to ensure that effective Project operation post-closure may be possible. Indeed, MMCT institutional changes during implementation included recruitment of an M&E officer and additional supervision capacity brought in from other projects and organizations. However, further institutional changes have not been made because the PPP remains pending.

Unless the fundamental challenges experienced by the Project are addressed, in particular the institutional issues related to relative roles and responsibilities of MMCT and FD, the operation post-closure will continue to experience limited success in terms of making tangible progress toward achieving the original Global Environmental Objectives.

Clarity is needed as to MMCT's role going forward. Is MMCT to hold a supporting role to FD or is it to be delegated a comprehensive management role of MMFR by FD? Both have clear implications on management of the Trust. As long as an appropriate arrangement is not formalized, then limited success will be achieved in terms of sustainability of the Reserve. This has been a pervasive issue since the mid-term review. Clear resolution is needed for the post-closure operation to be successful. MMCT cannot strengthen its institutional structure without a clear vision for the future in terms of its working relationship with the FD, specifically, the formal arrangement as outlined in the PPP.

### **3. Assessment of Outcomes**

#### *3.1 Relevance of Objectives, Design and Implementation (to current country and global priorities, and Bank assistance strategy):*

At ICR, the Project's objectives remain relevant to current country and global priorities and the Bank's assistance strategy.

The overall objective of the **Malawi Growth and Development Strategy (MGDS, 2006 -2011)** is to reduce poverty through sustained economic growth and infrastructure development. Theme One: Sustainable Economic Growth, Sub-Theme 1: Maximizing the contribution to economic growth through the sources of growth, emphasizes that high growth sectors will be positioned to realize economic growth in the long term and increase employment in the medium term.

Tourism is listed as a key area for growth and employment under Sub-Theme 1. The MGDS aims to position Malawi as a leading eco-tourism destination in Africa and to foster increased domestic tourism. Efforts by MMCT and FD to foster domestic and international tourism on Mulanje Mountain illustrate the relevance of the Project's original objectives to the GoM's current development strategy.

In addition, the MGDS emphasizes the importance of conserving the natural resource base. The strategy recognizes that sustainable use of natural resources contributes to many of the goals in the MGDS.

In the Forest Sector, the strategy indicates that the country will ensure sustainable use and management of forestry resources. Key strategies include: improving productivity and value added by the industrial forestry sector; increasing reforestation efforts for key areas; improving enforcement of regulations for forestry management; initiation of reforestation and environmental rehabilitation programs in priority areas; and introducing incentives for private sector participation.

On Environmental Protection, the strategy indicates that efforts for environmental protection will focus on improving compliance with environment and natural resource management laws. Key strategies include: improving enforcement of environmental policies, legislation and cooperation in environment, natural resource management and development; raising awareness of issues of protecting the environment; and incorporating environmental concerns in school curricula and establishment of an environmental management information system.

With respect to Wildlife, the overall goal is to conserve and manage protected areas and wildlife. In the medium term, the sub-sector is expected to conserve, manage and develop wildlife resources to effectively contribute to the sustainable development of biodiversity and the tourism industry in Malawi.

Each of these priorities highlight the relevance of the Project to Malawi's current development goals.

With respect to **global priorities**, climate change, food security, sustainable livelihoods, conservation of endemic, endangered and threatened biodiversity and Carbon finance all remain core issues on the global development agenda and are embedded as essential elements of the Project's original objectives as well as the proposed post-closure operation.

**The Bank's fourth Country Assistance Strategy (FY07-10) for Malawi** supports the Government's Growth and Development Strategy and links the MGDS Goals to four CAS Outcomes. The current CAS emphasizes the critical importance of ensuring environmental sustainability which is at the core of the Project's objectives and design.

*3.2 Achievement of Project Development Objectives [or Global Environmental Objectives] (including brief discussion of causal linkages between outputs and outcomes, with details on outputs in Annex 2):*

Despite having had to tackle a number of significant institutional and financial challenges, overall, the Project exhibited moderate success in achieving some of its Global Environment Objectives. In particular, the Project was able to achieve partial success in specific areas, as summarized below per GEO and as further detailed in Annex 2.

**A. Maintain the Mulanje Mountain ecosystem, including globally significant biodiversity and vital ecological services.**

At ICR, development of an improved ecological and biodiversity knowledge base coupled with marginal, but insufficient wildfire prevention programs, partial invasive species clearance, partial encroachment reduction and a negligible decrease in illegal harvesting of Mulanje Cedar suggest that maintenance of the Mulanje Mountain ecosystem, including globally significant biodiversity and vital ecological services, has been achieved to a limited extent.

That is, the Project was able to initiate work to begin addressing a number of threats to the ecosystem, but establishing viable systems to maintain the Mulanje Mountain ecosystem and biodiversity over the long-term will require a much more concerted effort by MMCT and the FD at both the national and district levels. Eradication of brackenfern, continued unsustainable harvesting of Mulanje Cedar, the absence of sufficient law enforcement to halt illegal logging and poaching and the potential for bauxite mining activities on the mountain threaten the integrity of the ecosystem and illustrate the enormous challenges to be addressed by MMCT and FD in the post-closure period.

**B. Increase awareness, understanding and appreciation of the value of the Mulanje Mountain ecosystem, at local and national levels.**

At ICR, the last community attitude survey conducted was in 2006 at MTR. The rating assigned to the survey indicator was 80% at that time out of a possible 100%. Albeit outdated, the 2006 score can be considered as a fairly accurate for one of the two proxy indicators developed for the original key indicator due to the findings detailed in MMCT's Project Completion Report and the findings of the ICR stakeholder consultation session (summarized in Annex 6). In particular, growing stakeholder reliance on MMCT to deliver on a broad development agenda beyond biodiversity conservation in the Mulanje Mountain area suggests that stakeholders have a positive attitude toward MMCT.

Although circumstantial evidence<sup>6</sup> suggests that the importance of Mulanje Mountain is known throughout Malawi and abroad, the extent to which the Project has been able to increase awareness, understanding and appreciation of the value of the Mulanje Mountain ecosystem has not been established nor has it been measured since 2006.

As such, continued efforts are needed to increase awareness and appreciation of the mountain, particularly to decrease the incidence of wildfire and poaching. Ongoing investments are also needed to address the misconceptions about MMCT's role (e.g., that it bought the mountain from the FD) and the relative responsibilities of the FD and MMCT towards long-term management of the MMFR.

**C. Improve sustainability of biological resource use and enhance the value of the Mulanje Mountain ecosystem to local communities.**

At ICR, 1,160 ha (of the 7000 ha target) of miombo forest were under co-management and 6 of the 12 co-management agreements were signed. Albeit significantly lower than the expected target, the fact that these agreements were signed at all sets a powerful and positive precedent that other such co-management arrangements may be forthcoming in the medium to long-term. In addition, the fact that the number of VNRMC and other relevant community structures established and operational exceeded the end of Project target value of 75 (actual value achieved was 134) suggests that the value of the Mulanje mountain ecosystem to local communities was enhanced by the Project's interventions. Despite these gains, further efforts are needed to ensure the sustainability of the resource use and to increase the value of the ecosystem to local communities.

**D. Establish long-term income stream and institutional capacity to ensure continuation of 1-3; MMCT appreciated and respected by stakeholders at local, national and international levels. Demonstrate the appropriateness of Conservation Trust Fund as financing mechanism for biodiversity conservation.**

At ICR, the endowment fund was not generating sufficient income to cover MMCT's administrative and operating costs. However, MMCT's ability to raise more than US\$15 million in financing for activities related to the Project objectives not only demonstrates MMCT's ability to leverage funds to ensure financial resources to achieve and sustain the

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<sup>6</sup> Based on the growing local tourist industry at the mountain and visitor records to the mountain, in addition to the growing body of Mulanje Mountain-based scientific publications by renowned national and international institutions



Project's objectives, it also showcases international recognition and respect for MMCT as well as highlights the appropriateness, albeit indirectly, of a Conservation Trust Fund as a financing mechanism for biodiversity conservation. All are elements of the Project's original objectives.

However, continued strategic and aggressive fund raising is required in the post-closure period since the endowment fund does not yet function as a stand alone financing mechanism. A key consideration when assessing the risk associated with the long-term achievement of this particular GEO is the volatility of global financial markets and the fact that, to date, donors are unable to place funds directly into the endowment fund; rather they are only able to finance parallel activities or the administrative costs of MMCT.

As noted earlier, informal refinements were made to the Project's indicators and Results Framework. Complete treatment of actual values achieved (and their relative meanings) for each of the Project's outcome and output indicators (both original and proxies) as well as a detailed listing of the Project's outputs are presented in Annex 2.

### *3.3 Efficiency (Net Present Value/Economic Rate of Return, cost effectiveness, e.g., unit rate norms, least cost, and comparisons; and Financial Rate of Return):*

One of the key objectives of the Project was to establish a long-term income stream and institutional capacity to sustain biodiversity conservation activities on the Mulanje massif. Based on an updated incremental cost analysis, the Project is considered somewhat efficient in terms of achieving these objectives, particularly given the challenging institutional context within which it operated.

The incremental cost analysis in the PAD identified the following domestic benefits to be generated by the Project:

- Capacity to administer Trust Fund that will finance long-term activities to conserve locally important biodiversity in Mulanje
- More effective monitoring and protection of local use of the Reserve's biological resources
- Increased national awareness of biodiversity conservation and participatory schemes for sustainable natural resource management in the region
- Greater involvement of communities bordering the Reserve in sustainable resource use programs
- Sustainable programs for local biodiversity conservation based on trust fund income

Overall, as shown in the incremental cost matrix in Annex 3, implementation of the Project contributed to increased resources for most components. Total incremental funding is estimated at US\$8.54 million.

The Project was efficient in incrementally establishing a near term financing stream for biodiversity conservation activities on the mountain. GEF support catalyzed the provision of additional funding and technical assistance from a range of stakeholders. Although fund-raising

efforts have fallen short of levels required to increase the capital base of the Endowment Fund, without GEF support, such incremental resources would not have been made available for biodiversity conservation interventions on the mountain. As such, the Project can be considered efficient in establishing a preliminary financial (albeit not institutional) basis for biodiversity conservation on Mulanje Mountain.

At ICR, it was not possible to assess the net benefit of the Project using the conventional rate of return because of the difficulty associated with objective valuation of the benefit and cost streams from Project interventions.

However, as noted in other sections of the ICR, the Project has supported livelihood activities among local communities. As presented in Annex 2, the positive impact generated by the Project with respect to creating viable livelihood alternatives for local communities is a significant benefit generated by the Project which should be emphasized as it tackles a core problem associated with long-term biodiversity conservation and sustainable use of the natural resources on the mountain.

According to the 2006 MTR, the beneficiary attitude study noted that the level of awareness of MMFR and the need for its conservation had significantly improved since Project inception. However, at ICR additional data were not available to assess the complete and direct impact of the Project's interventions in terms of beneficiary attitudes.

#### *3.4 Justification of Overall Outcome Rating (combining relevance, achievement of PDOs [GEO], and efficiency):*

Rating: MS

The overall outcome rating at ICR is Moderately Satisfactory.

Although significant challenges remain to be tackled in the post-closure period, the Project did achieve some positive outcomes associated with Project interventions.

The Project demonstrated progress in eradicating some of the invasive species on the mountain, it illustrated innovative ways of allowing a conservation endowment fund to increase its capital base and paved the way for future pro-active community involvement in the mountain's conservation with the signing of 6 co-management agreements.

Many outcomes have not yet been achieved, but with the stamina and commitment to the mountain exhibited by MMCT and the new FD Director, the Project closed on a positive, forward looking note rather than one signaling a bleak future for the mountain.

#### *3.5 Overarching Themes, Other Outcomes and Impacts (if any, where not previously covered or to amplify discussion above):*

(a) *Poverty Impacts, Gender Aspects, and Social Development*

Although data on poverty impacts and gender were not formally monitored during implementation, the Project did generate positive impacts on the socio-economic status of local communities, in particular women.

It is estimated that more than 60% of all livelihood initiatives financed by the Project directly benefited women. Indeed, women remain the main stakeholders in all beekeeping, mushroom cultivation and small-scale irrigation activities as well as fish farming supported by the Project. Specific details on these impacts are provided in Annex 2.

*(b) Institutional Change/Strengthening (particularly with reference to impacts on longer-term capacity and institutional development):*

Not applicable.

*(c) Other Unintended Outcomes and Impacts (positive and negative):*

### **Positive Unintended Outcomes and Impacts**

- The Project acted as a catalyst to attract a significant number of expert agencies, universities, research organizations and NGOs to work on conservation related matters in and around Mulanje Mountain. The list below is a partial list of those entities that began work in and around Mulanje due to the presence of MMCT and the GEF Project:

Ecological work	Earthwatch Royal Botanical Gardens – Kew Birdlife International National Herbarium and Botanic Gardens of Malawi Forestry Research Institute
Climate Change	University of South Carolina University of Oregon
Livelihoods	United States Peace Corps Concern Universal Wildlife and Environmental Society of Malawi (WESM) United States Embassy Mulanje Peak Foods Presbyterian Church
Carbon Trade	Sustainable Forest Management Carbon Capital and The New Forest Company Carbon-Aided Hestian International Development
Energy	University of Twente (MoU) Practical Action (MoU) GEF Small Grants Scheme

At ICR, the cumulative impact of these interventions would not have occurred had it not been for the GEF Project and the endowment fund which afforded many entities the ability to establish working partnerships with MMCT. It is believed that these partnerships will help sustain achievement of the primary objectives of the Project by elevating the importance of Mulanje's unique biodiversity nationally and internationally, whilst simultaneously enhancing local economic development and providing a permanent income stream for local communities.

- Establishment of a number of legally registered resource-based user associations (beekeepers, tourism). These were in addition to the expected outcome to organize communities for co-management agreements and to the VNRMC. These are listed in Annex 2 as well as in MMCT's Project Completion Report.
- Comprehensive understanding of the northern Mozambique montane ecosystems. At ICR, it became evident that MMCT is considered an authority on the Mulanje ecosystem in Malawi as well as in Mozambique. During Project implementation, Mozambican authorities approached MMCT to share Project expertise and knowledge of the Mulanje montane ecosystem and biodiversity. They also requested MMCT's assistance to incorporate Project activities in Mozambique. The particular details of this evolving relationship are detailed in MMCT's Strategic Plan, 2008 – 2012.

#### **Negative Unintended Outcomes and Impacts**

- The Forest Department's End of Project Report indicates that some members of the local community felt that the Forest Department had in effect "sold" the mountain to MMCT. At ICR, as indicated in Annex 6, this perception remains as one of the long-term misconceptions about the Project. It is a point that should be addressed through MMCT's Environmental Education and Outreach Efforts going forward.

#### *3.6 Summary of Findings of Beneficiary Survey and/or Stakeholder Workshops (optional for Core ICR, required for ILI, details in annexes):*

Main points reviewed during the stakeholder consultation session are summarized in Annex 6.

## **4. Assessment of Risk to Development Outcome**

*Rating:* Significant

At ICR, the risk that the Project's development outcome will not be realized or maintained in the long-term is rated as significant because of the unresolved institutional and financial constraints assessed at Project closing.

With respect to MMCT's role in managing MMFR during the post-closure period, should approval of the PPP by Parliament remain unsigned following the May 2009 Presidential elections, the core institutional issue blocking further progress in achieving the Project's development outcome will remain unresolved.

And, although MMCT's administrative and program costs are financed by Norway in the near term (to 2012), there is no guarantee that the endowment fund will grow to the expected US\$10 million in four years time given the current global financial crisis.

Both constraints highlight the significant institutional and financial risks associated with achievement and maintenance of the Project's development outcome.

## **5. Assessment of Bank and Borrower Performance** (relating to design, implementation and outcome issues) **Bank**

*(a) Bank Performance in Ensuring Quality at Entry (i.e., performance through lending phase):*

Rating: *Satisfactory*

The Quality at Entry assessment report rated Project preparation as Highly Satisfactory, despite the fact that it was lengthy and challenging, it was deemed necessary given the operating environment at appraisal.

The assessment included suggestions to the task team to improve certain aspects of the Project including: (i) ensuring adequate supervision budget to allow for the participation of environment, finance and organizational specialists; (ii) carefully monitor the trust fund management firm; and (iii) watch for potential problems between MMCT and the Government in case of changes in Government or other relevant political changes.

At ICR, the aforementioned factors affecting implementation and achievement of Project objectives can all be traced back to the specific notes and suggestions made in the Quality at Entry assessment report, including: (i) potential for poor performance and external vulnerability of the endowment fund and (ii) risks associated with the evolving MMCT and FD relationship.

In hindsight, it would have been prudent for the task team and Borrower to have considered more thoroughly and adopted more fully the findings and suggestions of the assessment during Project implementation.

Given the aforementioned design issues and project preparation gaps, at ICR, Project preparation in ensuring quality at entry is rated as satisfactory.

*(b) Quality of Supervision* (including of fiduciary and safeguards policies):

Rating: *Moderately Satisfactory*

Bank performance throughout implementation is rated as moderately satisfactory. At ICR, the rating remains as per the final ISR dated May 2008 despite a few issues identified by the Borrower and Implementing Agency as described below.

At ICR, the FD and MMCT both felt that the quality of Bank supervision was satisfactory based on the fact that the task team continuously sought avenues and means for the Project to progress, identifying viable solutions to address challenges arising throughout Project implementation, particularly in the first two years. The Bank also assisted in identifying global expertise to support Project implementation. In addition, improvements in Project supervision were observed over time in certain areas. For example, some of the fundamental Project constraints were addressed at mid-term review.

However, FD felt that Bank supervision fell short of expectations. For example, although the supervision aide memoires were useful, follow up was considered limited.

Additional issues associated with the quality of Bank supervision included:

- Minimal resident mission support during the early years of the Project. In addition, the Bank's Project Task Team Leader was Washington-based at the beginning of the Project, carrying out biannual missions to Mulanje, thus limiting daily or regular interactions amongst implementing partners. And, although Project preparation was extensive, the subsequent change in Task Team Leaders at the beginning of the Project brought about a temporary gap in Project preparation.
- There was no interaction or cross-learning fostered between the Project and other GEF Projects at the global, sub-regional (Republic of South Africa - Table Mountain, Tanzania - Eastern Arc) or national levels (Lake Malawi Environment Project). The Bank did not facilitate any interaction with Bank-financed Projects such as the Development Corridors Assistance Project and the piloting of Mulanje in the National Water Development Program during Project preparation. Interaction with these projects may have helped to identify and optimize potential collaborative opportunities.
- The Bank did not provide adequate training on Project financial management or procurement until the third year of the Project. The Borrower and Implementing Agency both felt that they would have benefited from more day-to-day, rather than biannual, supervision support from the Bank so as to effectively address issues as they arose. The time period between supervision missions was seen as a gap in support from the Bank to Project implementation. Given the model adopted with respect to implementation of the Project via a new NGO unfamiliar with Bank norms and procedures, MMCT and FD considered that additional regular resident mission support would have improved achievement of Project outcomes.

*(c) Justification of Rating for Overall Bank Performance:*

Rating: *Moderately Satisfactory*

Overall Bank performance is rated as MS at ICR balancing the areas where the Bank successfully designed, prepared and supervised the Project with those areas where the Bank could have offered additional support to the Government and MMCT during implementation.

## 5.2 Borrower Performance

NOTE: When the government and implementing agency are indistinguishable, provide rating and justification only for Overall Borrower Performance.

### *(a) Government Performance:*

Rating: *Moderately Unsatisfactory*

- From effectiveness to Project closing, the Government failed to allocate the financial resources (US\$1.27 million) committed to the Project at appraisal. The FD failed to provide sufficient and appropriate staff to support implementation of the Project. The FD Director failed to collaborate with Project partners throughout implementation.
- The PPP agreement agreed at MTR in 2006 remains unsigned and is unlikely to be signed before 2010 due to the Presidential elections in May 2009 and current delays in Parliament.
- FD commitment to not reopen Cedar season has been sustained. Although, at ICR, it was confirmed that the Forest Department did allow harvesting of dead Mulanje Cedar for construction of artisanal fishermen's canoes as part of a Lake Malawi development project. As stated earlier, it remains unclear as to whether harvesting has been limited to dead Cedar and when this off-season harvesting will end. In addition, law enforcement on the mountain needs to be significantly upgraded before the Cedar season can be reopened.
- FD has made concerted efforts to improve its relationship with MMCT. At ICR, this renewed relationship confirms the potential for positive future engagement as presented in MMCT's strategic plan.

### *(b) Implementing Agency or Agencies Performance:*

Rating: *Moderately Satisfactory*

MMCT performance in the May 2008 ISR was rated as Moderately Satisfactory. At ICR, there was no evidence to suggest that this rating should change. Full documentation and details with respect to the criteria used to assign this rating are included in the May 2008 ISR.

### *(c) Justification of Rating for Overall Borrower Performance:*

Rating: *Moderately Satisfactory*

This rating takes into consideration the considerable efforts made by MMCT to achieve the Project objectives throughout Project implementation and the recent improvements in working relations between FD and MMCT. The rating balances this improvement with the historical moderately unsatisfactory performance by Government throughout Project implementation as well as existing institutional and financial gaps and challenges.

## 6. **Lessons Learned** (both Project-specific and of wide general application)

The main lessons learned from this Project can be organized in three categories: institutional, technical and community involvement.

- Institutional
  - A key lesson learned from this Project is that the institutional framework and supporting policies should be designed such that accountability is clear to all stakeholders and lies where there is sufficient capacity. In other words, this Project created an asymmetry between government and a semi-private organization. It created an NGO with the capacity to finance conservation of MMFR, but for which it was not accountable. Conversely, the FD was accountable for management and conservation of MMFR, but experienced decreasing capacity and resources to manage and conserve the MMFR. The conflict between MMCT and FD only served to exacerbate an already frustrating and dysfunctional working relationship, partially caused by these asymmetries. Despite these difficulties, MMCT was able to achieve results at the margin (e.g. fire breaks, clearance of invasive species) but was ultimately unable to address the ecological challenges faced in the Reserve because it was not accountable for it. And, FD failed to manage MMFR effectively due to lack of resources and institutional capacity despite holding primary accountability for management of MMFR.
  - A second related institutional lesson learned is that not only do the roles and responsibilities of all implementing partners need be clear from inception, the institutional capacity and commitment to carry out those roles and to deliver on the respective responsibilities is a critical element necessary to ensure Project success. This Project did clarify roles and responsibilities early on in Project preparation, but it failed to ensure that each entity held sufficient capacity and commitment to deliver on its responsibilities.
  - A third institutional lesson learned is that an endowment fund approach to ensure sustainable financing of conservation objectives can be successfully used as a tool to secure additional investments and attract strategic partnerships related to core conservation goals if it is embedded within a strong institutional structure.
  - A fourth lesson is that future operations should consider an M&E system critical for planning and also as an early-warning system for management. As previously mentioned, this Project's ecological monitoring system was delayed and unable to fully inform management decisions.



- A final lesson learned was that for this type of operation (small scale, innovative district-level implementation model), Project supervision would have been more successful at addressing day-to-day management issues had it been based out of the resident mission. Direct resident mission support on a regular basis is preferable to biannual Washington-based supervision missions.

- Technical

The primary research financed by this Project generated a number of important scientific results that warrant further investigation and can be used to refine strategic biodiversity conservation approaches on the mountain. For example, with respect to the question as to whether or not natural regeneration of Mulanje Cedar occurs on the mountain, comparison of four years of data suggest that natural regeneration does occur but that micro-environments affect germination and survival rates with significant variation between sites. Fire is noted to cause the greatest loss of new recruits.

The artificial regeneration studies also show some trends that can be of use in the consideration for the planting of the species. Lessons learnt from these studies have been applied on the Lichenya Plateau where seedlings planted under canopy have shown a 95% rate of survival.

Other scientific findings of significance are described in detail in the published literature as well as MMCT's Project Completion Report in addition to the summary presented in Annex 2.

- Community involvement

Local community involvement was a critical element in ensuring progress toward achieving the Project's GEOs. Provision of viable livelihood alternatives, coupled with pro-active engagement of local communities in Reserve management work and mountain conservation activities were essential ingredients affording MMCT and FD the success witnessed in several of the Project's investments.

Had local communities not been involved in Project preparation and Project implementation, it is unlikely that the Project would have achieved as many results as documented at ICR. Early, intensive and continuous engagement of local communities is a core element of any future operation that will be carried out under similar circumstances (high population density, growing population pressure on natural resources, lack of livelihood alternatives, etc) to Mulanje Mountain.

## **7. Comments on Issues Raised by Borrower/Implementing Agencies/Partners**

(a) *Borrower/implementing agencies:*

(b) *Cofinanciers:*

(c) *Other partners and stakeholders (e.g. NGOs/private sector/civil society):*

## Annex 1. Project Costs and Financing

(a) **Project Cost by Component** (in US\$ million equivalent)  
(Total rows and percentage column will be calculated by the system)

Components	Appraisal Estimate (US\$ million)	Actual /Latest Estimate (US\$ million)	Percentage of Appraisal
1.Trust Administration	0.52	0.48	<b>92%</b>
2. Biodiversity, Conservation, Research and Monitoring	0.84	0.43	<b>51%</b>
3. Environmental Education	0.12	0.06	<b>50%</b>
4. Forest Co-management and Livelihoods	0.76	0.06	<b>8%</b>
5. Conservation Trust Fund	4.95	5.45	<b>110%</b>
<b>Total Baseline Cost</b>	<b>7.19</b>	<b>6.48</b>	<b>90%</b>
Physical Contingencies	0.50		
Price Contingencies	0.33		
<b>Total Project Costs</b>	<b>8.02</b>		
Project Preparation Facility (PPF)			
Front-end fee (IBRD only)			
<b>Total Financing Required</b>	<b>8.02</b>	<b>6.48</b>	<b>81%</b>

(b) **Co-financing**

(The appraisal estimate will be entered from the Financing data in SAP/AUS; Percentage of Appraisal column will be calculated by the system)

Source of Funds	Type of Financing	Appraisal Estimate (US\$ million)	Actual/Latest Estimate (US\$ million)	Percentage of Appraisal
Government		1.27	0	<b>0%</b>
GEF		6.75	6.75	<b>100%</b>
DFID	Grant	0.50	0	<b>0%</b>
Norway	Grant (2007-2012)	0	5.00	<b>0%</b>

Actual MMCT expenditures were: Trust Administration US\$484,075.62; Biodiversity Conservation Research and Monitoring US\$431,333.04; Environmental Education and Communication US\$ 61,700.48; Forest Co-management and Sustainable Livelihood US\$64,115.86. The remaining US\$252,936.66 was used for goods and works such as: office equipment and furniture, 3 motor vehicles, 3 motorcycles and construction of the office building. A total of US \$5.45 million was transferred to the Trust Fund.

The Project cost by Component table above does not include funds received from Norway. Total amount of funds received from the Bank were US\$6.75 million. US\$1.3 million was received through a Special Account and US\$5.45 million was transferred to the Trust Fund (Smith

Barney). MMCT did not receive funding from DFID or the GoM. As of January 6, 2009, a balance of \$17,063.34 remained in the Special Account and is expected to be returned to the Bank in March 2009.

## Annex 2. Outputs by Component

As noted in Section 3 on Assessment of Outcomes, the matrix below presents the linkages between the original set of key indicators and outcome indicators in the Grant Agreement and PAD and the measureable performance outcome proxy indicators developed by MMCT, the Bank and FD at MTR.

The values associated with each proxy indicator achieved at Project closing, are indicated in the matrix.

Overall, the proxy indicators assigned for each key indicator in the PAD (and Grant Agreement) are considered robust and indicative of the information expected of the original set of qualitative indicators. It is commendable that MMCT took the initiative at MTR, with the Bank's and FD's support, to improve the Project's Results Framework and refine the Project's key outcome indicators. MMCT is commended for being realistic in terms of recognizing what could be monitored and measured effectively and for having improved the M&E system of the Project.

The proxy indicators were measured and used by all parties (the Bank, MMCT and the FD) from MTR to closing. The results presented in the ISR's and Aide Memoires reflect MMCT's ability and dedication to track each of the proxy indicators effectively.

The matrix below describes the extent to which each of the GEOs were achieved based on the values assigned to each proxy indicator at ICR.

GEO	Grant Agreement Key Indicators	PAD Outcome Impact Indicators (Annex I)	MMCT Measureable Performance/ Outcome Proxy Indicators (est. 2006 at MTR)	Outcome Indicator Values at ICR
<b>Maintain the Mulanje Mountain ecosystem, including globally significant biodiversity and vital ecological services.</b>	Biodiversity conservation aspects of MMFR Management Plan under implementation	Biodiversity conservation aspects of MMFR Management Plan under implementation	<p>Decrease in area with invasive tree species: Pine plantation decline (ha) and rogue pine elimination (by %).</p> <p>Area wildfire damage on high altitude indigenous plant habitats: number of Moderate Resolution Imaging Spectroradiometer (MODIS) fire reports and area above 2000m % burnt</p> <p>Area of agricultural encroachment: internal (ha) and boundary (ha)</p>	<p>At ICR, 320 ha of pine remained. Representing a decrease of 630 ha of pine plantation from Project inception. Similarly, rogue pine elimination was recorded as 85% at project closing. Both indicators suggest that this outcome was partially successful.</p> <p>With respect to wildfire damage, the end of Project target for the number of MODIS fire reports was 15. A total of 30 fires were reported in 2008, twice the target value. As such, this proxy indicator was not successful in meeting the end of Project target.</p> <p>With respect to area above 2000m % burnt, the actual value attained at Project closing of less than 10% matched the end of project target for this indicator.</p> <p>Taken together, these two proxy indicators suggest that minimizing wildfire damage on Mulanje was partially achieved, but additional efforts are needed to ensure a significant decrease in wildfires at high altitudes.</p>

				Regarding area of agricultural encroachment, the internal (ha) end of Project target value was 40, actual value achieved was 5. Boundary (ha) target value was 40, actual end of project value was 30. Both values suggest that encroachment has decreased and that this aspect of maintaining the Mulanje ecosystem has been successful. Work going forward must continue to focus on reducing encroachment as with the efforts invested in reducing the incidence of wildfires. Both types of interventions will function to guarantee the long term maintenance and integrity of the Mulanje ecosystem and biodiversity.
<b>Maintain the Mulanje Mountain ecosystem, including globally significant biodiversity and vital ecological services.</b>	Ecosystem of MMFR maintained in good condition	Ecosystem of MMFR maintained in good condition	Decrease in area with invasive tree species: Pine plantation decline (ha) and rogue pine elimination (by %).  Area wildfire damage on high altitude indigenous plant habitats: number of MODIS fire reports and area above 2000m % burnt  Area of agricultural encroachment: internal (ha) and boundary (ha)	As discussed above, the end of Project values achieved for each of the proxy indicators suggests that the expected outcome and PAD outcome indicator can be considered as partially achieved, with significant work ahead to ensure that the MMFR ecosystem is maintained in good condition over the long-term.
<b>Maintain the Mulanje Mountain ecosystem, including globally significant biodiversity and vital ecological services.</b>	Decrease in FD/community conflict relating to Reserve access and use	Decrease in FD/community conflict relating to reserve access and use	% Community Attitude Survey interviewees with positive attitude to FD.	The last community attitude survey was conducted in 2006 at MTR. As such, the only available score at ICR is 67% of survey interviewees with a positive attitude to FD.  At ICR no further data, nor measurements from the FD's operating budget (as per the description of the original indicator) were available to gauge whether or not this outcome had been achieved. As such, this key indicator cannot be assessed at ICR.
<b>Increase awareness, understanding and appreciation of the value of the Mulanje Mountain ecosystem, at local and national levels.</b>	Community knowledge and appreciation increased with respect to target messages	Community knowledge and appreciation increase with respect to target message	Scored community attitude and understanding (from the community attitude survey).	This indicator was not monitored by MMCT. MTR interviews and the ICR review process suggest that messages are passing through, but are not being translated into behavior change. A recent survey may provide more accurate information.  At ICR, the last community attitude survey conducted was in 2006 at MTR. The rating assigned to this indicator was 80%. At ICR, the final year community attitude survey was not conducted and, as such, the result associated with this indicator is limited to the 80% score achieved at MTR  At ICR, it is unclear as to the current level of community knowledge and appreciation of target messages. It is important to clarify that the focus of this indicator is on community knowledge and appreciation of target messages, not of MMCT or the benefits generated by project investments. It is not known at ICR to what degree the local communities appreciate the target messages of the Project.  Although, some indirect understanding can be

				gleaned from the findings of the stakeholder consultation session as summarized in Annex 6.
<b>Increase awareness, understanding and appreciation of the value of the Mulanje Mountain ecosystem, at local and national levels.</b>	Local stakeholders aware of and positive towards MMCT and its objectives		Scored community attitude and understanding.	As detailed above, the last community attitude survey conducted was in 2006 at MTR which scored this indicator at 80%.  In this instance, this score can be considered as a fairly accurate indicator of the original key indicator due to the findings of the Project as detailed in MMCT's Project Completion Report and the findings of the ICR stakeholder consultative session, in particular, stakeholder reliance on MMCT to deliver on a broad development agenda beyond biodiversity conservation which suggests stakeholders have a positive attitude toward MMCT
<b>Increase awareness, understanding and appreciation of the value of the Mulanje Mountain ecosystem, at local and national levels.</b>		Allocation of funds for reserve management		PPP was not signed, as such revenue retention mechanisms were never developed.
<b>Improve sustainability of biological resource use and enhance the value of the Mulanje Mountain ecosystem to local communities.</b>	Proportion of MMFR resources under co-management	Proportion of MMFR resources under co-management	Area (ha) of miombo forest under co-management and number of co-management agreements.	At ICR, 1,160 ha (of the 7000 ha target) of miombo forest were under co-management and 6 of the 12 co-management agreements were signed. Based on the proxy indicator data, this outcome was not achieved, though a strong positive precedent was set.
<b>Establish long-term income stream and institutional capacity to ensure continuation of 1-3; MMCT appreciated and respected by stakeholders at local, national and international levels. Demonstrate the appropriateness of Conservation Trust Fund as financing mechanism for biodiversity conservation.</b>	Effective biodiversity conservation program maintained over time in the face of changing circumstances	Effective biodiversity conservation program maintained over time in the face of changing circumstances	Trust operating on endowment fund income, score of management effectiveness, accumulated extra donor (US\$m) financed raised for MMCT 3 programs.	At ICR, the trust was not operating on endowment fund income (indicator rating was 0%). However, as previously noted, this indicator is somewhat misleading in that the trust was operating off resources raised by the existence of the endowment which can be considered indirectly as endowment fund income.  The score of management effectiveness at ICR was 60% out of a target 90% as scored by the MMCT team.  The meaning of this score is difficult to judge as to its core relevance with respect to the original outcome indicator.  The proxy indicator score at ICR was 6 actual in committed and disbursed funds – that is, US\$6 million raised in extra donor funds for MMCT's 3 programs. The target at Project closing was 2.5, therefore, at ICR this proxy indicator suggests that the Project achieved more than the target value.  Together, the 3 proxy indicators suggest that this outcome was moderately successful in terms of maintaining an effective conservation program in the face of changing circumstances. Although it should be noted that M&E reports were neither generated nor used to measure the outcome as per the original description.
<b>Establish long-term income</b>		Local stakeholders aware of and		This indicator was not monitored during Project implementation. The MTR and ICR stakeholder

<p>stream and institutional capacity to ensure continuation of 1-3; MMCT appreciated and respected by stakeholders at local, national and international levels. Demonstrate the appropriateness of Conservation Trust Fund as financing mechanism for biodiversity conservation.</p>		<p>positive toward MMCT and its objective</p>		<p>consultation session found that most stakeholders and Project beneficiaries are aware of and positive toward MMCT. The awareness attitude survey was only carried out in 2006. A second survey is scheduled for June 2009.</p>
<p>Establish long-term income stream and institutional capacity to ensure continuation of 1-3; MMCT appreciated and respected by stakeholders at local, national and international levels. Demonstrate the appropriateness of Conservation Trust Fund as financing mechanism for biodiversity conservation.</p>		<p>Contribution to the MMCT</p>		<p>As noted in the main text of the ICR, proceeds of the endowment do not currently cover MMCT administrative and operational costs. At ICR, Norwegian funding covers all of MMCT's administrative and program operating costs through to 2012. It is expected that at that time, the endowment will have grown sufficiently to allow for MMCT to operate of the proceeds of the Trust.</p>
<p>Establish long-term income stream and institutional capacity to ensure continuation of 1-3; MMCT appreciated and respected by stakeholders at local, national and international levels. Demonstrate the appropriateness of Conservation Trust Fund as financing mechanism for biodiversity conservation.</p>		<p>MMCT cited as positive example and model by GEF and other conservation supporters</p>		<p>This indicator was not monitored during the course of Project implementation.</p> <p>GEF praise was not documented during Project implementation nor at ICR, However, it was noted throughout Project implementation that several other conservation supporters are positive about MMCT.</p>



## **Output Indicators**

With respect to output indicators, the following matrix presents the link between the PAD output indicators and the refined set of measureable performance output proxy indicators developed by Project partners (Forest Department, MMCT and World Bank) at MTR in 2006.

The achieved values for each indicator at Project closing are listed in the matrix.

Note, Project Component 1 did not have any output or proxy indicators defined since the results of the Component were embedded in the outputs achieved under Component 5.

Component Outputs	PAD Output Indicators (Annex I)	MMCT Measureable Performance/ Output Proxy Indicators (est. 2006 at MTR)	Output Indicator Values at ICR
<p>Component 2:</p> <p>Good baseline, monitoring and research information available to FD to improve MMFR management</p> <p>FD staff trained and equipped to protect and manage biodiversity</p> <p>Local employment generated through conservation actions</p>	<p>Biodiversity/ecosystem baseline completed</p> <p>Practical long-term monitoring program approved and initiated</p> <p>Biodiversity conservation needs/actions reflected in MMFR management plan</p> <p>FD annual work plans, and being carried out by FD, with community employment</p>	<p>Degree of effectiveness of ecological monitoring system</p> <p>Cumulated number of FD person days of training</p> <p>Number of person-days of temporary &amp; permanent jobs created as part of the daily MMFR management</p>	<p>At ICR, based on the following rating system (design 3 pt, baseline 7 pt, completed annual data collection 2 pt/yr, annual report 1 pt/yr), the degree of effectiveness of the Project's ecological monitoring system indicator was scored at 12 which was less than the end of Project target of 22.</p> <p>Conversely, the other two proxy indicators used to evaluate this PAD output indicator achieved values above the end of Project target. The cumulated number of FD person days of training indicator achieved an end of Project value of 194 compared to the target of 124.</p> <p>The number of person-days of temporary &amp; permanent jobs created as part of the daily MMFR management indicator achieved an actual value of 33560 which was higher than the expected target value of 22500.</p> <p>As such, achievement of the outputs for Component 2 can be considered as partially achieved. With respect to the baseline, monitoring and research information available to MMCT and FD for MMFR management, work is still needed to improve the system. However, with respect to FD staff training and local temporary employment through conservation actions, the indicators suggest that these outputs have, in principle, been achieved. The caveat going forward in the post-closure period is whether both investments can be sustained for the long-term maintenance of the Project's GEOs.</p>
<p>Component 3:</p> <p>Environmental education and communications strategy and program developed and ongoing</p>	<p>Key messages and educational/communication approaches identified</p> <p>Agreement(s) with implementation partner (s) established</p> <p>Requests made to MMCT for information</p>	<p>Number of community level awareness &amp; interaction events held</p>	<p>Number of community level awareness &amp; interaction events held: Target value was 50, Actual end of Project value was 53. Since the actual value was higher than the target value, it can be stated that at ICR, the outputs expected of this Component were achieved and that based on MMCT's strategic plan and annual work plan 2008-2009, that investments in education and communication programs will continue to be a priority investment for MMCT, thereby ensuring continuity of this set of interventions which have proven to be critical to the achievements of the Project.</p>
<p>Component 4:</p> <p>Improved FD and community capacity to implement co-management policy in MMFR (trained, organized and equipped)</p> <p>Co-management pilot projects</p>	<p>VNRMC and other relevant community structures established and operational</p> <p>Forest resource co-management pilot activities underway</p>	<p>Number of VNRMC and other relevant community structures established and operational</p> <p>Number of forest resource co-management pilot activities underway</p>	<p>Number of VNRMC and other relevant community structures established and operational: Target 75. Actual 134. This proxy indicator is deemed to be fairly robust in terms of providing an accurate measure of improved FD and community capacity to implement relevant community structures in MMFR. However, for the second proxy indicator of "number of forest resource co-management pilot activities underway" MMCT's end of Project report indicates a target value of 10 with an actual achieved value of 5. However, in all Bank</p>

Further complementing the actual values assigned at Project closing to each of the aforementioned outcome and output indicators, specific outputs from each Component are highlighted below. Additional details on all outputs are provided in MMCT’s Project Completion Report.

**Component 1: Trust Administration** – The PAD Results Framework blends this component with Component 5 Conservation Trust Fund. Outputs are therefore detailed under Component 5 below.

**Component 2: Biodiversity Conservation, Research and Monitoring** - At ICR, specific outputs generated by Component 2 at Project closing were as follows:

**Conservation Activities**

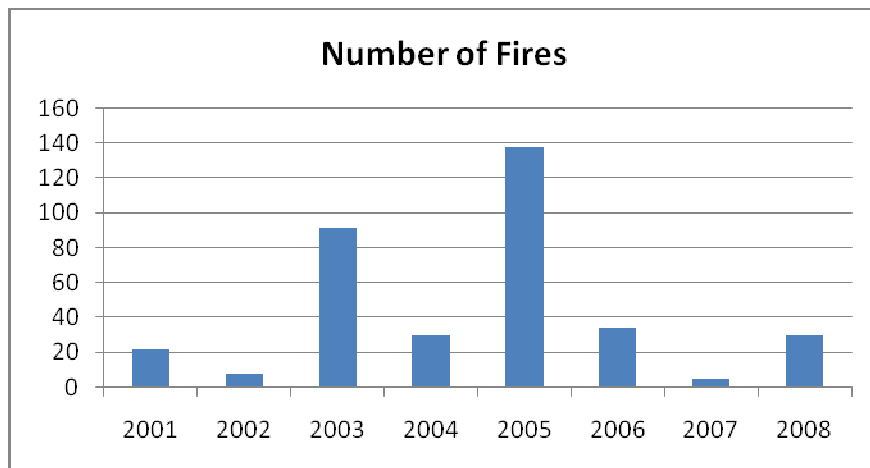
*Wildfire Prevention and Management:* The rationale for this activity was to significantly reduce the incidence of fires (one of the major threats to biodiversity) in the MMFR. Involving local communities on wage labor, the following kilometer coverage was achieved in the respective years (table below) with the resultant effects of fire incidences as shown in the figure below.

**Total kilometer Coverage of Firebreak Maintenance**

2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	2007/2008
896	439	758	314	212	880

The success of the intervention was measured through the number of fires observed via the MODIS Satellite Rapid Response fire alert system. It has been noted, however, that the number of fires in each year varied considerably, which was attributed to a number of factors ranging from the level of fire management, i.e., extent of firebreaks cleared, fire fighting operations, staff commitment and weather conditions prevailing on Mulanje.

**Incidence of wild fire detected by MODIS per year**



To support reduction in wild fires, awareness materials were developed and distributed to schools, villages and other establishments. Fire awareness signs were posted in strategic places around the Reserve. In addition, a fire awareness campaign was conducted in 2008 reaching out to 80 villages around the mountain.

*Invasive Plant Species Clearance:* Invasive species clearing focused on Sombani and Chambe Basins, targeting *Pinus patula* and *Rubus ellipticus* with significant progress as detailed here:

**Clearance of Invasive Species on Mulanje Mountain (2002 – 2008)**

Years	Chambe Total Area = 770ha		Sombani Area Coverage = 74ha +		Remarks
	<i>P. patula</i>	<i>R. Ellipticus</i>	<i>P. patula</i>	<i>R. Ellipticus</i>	
2002/2003	0	0	0	0	Inception year, activity was to be contracted out, but not possible due to conflict of interest related to hiring government entity to carry out work among other procurement related issues.
2003/2004	150	8	74	0	Sombani was completed by mid 2004.
2004/2005	83	22	trace	trace	Saplings on Sombani from soil seed-bank were cleared, hence 'trace'.
2005/2006	0	0	0	0	Activity postponed due to inadequate financing – Project depended on endowment draw-downs.
2006/2007	0	0	0	0	Postponed, prompting WB review team rating the program unsatisfactory.
2007/2008	289	25	trace	5	

The entire seventy-four hectares of pine plantation on Sombani was cleared by mid 2004, leaving only isolated trees on peak tops, difficult-to-reach areas such as gorges and steep rock faces; and the young seedlings/saplings that are emerging from the soil seed-banks. The germinating seedlings and saplings are cleared routinely. On Chambe, a total area of 522 hectares out of approximately 770 hectares has been cleared of *Pinus patula*. Because of the nature of growth and spread of the *Rubus ellipticus*, it is difficult to determine the hectares cleared, independent of the areas cleared for *Pinus patula* hence the figures are incomplete, save for areas that were exclusively *Rubus ellipticus* infested.

Similar to the firebreak intervention, local workers from the villages surrounding the MMFR were recruited on an annual basis to clear invasive species adding to the socio-economic benefits received by local communities actively engaged in supporting biodiversity conservation efforts in the MMFR.

*Habitat Restoration and Cedar Forest Regeneration*

Interventions and achievements in this area included:

- a) Two FD staff training courses were conducted to equip them with the necessary skills required to effectively discharge their functions. The first training involved 13 patrolmen in effective forest and environmental management, out of whom 10 emerged successful and these were posted in various locations around the mountain. They were meant to train others on the job. The second training involved 84 forest guards and patrolmen. These were trained in fire control and management. They too were to train others on the job. At

*ICR, the subsequent training-of-trainers expected from the initial sessions was not recorded. And, it was unclear as to how many of the original trained FD staff remained working on the mountain in their functions following the training.*

- b) Restoration of the degraded habitat of the MMFR, particularly the Mulanje Cedar forest has been significant (complete details are listed in MMCT's Project Completion Report). The number of nurseries increased and more Mulanje Cedar seed collection programs are in place.

*Reduce the Illegal Harvest and use of Mountain Resources:* Illegal resource harvesting has far reaching negative impacts to the ecosystem health status of the Reserve. To address this challenge, involvement of all stakeholders becomes critical. Interventions included joint awareness activities aimed at sensitizing the police, the judiciary and the community. With increased awareness on the need to arrest perpetrators of illegal forest resource harvesting in the MMFR, a number of cases have been concluded in court. Both Court Users' Committees in Phalombe and Mulanje Districts are actively assisting with apprehending offenders in forest related offences.

### **Ecological Monitoring and Research**

Ecological Monitoring and Research is an on-going activity of the MMFR ecological monitoring program (EMP). Close collaboration between the FD, the Forestry Research Institute of Malawi (FRIM), the National Herbarium and Botanical Gardens of Malawi (NHBG), the University of Malawi and the Museums of Malawi and other research institutions in Malawi and MMCT remains a strength in its own right. These institutions have been actively involved in the EMP of the MMFR. Involvement of local communities who derive direct benefits from the Project is also a positive aspect of this activity. Alliance with communities is now deemed a critical factor to attract interventions to strengthen local capacity to address conflict management and monitoring strategies.

*The Ecological Monitoring Program.* This program involved the following activities:

- a) Monitor artificial and natural regeneration of Mulanje Cedar (*Widdringtonia whytei*) to determine natural regeneration and survival success of the species.

Comparison of four years of data suggest that there is natural regeneration but that micro-environments affect germination and survival rates with significant variation between sites. Fire is noted to cause the greatest loss of new recruits. The amount of shade, litter level and mineral soil upon which seeds fall are parameters worthy of further investigations.

The artificial regeneration studies also show some trends that can be of use in the consideration for the planting of the species. Lessons learnt from these studies have been applied on the Lichenya Plateau where seedlings planted under canopy have shown a 95% rate of survival.

Two out of the three study plots still survive at ICR. Evidently, Mulanje cedar will not perform in open canopy areas such as those areas cleared of *Pinus patula*. This finding provides lessons with respect to what can be done to those areas where invasive pine has been eradicated.

b) Woodland sampling and habitat disturbance monitoring assessed: species composition and diversity as well as determined human disturbance and succession of species in all the eco-zones of the MMFR.

Four permanent sampling plots were established at the start of the EMP in 2006. These were established alongside disturbed transects that were established in six areas. With EarthWatch support, three more sites were added during the course of Project implementation.

c) Plateau grasslands were surveyed to assess diversity and complexity of species based on the understanding that several endemic species inhabit the plateau grasslands. The activity set out to assess change in species composition as well as monitor the effect of fire on species composition over time.

The data in the grasslands needs to be collected in an evenly distributed seasonal calendar in order to capture the seasonality of occurrence of each representative plant species. Species diversity and abundance will be assessed when sufficient data are generated for each site using the Tree Diversity Statistical Analysis software.

At ICR, the emerging lesson is that fire regimes and intensities have a significant impact on species composition. It was also observed that where fires were frequent the diversity of species tended to decrease in favor of fire resistant or tolerant species.

d) The presence of large to medium size scat was considered a sign of serval cat / leopard and therefore an indicator of ecosystem health. An assessment of the scat frequency was considered of importance under the EMP. However, the study did not progress due to technicalities of assessing the data. The possibility of delineating populations of felids using Deoxyribonucleic acid (DNA) analysis was advanced, but that proposal has limitations. Therefore, this study remains dormant at ICR.

e) Cycad populations and cycad moth surveys were conducted to form a better understanding of the interaction between the host cycads and the endemic moth (*Calioratus spp*).

Specific findings from all EMP activities are available in the published reports and MMCT's Project Completion Report.

### **Community involvement in EMP**

The development and implementation of a strategy to engage local communities in research and ecological monitoring are an emerging issue for the TAU. Reporting requirements under this component are being addressed in the Forest Co-management and Sustainable Livelihoods sub-component of the Project. Although communities are not directly involved in research activities, they are engaged in collaborative management of the forest reserve. Results of EMP studies are beginning to contribute to some of the community activities under the co-management arrangements. For instance, the communities in the co-management blocks have demonstrated that beekeeping would thrive if their forests are not set on fire. They have also realized that direct cutting of trees is not a lucrative option of resource utilization.

### **Experimental Research**

The MMFR Management Plan emphasizes research and monitoring to focus on those areas where information is needed to help plan and refine management interventions. It states "if optimal conservation and restoration strategies are to be developed, there is a need not only for an experimental approach to answer key questions, but also for a comprehensive array of

baseline information against which all observed changes, whether or not related to any deliberate management intervention, may be interpreted". The research and management program must have means to acquire and update baseline data as well as to detect and measure change in key species and habitats.

### **Biodiversity Baseline Surveys**

At Project inception, MMCT contracted baseline biodiversity surveys to the Wildlife Conservation Society. Gaps identified were addressed by sub-contracting rapid assessments involving specific taxa.

These studies complemented requirements for development of the Ecological Monitoring Program. Studies included:

- a) Small Mammals of Mount Mulanje
- b) The Reptiles and Amphibians of Mount Mulanje
- c) The Butterflies and Moths of Mount Mulanje
- d) The Mulanje Cedar Inventory

Following development of the EMP, a number of other research activities were carried out, including:

- a) The Bat Fauna of Mt. Mulanje and Surrounds
- b) The Temperature Requirements for the Germination of the Mulanje Cedar Seed (Masters Research Study - completed)
- c) The Seed Ecology of the Mulanje Cedar on Mulanje Mountain (Doctoral Research Study, on-going)

### **Tourism and FD Infrastructure Development**

This activity was aimed at improving the existing mountain tourist infrastructures that were in a state of disrepair due to the extended period during which the FD lacked sufficient resources to maintain and rehabilitate them.

*Footpaths, bridge maintenance and erosion control:* In close collaboration with the Mount Mulanje tour guides under supervision of Tiyende Pamodzi Adventures (a Tour Operator's Group in Mulanje), MMCT funded and facilitated the refurbishment of all footpaths on the mountain, including all of the bridges that had either been burnt down or washed away by floodwaters. The tour guides also worked on erosion control measures where gullies were seen to eat into the footpaths. This work was completed in the first two years of Project implementation.

Following completion of this work, footpath maintenance was carried out by porter's groups on the understanding that tourists would only patronize their stations if these paths were well maintained. At ICR, all footpaths were appropriately labeled, indicating directions to guide tourists and hikers.

*Tourist Hut Maintenance:* All eight huts on the mountain received significant repairs, ranging from interior painting, and physical repairs on doors, windows, ladders and roofs. The roof on the Francis Cottage at Chambe was completely reconstructed. A new hut was constructed at Chisepho (junction to Sapitwa peak). The huts were fully equipped with beds, mattresses, blankets, cutlery and other cooking utensils. Three new watchmen huts were constructed at

Chisepho, Chambe and Lichenya. Funds for these operations were provided courtesy of the Scottish Mission in Scotland, Beit Trust, Mountain Club of Malawi and MMCT.

MMCT has also refurbished the Fort Lister Forester’s house to add onto the existing tourist accommodation on the mountain.

### **Component 3: Environmental Education**

This component sought to achieve the following result: *Environmental Education and Communications strategy and program developed and on-going*. The strategy was implemented through a wide range of activities. Overall, the strategy maximized use of every available channel to create awareness.

At ICR, key outputs included:

#### **Community Knowledge and Appreciation of Mulanje Mountain Biodiversity Increased**

The main objective of the Environmental Education and Communications program is to improve public awareness and knowledge of the Reserve’s importance and the benefits of protecting and sustainably utilizing its resources.

##### Public Awareness Surveys

In 2003, MMCT conducted a baseline survey to assess the attitude of boundary communities towards resources in MMFR. The key findings from the survey indicated that boundary communities had limited knowledge about the range of resources available in the Reserve and limited understanding of the importance of managing these resources in a sustainable manner. The baseline survey revealed that local communities perceived FD staff as threats to resource exploitation rather than forest management partners. A subsequent survey carried out at mid-term showed that the Project had achieved significant impact, as detailed here:

#### **Results of the Attitude Survey at MTR**

Boundary Communities that have received awareness from MMCT	72%
Communities with knowledge of the MMFR boundary	71%
Community proportion with awareness of water as a benefit from MMFR	54%
Communities with knowledge about MMCT	66%
Community readership on MMCT Newsletter	4%

The findings from the survey led to the development of an environmental education, awareness and communication strategy which includes communication interventions aimed at sending out messages to address the identified gaps.

These interventions also identified key partners in Environmental Education and Communication which included local leaders, youth clubs, drama groups, local musical bands, radio stations, print and electronic media stations, primary and secondary schools, FD staff, private partners in video development and message printing and sports institutions among others. The program also supported establishment of the Wildlife and Environmental Society of Malawi Mulanje Branch which today is a key implementer of environmental education activities in local schools. These partners have played an important role in helping develop materials and to disseminate relevant messages across different channels locally and abroad.

### **Component 4: Forest Co-Management and Sustainable Livelihoods**



This component set out to achieve the following results: (i) *Improved FD and community capacity to implement co-management policies in the MMFR and, (ii) Co-management pilot projects.*

This component was under-funded during Project implementation, yet attracted financing partners to foster complementary activities. Most activities were carried out satisfactorily. However, some results of this component were threatened by the fact that at MTR, FD had not yet signed the co-management agreements.

Specific outputs of this component were as follows:

#### *Forest Co-management Agreements*

The objective of these agreements was to increase and generate active participation of the boundary communities in management and sustainable use of the forest resources. Ownership and benefits to resources in the forest block is paramount. Increased participation and active utilization of the forest blocks in sustainable natural resource based enterprises is a main outcome of this effort. Achievements reached to date are indicated below.

#### **Progress of the MMFR Co-management Agreements**

<b>Period</b>	<b>Parameters</b>				
<b>(Years)</b>	<b>Villages involved</b>	<b>Households involved</b>	<b>Estimated population</b>	<b>Area in Miombo woodlands under co-management</b>	<b>Co-management Agreements Signed</b>
2002	0	0	0	0	0
2003	0	0	0	0	0
2004	0	0	0	0	0
2005	6	2,533	13,932	1,160	0
2006	0	0	0	0	0
2007	0	0	0	0	0
2008	0	0	0	0	6 – year signed
<b>TOTALS</b>	<b>6</b>	<b>2,533</b>	<b>13,932</b>	<b>1,160</b>	<b>6</b>

In addition to the six co-management agreement signed (with six villages), there are 2 sites (with 10 villages as sub blocks) for which similar agreements are under development.

Introduction of the co-management concept fostered a number of successful livelihood activities including: commercial beekeeping, small-scale irrigation schemes, fish farming, mushroom growing and commercial fruit tree improvement. Most of which were led by and benefited women.

The outcome of some of these activities included:

#### **Progress in Commercial Beekeeping Initiative**

<b>Period</b>	<b>Parameters</b>
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(Years)	No. of clubs	No. of Producing Zones	Membership	Beehives	Honey production (Kilos)	Sales (MK)
2002	0	0	0	0	3.0	0
2003	3	0	15	100	45.0	12,600
2004	15	0	54	260	156.0	330,245
2005	33	6	266	520	225.0	554,365
2006	30	2	417	917	252.0	677,010
2007	29	2	659	974	556.0	934,050
2008	37	2	1006	2800	840.0	727,420
<b>Totals</b>	<b>147</b>	<b>12</b>	<b>2,417</b>	<b>5,574</b>	<b>2077.0</b>	<b>3,235,690</b>

Project support to commercial beekeeping initiatives focused on training, organization and collaborative linkages. Communities were trained in technical beekeeping skills. Through organization support, beekeepers were organized into clubs, zones as well as a legally registered and functional Sapitwa Beekeepers Association. This association worked with the National Bank of Malawi to secure Malawi Kwacha 25 million to boost honey production through increased beehive construction.

Other income generating activities supported by the Project included: small-scale irrigation, fish farming, mushroom production, commercial fruit tree propagation and curio carving. The table below outlines the general trend of these economic activities. The main outcome of these activities is the increased economic gains achieved by local communities that in turn reduce pressure on mountain resources.

### Trends in Economic Activities Promoted by MMBCP

Economic Activity	Focus	# beneficiary households	Avg income per beneficiary (MK)
Small-scale irrigation	Production of maize, tomatoes and potatoes for commercial purposes	<ul style="list-style-type: none"> <li>• Tomato = 60</li> <li>• Maize = 151</li> <li>• Potato = 34</li> <li><b>Total = 245</b></li> </ul>	<ul style="list-style-type: none"> <li>• Tomato = MK11,000 in 5 months</li> <li>• Maize = MK 5,000 in 4 months</li> <li>• Potato = MK 6,000 in 4 months</li> </ul>
Fish Farming	Production of fish in fish ponds using water from the mountain	50 households with over 65 fish ponds	MK3,000 per household in 6 months
Mushroom production	Production of edible mushroom. Not necessarily using mountain resources	15 households with 17 mushroom houses	MK3,000 per household in 3 months
Commercial fruit tree propagation	Improvement of fruit tree seedlings Budding and grafting)	7 households producing 700+ improved fruit tree seedlings	MK4,000 in 4 months
Curio Carving	Carving and joinery of different items	36 households involved	Unknown
<b>Total</b>		<b>353 Households</b>	

Since 2006, the Project's livelihoods activities have been implemented in close coordination with the Mkhumba Boundary Communities Livelihoods Project led by Concern Universal and the Wildlife and Environmental Society of Malawi.

The Project's emphasis on piloting several alternative livelihood activities simultaneously has given communities a choice to select the most attractive income generating activities. At ICR, small-scale irrigation and beekeeping are considered the most beneficial income generating activities whereas fish farming has been deemed an unattractive activity because of the time required before harvesting. Such delays coupled with difficult marketing and low prices have reduced the relative importance of this activity among local communities.

### Land Resource Management and Tree Planting

Both Mulanje and Phalombe districts face increasing land pressure and food security challenges. In both districts, agriculture is prioritized over tree planting. To improve land management options, the Project promoted the creation of village forest areas in marginal areas of customary land. This approach encouraged natural regeneration in marginal areas as well as incorporation of agro-forestry, fruit tree planting and smallholder tea growing initiatives. These initiatives aimed at improving food security through improved land resource management. The main outcomes of this investment were the economic and food security benefits received by local communities as well as watershed protection. The table below shows the trend in land resource management and tree planting during Project implementation.

#### Trend in land resource management and tree planting

Parameter	Trend of progress over years						
	2002	2003	2004	2005	2006	2007	2008
Community based tree nurseries supported with necessary materials like seed, planting pots and watering cans and technical training	0		13	22	38	60	66
Number of Village Forest Areas created	0	2	8	11	13	22	-----
Area (ha) under agro-forestry	0	0	0	4	12	33.1	-----
Farmers supported with tea seedlings	0	0	0	0	0	157	-----
Number of tea seedlings planted	0	0	0	0	0	101,387	-----
Area (ha) under smallholder tea growing	0	0	0	0	0	11.0	-----

### Forest Reserve Encroachment Limitation

Boundary community encroachment into the Reserve was a major threat to MMFR's resources. This activity was aimed at ensuring that encroachers were evacuated in an effort to stop further encroachment. Achievements at ICR are indicated in the table below.

#### Progress in forest reserve encroachment limitation

Period (years)	Area under encroachment		Area reclaimed from encroachment		Associated livelihoods initiatives
	Internal Encroachment (Ha.)	Boundary Encroachment	Internal Encroachment	Boundary Encroachment	
Basic	81	50	0	0	None from MMCT initiative
2002	81	50	0	0	None from MMCT initiative
2003	81	50	0	0	None from MMCT initiative
2004	81	50	0	0	None from MMCT initiative. However, negotiations started at

					local level
2005	81	50	0	0	<ul style="list-style-type: none"> <li>• None from MMCT initiative.</li> <li>• Agreements reached for encroachers to evacuate</li> </ul>
2006	12.6	8	68.4	42	<ul style="list-style-type: none"> <li>• Supported with beekeeping initiative</li> <li>• Given an opportunity for land relocation to Machinga district</li> </ul>
2007	12.6	8	68.4	42	<ul style="list-style-type: none"> <li>• Supported 8 villages with 101,387 tea seedlings to 157 people. 11 ha were planted.</li> </ul>

MMCT focused Project support on fostering dialogue between the Forest Department and local community leaders in order to excise encroachers from the Reserve. Support also focused on awareness activities highlighting the importance of watershed protection. MMCT also facilitated negotiations on livelihood activities as immediate alternatives for the landless. Introduction of the livelihood initiatives resulted in 68.4 ha internal and 42 ha boundary encroachment to be reclaimed. At ICR, some encroachers remain and efforts of force are underway to help them adopt alternative livelihoods. The reclaimed areas were replanted or left to natural regeneration.

### **Capacity Building and Skills Development**

Capacity building activities were aimed at local communities and forest department staff at the district level.

Training areas focused on:

- Technical tree nursery and forest management in customary land,
- Conflict management skills,
- Fruit tree improvement,
- Commercial beekeeping,
- Tour guides,
- Co-management concept,
- Agro-forestry technologies
- Forest Policy 1996 and Act 1997

This training resulted in the following outputs:

- Formation of 52 VNRMC,
- Formation of Njema Environmental Management Committee and Mpatsa Environmental Management Committee in Laston Njema and Paramount Chief Mkhumba in Mulanje and Phalombe districts, respectively.
- Formation of Sapitwa Beekeepers Association,
- Tourism Association of Mount Mulanje,
- Mount Mulanje Tour Guide Association;
- Community based commercial fruit tree propagation groups
- Small scale irrigation schemes

### **Tourism Development**

Project achievements at ICR under this activity, included:

- Establishment of one information centre - InfoMulanje
- Tourism Association of Mount Mulanje established
- More than 120 tour guides and porters trained

### **Trend in tourists visits to Mulanje Mountain, 2002 - 2007**

Period	Months and number of tourists												Totals
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
2002	-	-	-	-	-	-	-	-	-	-	-	-	-
2003	-	-	-	-	-	-	-	-	-	-	-	22	22
2004	67	-	37	81	92	55	80	54	52	37	3	38	596
2005	28	4	65	83	204	85	203	96	103	97	144	112	1,224
2006	46	18	125	122	105	85	76	93	91	116	86	98	1,061
2007	27	43	68	163	105	119	158	250	132	250	221	58	1,594
2008 Sep.	63	79	128	162	276	197	300	363	80	-	-	-	1,648
<b>Totals</b>	<b>241</b>	<b>144</b>	<b>423</b>	<b>611</b>	<b>782</b>	<b>541</b>	<b>817</b>	<b>856</b>	<b>458</b>	<b>500</b>	<b>454</b>	<b>328</b>	<b>6,145</b>

The hospitality industry has increased the number of tourists coming to Mulanje Mountain from all over the world. This effort has increased income for tour guides and porters and other tourist service providers around the mountain.

As such, benefits generated by the livelihood investments ultimately stood to alleviate part of the pressure placed on the mountain's resources by addressing the gap in livelihood opportunities.

Another important outcome of the Project that deserves to be highlighted here was the result of the land resource management and tree planting investment which generated significant economic and food security benefits for local communities as well as for watershed protection.

Both Mulanje and Phalombe districts face increasing land pressure and food security challenges. In both districts, agriculture is prioritized over tree planting. To improve land management options, the Project promoted the creation of village forest areas in marginal areas of customary land. This approach encouraged natural regeneration in marginal areas as well as the incorporation of agro-forestry, fruit tree planting and smallholder tea growing initiatives. These initiatives were aimed at improving food security through improved land resource management.

### **Component 5: Conservation Trust Fund**

At MTR, the endowment was fully capitalized and performing well with nearly 9% accrual in 2006 and capital reaching \$5.89 million by November 2006. Despite such growth, the endowment was insufficient to cover all of MMCT's administrative costs and conservation activities.

At ICR, the endowment remained highly vulnerable to the global financial crisis. And, although Norway confirmed funding for the post-closure period through to 2012, it remains unclear whether the endowment fund will recover sufficiently in time and grow to the expected US\$10 million in order to cover MMCT's running costs as well as the full set of conservation activities once Norway's support ends.

However, this uncertainty must be balanced by the fact that MMCT’s extensive fundraising efforts have successfully attracted significant resources based on the original objectives of the GEF Project. As such, MMCT has effectively used the endowment fund as a catalyst to secure parallel investments in and around Mulanje Mountain, as follows:

### **Projects Implemented by MMCT**

<b>Project Name</b>	<b>Partners</b>	<b>Amount</b>	<b>Donor</b>	<b>Status</b>
Mkhumba Livelihoods Improvement	WESM & Local		European Union	Ongoing
MMFR Encroachment Resolution	Local	US\$10,000	German Technical Cooperation Agency	Completed
Chisongole Watershed Partnership	United States Agency for International Development, & Local	US\$250,000	United States Agency for International Development, Coca Cola	Completed
Ndala Irrigation & Fish-farming	Community & Local	US\$14,000	United States Embassy	Completed
E-MINDSET	Practical Action & Local		European Union	Ongoing
MMFR Millennium Seed Bank	Kew Royal Botanical Gardens		Kew Royal Botanical Gardens	Ongoing
Tourism Development	Local	US\$30,000	Beit Trust	Ongoing
Micro Hydro-Power Generation	Practical Action / Regional		European Union	Ongoing
Mozambican Montane Assessments	Kew, Mozambique + Malawi organizations	US\$ 590,000	Darwin Initiative	Ongoing
EMP Capacity Support	African & Local	US\$100,000	EarthWatch	Ongoing
	Local	US\$3,000,000	French GEF	Pending
	Local	US\$1,000,000	Norway	Ongoing
World Heritage Site Accreditation	Local	US\$25,000	UNESCO & Spain	Pending

### **Annex 3. Economic and Financial Analysis** (including assumptions in the analysis)

The total GEF funding for the Project was US\$6.75 million. This was distributed across Project components as follows: (i) Trust Fund Administration – US\$0.58 million; (ii) Biodiversity Conservation, Research and Monitoring – US\$0.40 million; (iii) Environmental Education and Communication – US\$0.14 million; (iv) Forest Co-management and Sustainable Livelihoods – US\$0.13 million and (v) Endowment Fund – US\$5.5 million.

Total cost of the baseline investments of the Government of Malawi to the MMFR was estimated at US\$1.27 million. These baseline resources were used in two components of the Project: Biodiversity Conservation – US\$0.54 million and Forest Co-management and Sustainable Livelihoods – US\$0.73 million. Together, the total Project cost was US\$8.02 million.

#### **GEF incremental cost analysis**

One of the key objectives of the Project was to establish a long-term income stream and institutional capacity to sustain biodiversity conservation activities of the Mulanje massif. A review of the incremental analysis to assess the efficiency of the Project was conducted. The analysis compares two scenarios: the baseline and the baseline plus the GEF alternative. The analysis serves as a basis for assessing the Project's incremental funding associated with GEF support. Since an incremental analysis was also undertaken at appraisal, this analysis reviews and updates the analysis by incorporating resources accrued to the Project during implementation.

During implementation, the Project leveraged over US\$10 million. These resources have been used to finance community livelihood activities, such as: community irrigation and fish farming which have reduced community pressure on the reserve. Norway has provided 24.5 million Norwegian Kroner (US\$5 million) for Project activities to 2012. This will enable the Project to reduce draw-downs from the endowment fund.

The added value to GEF's involvement in the MMCBP has been to help build the limited capacity of the government and other stakeholders in biodiversity conservation in Malawi.

GEF incremental support has assisted stakeholders to establish a basis for sustainable funding for biodiversity conservation of MMFR. Furthermore, GEF support has (and will probably continue to) attracted additional stakeholders to support efforts to conserve MMFR. As such the main outcomes to be realized from GEF involvement include improvement in the sustainability of the flow of both ecological and livelihood services from the reserve.

As illustrated in the incremental cost matrix below, implementation of the Project has contributed to increased resources for most Project components.

## Incremental Cost Matrix

Project component	Category	Amount (US\$ m – actual)	Domestic benefit	Global benefit
Trust Fund Administration	Baseline	0.00	No capacity for MMFR biodiversity conservation	No capacity for MMFR biodiversity conservation
	+ GEF alternative	0.58	Capacity built	Capacity built
	Incremental	0.58 (0.48)		
Biodiversity Conservation, Research and Monitoring	Baseline	0.54	none	none
	+GEF alternative	1.64 (0.43)	Improved biodiversity and ecosystem services and livelihood benefits	Improved biodiversity and ecosystem services
	Incremental	1.10		
Environmental Education and Communication	Baseline	0.00	Community awareness and participation	Increased awareness of global biodiversity values of MMFR
	+GEF alternative	0.44 (0.06)		
	Incremental	0.44		
Forest Co-management and Sustainable Livelihoods	Baseline	0.74	Declining resource based livelihoods	
	+GEF alternative	1.25 (0.06)	Sustainable resource use and improved livelihoods	Improved biodiversity and ecosystem functions
	Incremental	0.51		
Endowment Fund	Baseline	0.00		
	+GEF alternative	5.90 (5.45)	Adequate financial resources for sustainable biodiversity conservation	Adequate financial resources for sustainable biodiversity conservation
	Incremental	5.90		
<b>Total</b>	Baseline	1.27		
	+GEF alternative	9.81 (6.48)		
	Incremental	8.54		

Note: Figures in parentheses are the actual funding levels by component at ICR. The analysis does not include the 5-year funding provided by the Norwegian Government. The GEF alternative includes the appraisal estimate plus the additional funding leveraged from other projects, as shown in the last table in Annex 2 listing other projects implemented by MMCT.

Fund-raising efforts have fallen short of the level required for the Endowment Fund to independently sustain conservation activities at MMFR. It is not possible to assess the net benefit



of the Project using the conventional rate of return because of the difficulty associated with objective valuation of the benefit and cost streams from Project interventions.

## Annex 4. Bank Lending and Implementation Support/Supervision Processes

### (a) Task Team members

Names	Title	Unit	Responsibility/ Specialty
<b>Lending</b> <i>(The system pulls from Task Team in PAD Data Sheet, if any.)</i>			
Nathalie Weier Johnson	Sr Environmental Spec.	AFTS2	Lending TTL
Donald Herrings Mphande	Sr Financial Management Specialist	EAPCO	Financial Management
<b>Supervision</b> <i>(The system pulls from Task Team Members in all archived ISRs.)</i>			
Jean-Michel Pavy	Sr. Environmental Specialist	AFTEN	Supervision TTL
Hardwick Tchale	Agric. Economist	AFTS1	Team member
Simon Chirwa	Procurement Specialist	AFTPC	Procurement
Francis Mkandawire	Financial Management Specialist	AFTFM	Financial Management
Cary Anne Cadman	Forestry Specialist	AFTEN	ICR TTL

### (b) Staff Time and Cost (from SAP)

*(The system pulls data available for all fields)*

Stage of Project Cycle	Staff Time and Cost (Bank Budget Only)	
	No. of Staff Weeks	US\$ Thousands (including travel and consultant costs)
<b>Lending</b>		
FY98	0	201.4
FY99	0	22.5
FY00	11.4	78.7
FY01	10.3	38.0
<b>TOTAL:</b>	<b>21.7</b>	<b>340.5</b>
<b>Supervision/ICR</b>		
FY01	3.1	10.8
FY02	2.0	36.0
FY03	6.0	28.0
FY04	6.8	32.5
FY05	10.0	47.6
FY06	18.8	83.2
FY07	19.0	75.5
FY08	10.4	46.4
FY09	3.0	16.4
<b>TOTAL</b>	<b>79.0</b>	<b>376.5</b>

**Annex 5. Beneficiary Survey Results** (if any)

## Annex 6. Stakeholder Workshop Report and Results (if any)

Key stakeholders involved in Project delivery were consulted throughout the ICR preparation process and at the November 5, 2008 Stakeholder Consultation Session.

**Stakeholders:** Compass, District Forest Department Officers, FD, Kara O'Mula Lodge, MMCT, Mulanje Beekeepers Association, Mulanje Hiking Tour Association, Mulanje Mountain Club Association, Mulanje Mountain Rescue Team, Nkula House Youth Center, Peace Corps, Tourism Association of Mount Mulanje, Village Chief, WB, WCS, WESM.

Main findings and recommendations of these consultations related to either Project design considerations or Project implementation issues. These are summarized below.

Appreciation of Mulanje Mountain: Stakeholders were in general agreement that, at ICR, Mulanje Mountain is recognized nationally and internationally as a unique mountain with important biodiversity. Many remarked that prior to the GEF Project, the importance of the mountain's biodiversity and the threats to the natural resources of the mountain were virtually unknown to local communities and the FD. Many noted that today's greater appreciation of the mountain and its unique resources would not have been achieved if the Project had not been implemented. However, some members of the local community criticized the amount of resources invested relative to the visible Project achievements.

Tourism: At inception, the nascent tourism sector welcomed the GEF Project as it would attract more tourists and generate income for local communities. Subsequent establishment of a number of tourism-related associations has been highly beneficial for most local stakeholders. At ICR, the tourism industry in and around Mulanje Mountain employs the largest number of people from local communities. Indeed, the Mulanje Mountain tourism sector is fairly unique in that it is run almost exclusively by Malawians. In addition, the Project's investments in tourist related infrastructures on the mountain are all considered very positive results of the Project. In the future, more emphasis is needed to develop the tourism industry in the Phalombe district as well as to support additional marketing efforts and infrastructure development. The Ministry of Tourism should also be engaged to provide additional support to local tourism associations and stakeholders.

Law Enforcement: Lack of sufficient law enforcement on the mountain was cited as a major concern by all stakeholders. Effective law enforcement is needed to ensure the survival of Mulanje cedar in the long term.

Employment: At inception, local communities welcomed the Project as it was considered primarily as an employment opportunity. Indeed, MMCT initially hired many local workers, but on temporary seasonal contracts. The temporary nature of the work caused some tension between the communities and MMCT as their initial expectations of the Project were not met. Many even threatened retaliation (setting fires on the mountain) if MMCT would not rehire them. At ICR, the temporary nature of MMCT's employment is better understood and accepted by local communities, in part because of the success achieved with the livelihood alternative pilots.

Misconceptions: At inception and at ICR, local speculation that the FD had sold Mulanje Mountain to MMCT remained. This perception was exacerbated by the fact that MMCT began employing local labor to carry out basic forest management tasks. Another misconception about the Project at inception (but not at ICR) was that the Project would limit community access to the mountain's resources.

Roles and Responsibilities: From the beginning of the Project through to ICR, clarity regarding the respective roles and responsibilities of the FD and MMCT was and is needed. The lack of clarity with respect to FD and MMCT's role remains a key challenge post-closure. In addition, many local stakeholders remain unaware of the co-management agreements and what they entail. In addition, some members of the local communities maintain that MMFR is an ancestral property that they alone should manage not FD or MMCT.

Invasive Species: During Project implementation, tour guides and others had a negative impression of eradication of the pine trees. The aim of the invasive species program was not well communicated to local communities at the beginning of the Project. At ICR, there remained some lingering misunderstandings related to the invasive species program.

PPP: Signature of the PPP is key to formalize the critically important relationship between MMCT and FD. Such an arrangement would ensure the effective and long-term management of the MMFR as well as the appropriate institutional arrangement for successful conservation of the Mulanje Mountain biodiversity.

Co-Management Agreements: The Mulanje Mountain co-management agreements need to be better understood. In order for these arrangements to be successful, local FD staff need to understand their purpose and importance. There remains the impression that co-management agreements remove the authority that local FD staff traditionally had in the MMFR.

Research: Primary scientific research should be fostered on the mountain to continue the important work carried out during the GEF Project.

Remaining Challenges: Post-closure operations need to address several remaining challenges, including: the potential for bauxite mining operations on the mountain, encroachment in Nessa and Tinhare and continued illegal harvesting of Mulanje Cedar and poaching.

**Annex 7. Summary of Borrower's ICR and/or Comments on Draft ICR**

## Annex 8. **Comments of Cofinanciers and Other Partners/Stakeholders**

**Royal Norwegian Embassy:** “I have gone through the ICR for MMCT several times and I feel the report is well balanced. I feel however that MMCT’s sustainability has not been adequately assessed. The reason for Norway supporting MMCT activities was to allow the endowment to grown to a level where annual returns would adequately support core activities. But will this be achieved.

I also have a feeling that the MU rating is mainly due to the fact the FD failed to meet its obligations. But the FD might have good reasons for its failure - which have not been presented in the report (may be I missed them).”

## **Annex 9. List of Supporting Documents**

1. Bridging Cooperation Agreement, October 2007
2. Forest Department, End of Project Report, December 2008
3. MMCT Annual Work Plan, 2008 – 2009
4. MMCT Strategic Plan, 2008 – 2012
5. MMCT Trust Administration Manual (Draft), July 2008
6. MMCT, Project Completion Report, 2001- 2008, December 2008
7. MMFR Management Plan, 2004 - 2009
8. PPP Agreement (Draft), June 2007
9. Project Appraisal Document, March 2001
10. Project Concept Note, January 1998



