

FINAL PROJECT REPORT

COMMUNITY PARTNERSHIPS FOR SUSTAINABLE RESOURCE MANAGEMENT (COMPASS II)

COVERING PERIOD: 1ST APRIL 2004 – 31ST MAY 2009

August 2009

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ACRONYMS

Abbreviations and acronyms have been kept to a minimum in the text of this document. Where abbreviations or acronyms have been used, they are accompanied by their full expression the first time they appear, unless they are commonly used and generally understood abbreviations such as NGO, Kg, etc. However, in the many tables in this report, in the interests of brevity, many acronyms have been used, without explanation in the text. Their meaning will be found below.

ASNAPP	Agribusiness in Sustainable Natural African Plant Products
BAM	Beekeeping Association of Malawi
BDS	Business Development Services
BERDO	Bwanje Environmental and Rural Development Organization
BVC	Beach Village Committee
CAMAL	Coffee Association of Malawi
CBFM	Community-based Forest Management
CBNRM	Community-based Natural Resources Management
CM	Collaborative Management
CBO	Community Based Organizations
COMPASS	Community Partnerships for Sustainable Resources Management in Malawi
CO ₂	Carbon Dioxide
CQI	Coffee Quality Institute
CWPP	Community Watershed Partnership Project
DAI	Development Alternatives, Inc.
DESC	District Environmental Sub-committee
DEC	District Environmental Council
DOF	Department of Forestry
DNPW	Department of National Parks and Wildlife
EAFCA	East African Fine Coffee Association
EDO	District Environmental Officer
ENCAP	Environmental Capacity Building Project
EPL	Eco Products Ltd
ESHUR	Environmentally Sound Harvest Use Reviews
EU	European Union
FCMA	Fisheries Conservation and Management Association
FDA	Federal Drug Administration
FHI	Family Health International
FR	Forest Reserve
FRIM	Forest Research Institute of Malawi
FY	Financial Year
GDA	Global Development Alliance

GIS	Geographic Information System
GOM	Government of Malawi
GPS	Global Positioning System
GVH	Group Village Headman
Ha.	Hectares
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
IFFN	Innovative Fish Farmers' Network
IFMSLP	Improved Forest Management for Sustainable Livelihoods Program
LCP	Local Community Participation
LEAD	Leadership in Environment and Development
LTTA	Long-term Technical Assistance
MBC	Malawi Broadcasting Corporation
MBPA	Malawi Bee Products Association
MBS	Malawi Bureau of Standards
MCFW	Malawi College of Forestry and Wildlife
MCPCU	Mzuzu Coffee Planters' Cooperative Union
MEET	Malawi Environmental Endowment Trust
MGS	Malawi Gold Standard
MMCT	Mulanje Mountain Conservation Trust
MOU	Memorandum of Understanding
NAC	National Aquaculture Center
NASFAM	National Smallholder Farmers' Association of Malawi
NASME	National Association of Small and Medium-sized Entrepreneurs
NBS	New Building Society Bank
NCE	National Council for the Environment
NGO	Non-governmental Organization
NICE	National Initiative for Civic Education
NMIA	National Mushroom Industry Association
NP	National Park
NRBE	Natural Resources-Based Enterprises
NRBP	Natural Resources-Based Products
NRC	Natural Resources College
NRM	Natural Resources Management
NTFP	Non-Timber Forest Products
NVA	Nyika Vwaza Association for Rural Development and Environmental Protection
OIBM	Opportunity International Bank of Malawi
OP	Operating Plan

PDD	Project Development Document
PET	Poly-Ethylene Terephthalate
PFM	Participatory Fisheries Management
PFMP	Participatory Forest Management Planning
PFRA	Participatory Forest Resource Assessment
PTC	People's Trading Center
REDD	Reduced Emissions from Avoided Deforestation and Degradation
RUA	Resource Use Agreement
RUFA	Rural Foundation for Afforestation
RVC	River Village Committee
SADC	Southern Africa Development Community
SARPO	Southern Africa Regional Program Office
SCAA	Specialty Coffee Association of America
SCF	Save the Children, USA
SFAP	Strategic Forest Area Plan
SME	Small and Medium-sized Enterprises
TA	Traditional Authority
TAMIS	Technical and Management Information System
TLC	Total Land Care
TVM	Television Malawi
UBC	United Bank of Carbon
USAID	United States Agency for International Development
USG	United States Government
VFA	Village Forest Area
VNRC	Village Natural Resources Committee
VNRMC	Village Natural Resources Management Committee
WESM	Wildlife and Environmental Society of Malawi
WR	Wildlife Reserve
WWF	World Wildlife Fund
ZNRC	Zonal Natural Resources Committee

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PREFACE

Development Alternatives Inc. (DAI) was contracted by the United States Agency for International Development (USAID)/Malawi to implement the second phase of the Community Partnerships for Sustainable Resource Management (COMPASS II) under Contract # 690-C-00-04-00090-00. USAID and DAI signed the contract on April 30, 2004 with effective dates of May 1, 2004 to March 31, 2009. A no-cost extension, granted in January 2009 moved the completion date to 31st May, 2009.

The contract engaged DAI and its implementing partners¹ to assist USAID/Malawi in achieving progress toward the Strategic Objective of sustainable increases in rural income, and specifically the Intermediate Result of household revenue from community-based natural resources management activities increased.

The purpose of COMPASS II was to enhance household revenue from participation in community-based natural resource management (CBNRM) initiatives that generated income as well as contributed to safeguarding Malawi's natural resources. This was part of a strategy to mainstream community-based management of natural resources within a transformational development framework that progressed toward eventual graduation from developmental foreign aid, one of the USAID global operational goals for broad-based prosperity in stable, democratic countries such as Malawi. Building on solid foundations established from previous investments by USAID and others of increased capacity among Malawian government and nongovernmental organizations to adopt strategies that ensured long-term economic and environmental sustainability, COMPASS II worked to accomplish three objectives:

1. To increase the decentralization of natural resource management,
2. To enhance rural communities' capacity to sustainably manage their natural resources, and
3. To increase sales of natural resource-based products by rural households.

Achievement of progress toward these objectives required a multi-faceted approach toward devolving authority and responsibility to manage natural resources to field levels, facilitating the acquisition of skills and tools to dispatch that authority responsibly, and profiting from sustainable utilization of those natural resources as an incentive to manage the natural capital assets sustainably. COMPASS II's approach of marrying biodiversity conservation with economic growth was applied across 15 districts; as a result, over 2,000 communities have adopted CBNRM practices and are beginning to experience benefits both in economic and environmental terms.

DAI wishes to express appreciation for the opportunity to partner with USAID, the Government of Malawi, through the Department of Fisheries, Department of Forestry, and Department of National Parks and Wildlife, and Malawi's private sector to improve livelihood options and increase household income for especially smallholders, while creating the incentives to safeguard Malawi's natural resources through conservation and sustainable resource use. The many successes experienced during COMPASS II came about due to the hard work, dedication, and aspiration of not only the project staff, but also due to the central and district level Government Department staff, our NGO partners, and mostly due to the smallholders and communities themselves, who wanted to see their lives change for the better. We thank all of them for their trust, support, and partnership.

This document serves as the final report for COMPASS II. The report consists of 5 sections. The first provides an introduction and background to set the context. This is followed by section two, which lays out the COMPASS II technical approach applied by the team to build on smallholder strengths and help them integrate in commercial value chains that had the promise of delivering tangible economic benefits. The third details the COMPASS II activities and results achieved during the life of the project. Section four presents illustrative CBNRM models and methods that were deemed to be successful in encouraging conservation and better stewardship of natural resources. The report ends with a final section on lessons learned and end-of-project conclusions that could provide some guidance for future programming.

Bagie Sherchand
Chief of Party, Development Alternatives, Inc.

August 2009

¹ Wildlife & Environmental Society of Malawi, and Spectrum Media

EXECUTIVE SUMMARY

The Community Partnerships for Sustainable Resource Management (COMPASS II) project was a five (5) year, US\$12.56 Million USAID funded activity, initiated in April 2004 to enhance household revenue from participation in Community Based Natural Resources Management (CBNRM) initiatives that generated income as well as provided incentives for sustainable use in Malawi. COMPASS II ended on May 31, 2009, which included a sixty-day no-cost extension period. COMPASS II primary goal was to contribute toward USAID/Malawi's strategic objective of Sustainable Economic Growth through implementation of activities driven by the following three objectives:

1. Increase the decentralization of natural resource management,
2. Enhance rural communities' capacity to sustainably manage their natural resources, and
3. Increase sales of natural resources-based products (NRBP).

Achievement of progress toward these objectives required a multi-faceted approach toward devolving *authority* to manage natural resources to field levels, along with the responsibility to manage well; ensuring the *ability* to manage by facilitating the acquisition of skills and tools to dispatch management authority responsibly, and brokering the *incentive* to manage sustainably through profiting from sustainable utilization of those natural capital assets. This was part of a strategy to mainstream CBNRM within a development framework that progressed toward eventual graduation from developmental foreign aid, one of the USAID global operational goals for broad-based prosperity in countries such as Malawi.

COMPASS II began as a conservation-oriented effort aimed at sustainable use of natural resources, expanding awareness of CBNRM and supporting the Government of Malawi to implement a policy framework for mainstreaming CBNRM as a development strategy. By conceptualizing COMPASS II as a development initiative, emphasis was placed on stimulating broader-based economic growth in rural areas as a way to speed up conservation. This goal reinforced Malawi's Growth and Development Strategy and USAID's Economic Growth Objective, specifically focusing on the Natural Resources & Biodiversity Element within the Environment Program Area.

This shift in conceptual orientation was reflected in COMPASS II. COMPASS II was designed as an instrument to emphasize achievement of increases in rural incomes through more sustainable use of natural resources, to first address community needs for livelihoods while facilitating local management as a means to achieve long-term conservation. In other words, COMPASS II was tasked to help mainstream CBNRM as a viable rural economic development strategy for Malawi. The expected result was that communities which were making significant income from natural resources stewardship (of forestry, fisheries and wildlife) also had personal and collective incentives to ensure the long-term health of the resource base, which in turn secured rural economic health.

Building on solid foundations from previous investments by USAID² and others, COMPASS II focused on developing approaches and activities that successfully "married conservation with economic growth" to help achieve the above goals. Three themes played a strong role in COMPASS II strategy:

- a. Sustainability (ecological, economic, and social) to help build and support institutional strength across a wide range of institutions within Malawi for CBNRM to sustainably continue after the conclusion of COMPASS II;
- b. Diversity (of natural resources and approaches) to spread the natural resource conservation and economic development efforts to better insure against extraordinary risks that could lead to collapse; and
- c. Integration to interlink each component with other parts of the economic system, in collaboration and consultation with relevant government departments and the private sector, so that institutionalized service provision is more complete.

² The Malawi Environmental Monitoring Program, the NATURE program and COMPASS

COMPASS II activities were categorized into three results modules, each reflecting the three objectives specified in the contract statement of work.

1. Results Module 1: Decentralized Management of Natural Resources
2. Results Module 2: Enhanced Community Capacity for Managing Natural Resources Sustainably
3. Results Module 3: Increased Sales of Natural Resource-Based Products (NRBP) by Households

All activities under the above three modules implemented during the life of the project were expected to contribute directly and indirectly to achieving specifically Intermediate Result (IR) 6.3: “**Increase household revenue from community-based natural resources management (CBNRM) activities**” within USAID/Malawi’s *Results Framework*. Success was measured by the following four IR indicators and targets:

IR Indicators	Life-of-Project Target	Total Project Achievement	In Percent
Total Revenue Households Receive from Participation in CBNRM-Based Activities (measured in US\$)	US\$1,000,000	US\$1,873,061	187%
Number of Communities Adopting CBNRM Practices	1,000	2,405	241%
Number of Households Participating in CBNRM	80,000	92,678	116%
Number of Community Members Trained in CBNRM	4,000	8,700	217%

In addition to IR results, COMPASS II was also required to report on seven Operational Plan (OP) indicators, which fell under the Natural Resources and Biodiversity Program Element (8.1) within USAID/Malawi’s 2007 OP Framework. Progress in achieving the objectives of the elements was measured by the following OP indicators and their targets established by USAID/Malawi:

OP INDICATOR	END OF PROJECT TARGET	END OF PROJECT RESULTS	EOP RESULTS IN PERCENT
# of Hectares Under Improved Natural Resource Management ³	61,500	55,288	90%
# of Hectares in Areas of Biological Significance Under Improved Management	295,000	348,704	118%
# of Hectares of Natural Resources Showing Improved Biophysical Condition ⁴	35,000	35,377	101%
# of Hectares in Areas of Biological Significance Showing Improved Biophysical Condition (cumulative number)	325,000	327,795	100%
# of Policies, Laws, Regulations Promoting Sustainable NRM / Conservation Implemented (cumulative number)	400	480	120%
# of People with Increased Economic Benefits from Sustainable NRM / Conservation (cumulative number)	60,000	77,160	129%
# of People Trained in NRM &/or Biodiversity Conservation as a result of USG Assistance (annual number)	1,000	1,782	178%

Accomplishment of the targets and progress were monitored across 15 districts originally, then later 7 districts (due to reduced funding), which were identified as impact areas under COMPASS II. The original 15 districts (impact areas) were:

NORTHERN REGION	CENTRAL REGION	SOUTHERN REGION
Rumphi	Nkhotakota	Machinga
Chitipa	Lilongwe	mangochi
Nkhata Bay	Dedza	Phalombe
Mzimba	Ntcheu	Mulanje
		Chikwawa
		Nznaje
		Zomba

Beginning in 2007, due to reduced funding, a contract modification was approved to reduce the geographic coverage to 7 districts (**Mulanje, Phalombe, Zomba, Machinga, Nkhotakota, Nkhata**

³ This category includes all lands including customary lands outside of protected areas (forest reserves, national parks, Wildlife Reserves, and Sanctuaries managed by the DNPW).

⁴ Defined to include reduced incidence of bushfires, poaching, or other practices leading to degradation of ecosystem health; increased forest or wildlife populations, including natural regeneration; or other verifying evidence of improvement to biophysical condition as a result of management. Area of land showing improved biophysical condition is *part of* area of land under improved natural resources management.

Bay and Rumphi), essentially focusing only on those districts that demonstrated the most commitment to improving management of natural resources. That said, the priority districts contained within them the following eight most important areas of biological significance or natural resources, across 10 districts, in the country:

1. **Nyika National Park** in Rumphi, Karonga and Chitipa Districts;
2. **Nkhotakota Game Reserve** in Nkhotakota District;
3. **Kasungu National Park** in Kasungu District;
4. **Mkuwazi Forest Reserve** in Nkhata Bay District;
5. **Kandoli Mountain** in Nkhata Bay District;
6. **Lake Malawi, Lake Chilingali and Bua River**, all in Nkhotakota District;
7. **Lake Chilwa and Chuita** in Phalombe, Zomba and Machinga Districts;
8. **Mulanje Mountain** in Mulanje District.

In all these key areas of biological significance, COMPASS II brought its strategies and approaches into play to help safeguard the natural resources within it and secure their sustainability in both environmental and economic terms.

Successful implementation of the COMPASS strategies and approaches required working closely with communities, private sector, and government partners both at the central and district levels. It called for activities that demonstrated, for communities and partners, that community-based management of natural resources is a viable approach to conservation and development. This required designing and implementing those activities that could successfully enhance household revenue from participation in CBNRM initiatives so that income could be increased while creating incentives for sustainable resource use. The emphasis was on identification of those opportunities, whose production and sale to generate income rested on sustainable harvesting and processing of the natural resource-based product. Given that many of these biologically significant areas are surrounded by impoverished communities with large number of households, it also meant that COMPASS had to develop those opportunities that engaged large numbers of families from surrounding communities so that everybody stood to gain either from continued conservation of their natural resource base or to lose from their destruction. Such incentives were necessary since it was our belief that Malawi's rural families and communities living around the peripheries of these important natural resources would choose to exploit their short-term value, not out of mindless plunder, but more out of helplessness to make ends meet. Rural households in Malawi have generally been unable to participate in any meaningful formal business opportunities due to various constraints and impediments that consistently disadvantage them. With little or no support systems in place, they have suffered poor terms of trade and struggle to sufficiently gain from either enterprise or trade. The challenge then was for COMPASS to provide the means and prepare the development pathway for rural resource-poor households to benefit substantially from sustainable resources use.

To address this challenge, COMPASS pursued a site-based, market-driven value chain approach in order to speed up the CBRNM process and identify promising opportunities to generate income as well as spur sustainable resource use. For the demonstration effect to be quick, it was important that the opportunities had ready markets, applied simple technologies, required minimal capital investment, was "smallholder friendly," and offered the opportunity to add value. It was also important that the identified opportunities be able to promote the integration of smallholders and communities in the value chains to support their participation not only as suppliers, but also as partners adding value.

It was for this reason that the approach was embedded within a smallholder commercialization framework in order to successfully integrate smallholders (or small-scale) producers in the natural resources-based product value chains to ensure that communities gained from economies of scale and growth of the sector. The notion of integrating smallholders and communities in commercial value chains, bundled with the introduction of value added activities, was driven by the idea that doing so would have the clearest prospect for increasing income and multiplier effects to levels that could stimulate high levels of participation and production by the communities such that the natural resource base then would be protected as an investment asset versus being viewed and used as free-for-all gift of nature.

To ensure that such a paradigm shift did take place, COMPASS focused on developing several NRBP value-chains that met the above requirements and played to the strengths of rural smallholders: Forest Honey, Aquaculture (cage culture), Mushroom (both wild and cultivated), Baobab, Dried fruits, and

Specialty Coffee. COMPASS also supported the development of Malawi's carbon credits sequestered through avoided deforestation and degradation (REDD), which required engaging actors and activities similar to those required for conventional product value-chain development. Promotion of Drip Irrigation program, targeting Malawi's vulnerable and HIV/AIDS affected households, helped set up 1,000 such households to engage in horticultural production (including green maize). COMPASS II introduced the program to help increase household income and improve food security. Implementation of the drip irrigation program required bringing on board 5 NGO partners, 2 irrigation kit suppliers, 1 irrigation kit manufacturer, 1 food processing company and 1000 participating households to facilitate linkages of service providers with those who could be customers.

Across all the value chains, COMPASS worked with over 2,000 villages/communities, 77 private sector and NGO partners, as well as district and central level government officials to strengthen the supply structure and unlock the enterprises' capability to serve as drivers of conservation and sustainability. Support was provided at all levels, from production to consolidation to processing and marketing, to enable each sector's transformation into more organized and coordinated commercial sector contributing to strong "market pulls." When "market pulls" remain strong and steady over time, communities generally respond by producing consistently. COMPASS' accelerated its effort to help support value chains, establish partnerships and linkages between hundreds of communities and private sector to facilitate a commercial approach to open up a marketing system in order to steadily channel their NRBE products to markets earning them income in return. It is because of these linkages and strengthened value chains that communities have now hung over 10,000 hives in Parks, Reserves and customary forests, established mushroom houses and fruit dryers, and are engaging in aquaculture, consolidating baobab fruits for the factory, and improving coffee quality to gain a leg up in the higher priced, Specialty and Fair Trade markets.

Select examples of COMPASS support to strengthen NRBP value chains/enterprises and enable sector growth included:

A: FOREST HONEY SUBSECTOR:

- Helped Establish two (North & South) Modern, State-of-the-Art Honey Processing Plants ;
- Helped Establish a Honey Sachet Production Facility (Central);
- Supported formalization of MBS Honey Standard (DMS: 366);
- Assisted with Successful Fair Trade Honey Certification;
- Helped in EU Accreditation Preparation required for Malawi to Export to the EU;
- Supported the Creation and Registration of the Malawi Bee Products Association (MBPA);
- Assisted with the set-up of the Honey Business-Relationship Registry;
- Developed and Disseminated the Malawi Gold Standard (MGS) Honey Production System package of extension training materials.
- Provided Training in all aspects of beekeeping at the community level
- Provided Training on Honey Quality Improvement to Processors

B: AQUACULTURE SUBSECTOR:

- Introduced Cage Culture at the Smallholder level;
- Partnered in the Establishment of Cage Culture Expansion Micro-Loan Scheme with OIBM;
- Helped Establish a Modern State-of-the-art Hatchery producing single-sex (male) tilapia fingerlings;
- Trained NAC Staff at a Commercial Hatchery in Thailand on single-sex fingerling production, brood stock selection and management, and hatchery operation;
- Provided Training on Small-Scale Cage Construction using locally available materials;
- Developed and Disseminated MGS Pond Aquaculture Production System package;
- Provided Training in all aspects of cage culture at the community level

C: WILD AND CULTIVATED MUSHROOM SUBSECTOR:

- Helped Establish a Modern State-of-the-Art Laboratory for spawn production;
- Introduced 5 New Varieties of Mushroom Spawn Imported from Europe and South Africa;
- Provided Training on Mushroom House Construction;
- Provided Training on Mushroom Cultivation at the community level;

- Helped Establish a Spawn Distribution System;
- Supported the Experimentation and introduction of water-hyacinth as alternative substrate for mushroom production
- Supported Creation and Registration of the National Mushroom Industry Association (NMIA).

D: SPECIALTY AND FAIR TRADE COFFEE:

- Assisted with Successful Fair Trade Certification of Smallholder Coffee;
- Helped with Market Expansion and Improved Marketing;
- Assisted with Enhancement of Coffee Processing : From Pulper to Roastery
- Initiated Cup Quality Improvement (Q-Cupping) Training Program;
- Supported Strengthening of the Coffee Association of Malawi (CAMAL).

D: CARBON CREDIT (REDD):

- Assisted with Carbon Stock Estimation in two Pilot Sites;
- Assisted with Development of the Plan Vivo Projects Development Document;
- Assisted with Development and Finalization of Resource Management and Revenue Sharing Plans for the two pilot sites;
- Helped Identify and Train local Project Coordinator for Carbon Credit work;
- Provided Training on Carbon Stock Assessment and Estimation;
- Supported Third Party Validation Assessment of the Plan Vivo Projects Required for Registration.

The starting point for COMPASS II had been to emphasize the centrality, in conservation, of income generating natural resources-based enterprises to increase revenue-flow back into the communities. While this was important, COMPASS was also mindful of the importance of encouraging communities to participate actively in conscious protection and conservation as well – to demonstrate “stewardship” of their natural resources. However, the environment for demonstrating stewardship, particularly within Parks and Reserves in Malawi, was complicated due to issues of co-management.

All three Departments (Forestry, Fisheries, and Parks and Wildlife) have sound established policies and legislation backing participatory resources management. However, all three differed in the way they placed participatory resources management into practice. Generally, in Malawi, reserves and protected areas for example continue to be fully owned and controlled by the government. Even with legislation in place, the delay in decentralization and devolution of authority from central to district level department officers was affecting the transference of participatory resource management rights to the communities since districts played a key role in implementation. In many instances, people had yet to have control of management and access to these resources. Without these fundamental conditions in place, participatory resources management was struggling to take off and to contribute to conservation.

In response, COMPASS II worked closely with communities and responsive district technical officers to begin the process of establishing the “missing link” or institutions that could help them take a leading role in implementing resource management. With COMPASS assistance on institution development, re-education of community members on the meaning and purpose of CBNRM (many were unawares), linkages to NRBP value chains and partnerships with both the private sector and government, the enabling environment for better natural resources management was quickly taking hold. By the end of COMPASS close-out, 463 management agreements and resource use agreements between 463 communities and government departments had been officially signed. This was made possible through the formation of community-based resource user groups, which were essentially commercially oriented natural resources management groups. The legal establishment of community groups such as beekeeping enterprises and associations has enabled many communities to enter into legally binding management agreements with the Departments to gain access to resources required to improve their livelihoods. When COMPASS II started, very few management agreements had been signed in any sector (two forest co-management agreements existed for small parts of the Chimaliro Forest Reserve in Kasungu District and Machinga Forest reserve and one National Park collaborative management for Nyika-Vwaza).

Of the 463 management agreements, a large number were resource use agreements. The signing of the resource use agreements (RUA) by the Director of each Department officially conferred the legal rights to communities to access protected areas and gave them the responsibility to undertake management

activities. The RUAs also gave the rights to signatories of the agreement (for e.g. Beekeeping Enterprises) to prevent poaching, uncontrolled burning and other illegal activities. And because only legal entities could be signatories, COMPASS's work with communities to establish such enterprises worked well, in that, it further served as the missing link or local institution, heretofore absent, but required, to implement the Departments' participatory resources management. While RUAs do not take the place of collaborative management or co-management agreements, they are supplemental to it and carry legal authority. COMPASS was also instrumental in assisting communities sign about 180 co-management agreements between communities and Departments of forestry and fisheries. In addition, COMPASS II supported the Departments to review and amend 17 pieces of government acts, policies, or legislation to smoothen the legal basis for communities to participate or share responsibility in natural resources management.

With many of these management instruments in place, and with as many as 8,700 community members trained in CBNRM and biodiversity conservation, natural resources management and conservation seems now to be heading in the right direction. The signing of the 463 management plans and resource use agreements has breathed hope in rural communities, who have now turned around to sign 694 sales agreements with the private businesses. Sales agreements are essentially official contracts signed between a legal entity such as a beekeeping enterprise or an association to secure commitment from the buyer to purchase at market price and for the sellers to deliver the product in the volume and time specified. A sales agreement ties two parties and provides a sense of partnership to source and supply, and keeps the marketing system moving. Sales agreements have also come into play to prevent conflicts from the side-selling and side-buying practices rife in Malawi. The Malawi Bee Products Association (MBPA) for example, has established a Business-Relationship registry at the association to add weight to these agreements. Furthermore, the signing of such sales agreements has also been good for the communities since businesses have been willing to invest in them after signing. *MzCPCU* for example has pre-financed close to 5,000 hives for community members who are signatories of these sales agreements. Others such as *McBee Honey* have provided training to communities, who have signed sales agreements with them. Sales agreements have also helped communities to directly call buyers when their honey is ready; in essence finding them guaranteed markets. Such commercial approaches with tangible relationships have persuaded rural communities to slowly shift away from subsistence-level extraction to profit-making, asset management of their natural resources.

While many of the sales agreements are for forest honey, many are also for dried fruits, baobab pulp, mushrooms, fish, and eco-tourism. It is because of these simple breakthroughs that have enabled 210 tons of honey, or nearly 100 tons of baobab-pulp, or 100s of liters of mushroom spawn producing 100s more of mushrooms to flow out of the distant reaches of Malawi into processing factories in towns and cities. While the numbers are modest, it is only the beginning for these communities. Successful CBNRM leading to successful conservation takes time.

Under COMPASS II, successes have been achieved, as signaled by the demarcation of over 230,000 Ha of community-managed apiaries for safeguarding across several protected areas and forests; by the increased entrepreneurial activities taking place in communities; by the movement of private companies into areas they had no interest in before; by the US\$1.87 million flowing back to rural households, and by the interest of communities keen to partner with government to sign management agreements now that a practical and workable framework is in place (in which COMPASS played a pivotal role) for exercising the Government's natural resource management strategies. But most importantly, COMPASS' positive impact is also demonstrated by the improvements in the status of biodiversity in the priority sites where COMPASS was active. In the end, all of COMPASS activities successfully contributed to stimulating positive changes in governance, environmental conditions and socioeconomic benefits or those contributing to general resource conservation and well-being at the community level. But, we are aware the work is far from over.

Absence of a household energy policy continues to fuel the demand for charcoal and firewood, which in turn pushes the charcoal producers back into Malawi's remaining forests. The continued decline in agricultural productivity is another major factor pressuring communities to encroach. In the mix, rural market failures and shortage of alternative sources of steady income also militate against conservation and biodiversity protection. Unless these drivers of deforestation and habitat loss are addressed at a large enough scale, Malawi's natural resources remain under threat.

I. INTRODUCTION AND BACKGROUND

PURPOSE

This report summarizes the activities and accomplishments of the USAID funded **Community Partnerships for Sustainable Resource Management** (COMPASS II) activity implemented by *Development Alternatives Inc.* (DAI) in partnership with *Spectrum Media* based in Massachusetts, USA and *Wildlife & Environmental Society of Malawi* (WESM) based in Blantyre, Malawi. DAI, the prime contractor is based in Maryland, USA. This summary report also captures the essence of the COMPASS II approach, highlights several noteworthy examples of COMPASS II/USAID success stories, and presents some lessons learned during the life of the project.

Below, we present the overall project overview and the contract scope of work to serve as background and set the context for the ensuing sections. Section two presents the COMPASS II approach and strategy applied during project implementation to deliver the results and successes. Section three brings to light, COMPASS performance and achievements recorded during the life of the project, which is followed by section four on community based natural resources management models and methods promoted by COMPASS II to successfully build and improve smallholder credibility, establish market linkages and partnerships, and deliver a stream of positive results in areas that mattered most to Malawi's smallholder producers: Building equity, increasing wealth and sustained prosperity leading to safeguarding biodiversity. We present in section five, the lessons learned during the life of the project, so that they can serve to better inform future development assistance. This last section also presents our end of project thoughts and conclusions for the future as it pertains to the future of Malawi's Community Based Natural Resources Management (CBNRM) activities. The Annexes provide a listing of several key activities implemented under COMPASS II.

PROJECT OVERVIEW

COMPASS II was a five (5) year, US\$12.56 million USAID-funded activity, initiated on April 19, 2004 (contract signing) “to enhance household revenue from participation in CBNRM initiatives that generate income as well as provide incentives for sustainable resource use” in Malawi. COMPASS II's primary goal was to contribute toward USAID/Malawi's strategic objective of **Sustainable Economic Growth**. In order for implementation to support USAID/Malawi's strategic objective, COMPASS II focused primarily on accomplishing the following three objectives:

1. Increase the decentralization of natural resource management,
2. Enhance rural communities' capacity to sustainably manage their natural resources, and
3. Increase sales of natural resources-based products (NRBP).

Achievement of progress toward these objectives required a multi-faceted approach toward devolving *authority* to manage natural resources to field levels, along with the responsibility to manage well; ensuring the *ability* to manage by facilitating the acquisition of skills and tools to dispatch management authority responsibly, and brokering the *incentive* to manage sustainably through profiting from sustainable utilization of those natural capital assets. This was part of a strategy to mainstream community-based management of natural resources within a transformational development framework that progressed toward eventual graduation from developmental foreign aid, one of the USAID global operational goals for broad-based prosperity in stable, democratic countries such as Malawi. The COMPASS II activity ended on **May 31, 2009**, which included a sixty-day no-cost extension period.

COMPASS II began as a conservation-oriented effort aimed at sustainable use of natural resources, expanding awareness of CBNRM and supporting the Government of Malawi to implement a policy framework conducive to mainstreaming CBNRM as a development strategy. By conceptualizing COMPASS II as a development initiative, USAID/Malawi encouraged the Government of Malawi and partner organizations to embrace CBNRM not simply as an approach to conservation but also as a way to

stimulate broader-based economic growth in rural areas. This goal reinforced Malawi's Growth and Development Strategy and USAID's Economic Growth Objective, specifically focusing on the Natural Resources & Biodiversity Element within the Environment Program Area.

The conceptual evolution of CBNRM from being conservation-oriented toward household income generation as an approach to speed up the pace of conservation was more fully embodied in COMPASS II, the follow-on activity to COMPASS (I) (which concluded in January 2004). USAID/Malawi designed COMPASS II as an instrument to more solidly emphasize achievement of sustainable increases in rural incomes and on more openly advocating the use of natural resources utilization, to first address community needs for livelihoods while still promoting local management as a means to achieve long-term conservation by demonstrating tangible direct benefits to resource managers. In other words, COMPASS II was tasked to help mainstream CBNRM as a viable rural economic development strategy for Malawi. The expected result was that communities which were making significant income from natural resources stewardship also had personal and collective incentives to ensure the long-term health of the resource base, which in turn secured rural economic health.

Building on solid foundations from previous investments by USAID⁵ and others, COMPASS II focused on developing approaches and activities that assured the delivery of the goals stated above. COMPASS II activities were categorized into three modules, each reflecting the three objectives specified in the contract statement of work and listed above. Each module further defined tasks to help steer implementation toward achievement of project objectives and results. Table 1 below outlines the three (3) Results Modules and the ten (10) tasks, which guided COMPASS II implementation activities.

Table 1: Results Modules and Tasks specified in the COMPASS II statement of work

RESULTS MODULE	TASKS
More decentralized management of natural resources in Malawi	
1)	Promote greater decentralization of key natural resource decision-making
2)	Increase district-level capacity to support CBNRM
3)	Improved CBNRM stakeholder coordination
Enhanced community capacity for managing natural resources in a sustainable manner	
1)	Increase capacity for natural resources management at the community level
2)	Strengthen the capacity of CBNRM service providers
3)	Increase public awareness and understanding of CBNRM roles and opportunities
4)	Strengthen knowledge and accountability of Traditional Authorities and related officials in CBNRM
Increased sales of natural resource-based products by households	
1)	Enhance market access by entrepreneurs, households, and community groups that produce natural products
2)	Identify production and harvesting opportunities for new natural resource-based products to be actively exploited on a sustainable basis
3)	Develop and strengthen partnerships between communities and the private sector

All activities and tasks listed in table 1 above and implemented during the life of the project were expected to ultimately directly and indirectly contribute to achieving specifically Intermediate Result (IR) 6.3: "***Increase household revenue from community-based natural resources management (CBNRM) activities***" within USAID/Malawi's *Results Framework*. Success was measured by the following four IR indicators:

1. Total revenue⁶ households receive from participation in community-based natural resources management (NRM) activities—*defined as: "Cumulative yearly income⁷ at household level realized from CBNRM*

⁵ The Malawi Environmental Monitoring Program, the NATURE program and COMPASS

⁶ The SO Team has clarified the definition of "income" to include non-cash (i.e., in-kind) income that households receive.

⁷ The SO Team has clarified the definition of "income" to include non-cash (i.e., in-kind) income that households receive.

activities. The sum of revenue received by all associations from sales of natural products. The natural products must be produced/ harvested in a sustainable manner in the context of CBNRM activities."

2. Number of communities adopting CBNRM practices—*defined as: "A cumulative figure representing number of communities that "adopt" CBNRM practices. 'Adoption' is judged to have occurred when a set of criteria is met. Number of communities that have organized themselves with the purpose of managing renewable communal natural resources in a sustainable way. CBNRM practices may include adoption and/ or implementation of a CBNRM action plan, best practice in forest management, or sustainable harvesting."*
3. Number of households participating in CBNRM activities—*defined as: "Number of households that are involved in CBNRM activities. 'Involvement' is defined as any action by an individual that advances community NRM."*
4. Number of community members trained in CBNRM (M/F)—*defined as: "Number of individuals trained in CBNRM." This indicator is disaggregated by gender.*

While all the above goals and objectives were considered central to advancing USAID's Strategic Objective and Mission Results Framework, in 2007, USAID/Malawi modified its 2001-2005 Strategic Objective to "Generating Rapid, Sustained, Broad-Based Economic Growth." This modification resulted from USAID/Malawi's establishment of a new Operational Plan (OP) Framework. The OP Framework took effect in 2007 and required COMPASS II to report progress on seven additional indicators. In total, COMPASS II was required to report progress on a total of eleven indicators, comprised of both OP and IR indicators.

The seven OP indicators fell under one of eight program areas (listed below) developed by the Mission as a result of the OP Framework. These eight program areas, each composed of one or more program elements, were developed to advance USAID/ Malawi's Strategic Objective for 2007 and beyond, for "Generating Rapid, Sustained, Broad-Based Economic Growth." The eight program areas are:

1. Macroeconomic Foundation for Growth – *composed of fiscal policy and monetary policy;*
2. Trade and Investment – *comprising trade & investment enabling environment and capacity;*
3. Financial Sector – *including financial sector enabling environment and financial services;*
4. Infrastructure – *composed of modern services in energy, communications, and transport sectors;*
5. Agriculture – *comprising the enabling environment and agriculture sector productivity;*
6. Private Sector Competitiveness – *including business enabling environment and productivity;*
7. Economic Opportunity – *composed of inclusive financial markets, policy environment for micro and small enterprises, micro-enterprise productivity, and economic law and property rights; and*
8. Environment – *comprising natural resources and biodiversity and clean human environment.*

Natural Resources and Biodiversity program element (8.1), which was the most applicable to COMPASS II, fell under the Environment program area within USAID/Malawi's 2007 OP Framework. The Natural Resources and Biodiversity program element is composed of sub-elements covering natural resource policy and governance; sustainable natural resource management and production; biodiversity policy and governance; biodiversity conservation; international cooperation; and science, technology and information. Progress in achieving the objectives of these sub-elements was measured by seven indicators, as follows:

1. Number of hectares under improved natural resource management—*defined by having a management plan completed and/ or a management agreement signed between the local natural resource management organization and the relevant government department. Or management being practiced such as hanging beehives, patrolling lakeshores etc;*
2. Number of hectares in areas of biological significance under improved management—*defined by having a management plan completed and/ or a co-management agreement signed between a local community and relevant management authority for an area included within a protected area, or area of recognized conservation value (e.g. Ramsar Convention);*
3. Number of hectares of natural resources showing improved biophysical condition as a result of US Government assistance—*with a definition of "improved condition" pending;*
4. Number of hectares in areas of biological significance showing improved biophysical condition—*disaggregated by terrestrial and "marine" (water-based) areas;*

5. Number of policies, laws, regulations promoting sustainable natural resource management and conservation that are implemented;
6. Number of people with increased economic benefits from sustainable natural resource management and conservation;
7. Number of people trained in natural resources management and/or biodiversity conservation.

Accomplishment of the targets and progress were to be monitored across 15 districts identified as impact areas under COMPASS II. In terms of geographical coverage, COMPASS activities were originally targeted at 15 districts across Malawi with the aim of reaching at least 80,000 households through at least 1,000 communities based organizations (CBOs) eager to adopt CBNRM practices in order to enhance their household income. The total household income to be generated from various CBNRM-based enterprises established across the 15 districts was originally set at US\$750,000 by the end of the contract. The 15 districts originally identified as impact areas were:

Table 2: COMPASS II Impact Areas by District

NORTHERN REGION	CENTRAL REGION	SOUTHERN REGION
RUMPHI	NKHOTAKOTA	MACHINGA
CHITIPA	LILONGWE	MANGOCHI
NKHATA BAY	DEDZA	PHALOMBE
MZIMBA	NTCHEU	MULANJE
		CHIKWAWA
		NZNAJE
		ZOMBA

However, beginning in 2007, due to reduced funding levels, a contract modification was approved on March 2008 to reduce geographic coverage in terms of number of districts from the original 15 to 7 districts. As a result of the modification, COMPASS II began focusing its resources on only those districts that showed the most promise in terms of being able to demonstrate the potential economic benefits of community-based natural resources management and how the incentive led to enhanced conservation of biodiversity. Because of the narrowing of focus, COMPASS prioritized locations in ten districts (Table 3), containing within them eight of the most important areas of natural resources in the country.

Table 3: COMPASS II Priority Districts

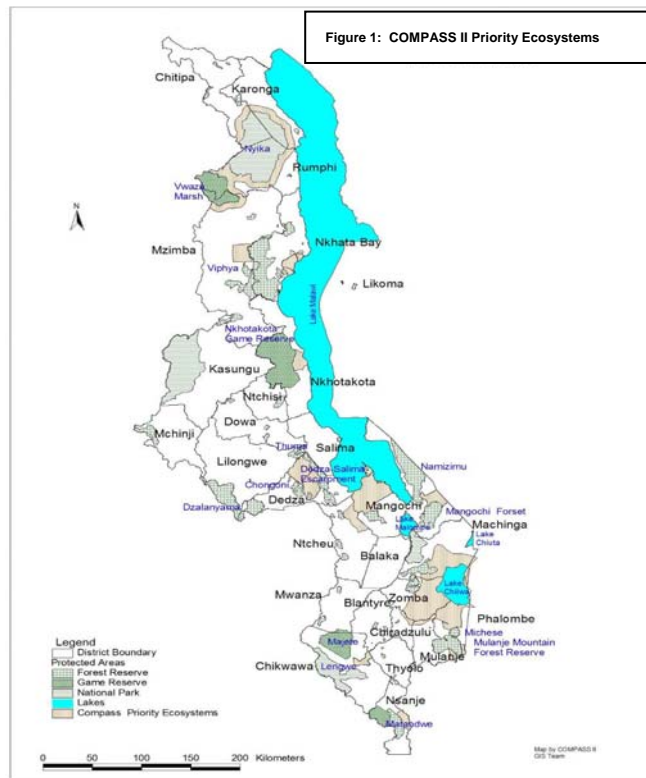
NORTHERN REGION	CENTRAL REGION	SOUTHERN REGION
RUMPHI	NKHOTAKOTA	MACHINGA
CHITIPA	KASUNGU	PHALOMBE
KARONGA		MULANJE
NKHATA BAY		ZOMBA

Early in the first year of COMPASS, a rapid appraisal of Malawi's ecosystems delivered a six-category classification of the country as *Development Pathways* for conservation enterprise (high and normal priority); natural resources-based enterprise (high and normal potential); agriculture; and agro-industry. These development pathways formed the basis for selecting, with technical officers in target districts, Priority Ecosystems (see Figure 1) where COMPASS conducted its fieldwork. The following eight important areas of biological significance or natural resources fall within these priority districts:

- **Nyika National Park:** *Rumphi, Karonga and Chitipa Districts*, specifically along the border of the Park, supporting the establishment of collaborative management and the concurrent development of small-scale commercial honey production as well as improvement in smallholder coffee quality.
- **Nkhotakota Game Reserve:** *Nkhotakota District*, where a range of activities related to collaborative management of the Wildlife Reserve including small-scale honey, dried fruit and mushroom production, and small-scale cage culture establishment.
- **Lake Malawi, Lake Chilingali (Chikukutu) and the Bua River:** *Nkhotakota District*, where a range of activities related both to PFM in the lake areas and Bua River, where activities to

enhance local knowledge is being supported through cage-based Aquaculture, as well as small-scale honey, dried fruit and mushroom production.

- **Lake Chilwa and Chuita:** *Phalombe, Zomba and Machinga Districts*, specifically the establishment of participatory fisheries management (PFM) on **Lakes Chilwa and Chiuta**; and in the Chingale and Domasi area, where aquaculture is being supported primarily through the establishment of a modern hatchery and improvement in marketing and business development;
- **Mkuwazi Forest Reserve:** *Nkhata Bay District*, around both the Reserve and Mountain, where community management of forest resources is being linked to honey production and eco-tourism;
- **Kandoli Mountain:** *Nkhata Bay District*, around the Mountain, where community management of forest resources is being linked to honey production;
- **Mulanje Mountain:** *Mulanje District*, where the Global Development Alliance (GDA)-supported Mulanje Community Watershed Partnership Program combined watershed and biodiversity conservation with improved water supply;
- **Kasungu National Park:** *Kasungu District* through the establishment of a successful beekeeping enterprise and consequent collaborative management at Ntchenda whose apiary is located in the northern part of Park.



In all these key areas of biological significance within each priority district, COMPASS II focused on addressing constraints to CBNRM and worked to increase household revenues earned from CBNRM activities. Specific constraints such as those relating to policy implementation, community tenure and rights of access, local institutional capacity, and natural resources based enterprises were also addressed.

COMPASS II effort worked to expand sales of natural products by identifying commodities that had the greatest potential to increase household income; support sound natural resource management; and generate employment for rural households and members of surrounding communities. This approach promoted cooperation and coordination among the key members of each value chain promoted by COMPASS II to not only reduce transaction costs but also to stabilize consistency of product supply base, enhance production through reduction of uncertainty and risks for buyers and sellers. Over the life of the project, COMPASS identified such high potential products as, honey and bee-products, tree seed oils, processed wild fruit, wild mushrooms as well as cultivated mushrooms, Aquaculture, medicinal plants, carbon credits (through *Reduced Emissions from avoided Deforestation and forest Degradation - REDD*), and smallholder coffee, especially those being produced around the Nyika National Park in the North. Within its enterprise development framework, COMPASS II has also promoted sound stewardship of the wildlife reserves, national parks, and forests that make up more than one-fifth of Malawi. Besides reserves and parks, COMPASS II also supported conservation of Lake Malawi, Lake Chikukutu, and Lake Chilwa and Chuita, as well as many large rivers that are vital watersheds, important to the nation’s food production base and overall economy.

The following two tables summarize the final performance data for both the IR and OP indicators listed above. As illustrated in the tables below, by the end of the contract (May 31, 2009), the DAI team successfully delivered the results, and in almost all cases, overshot the contractual target measurements.

Table 4: Progress on Intermediate Result (IR) Indicators as of May 31, 2009

INDICATOR ⁸	BASE LINE		2002	2003	2004	2005	2006	2007	2008/09 ⁹
TOTAL REVENUE HOUSEHOLDS RECEIVE FROM PARTICIPATION IN COMMUNITY-BASED NRM ACTIVITIES (MEASURED IN US\$)	6,000 (2001)	TARGET	-	20,000	50,000	180,000	400,000	750,000	1,000,000
		ACTUAL	9,000	15,774	55,431	200,587	532,162	809,573	1,873,061
NUMBER OF COMMUNITIES ADOPTING CBNRM PRACTICES	315 (2001)	TARGET	300	350	500	650	900	1,000	1,000
		ACTUAL	457	599	642	714	1,293	1,659	2,405
NUMBER OF HOUSEHOLDS PARTICIPATING IN CBNRM ACTIVITIES	23,408 (2002)	TARGET		28,088	30,000	45,000	65,000	80,000	80,000
		ACTUAL		30,681	33,498	46,255	75,847	82,346	92,678
NUMBER OF COMMUNITY MEMBERS TRAINED IN CBNRM (M/F)	846 (2001)	TARGET	420	570	1,500	2,250	3,250	4,000	4,000
		ACTUAL	1,206	M: 1,363 F: 504	M: 1,363 F: 504	M: 2,736 F: 3,019	M: 3,066 F: 3,083	M: 3,741 F: 3,389	M: 4,909 F: 3,791

Table 5: End of Project (EOP) Progress on Operating Plan (OP) Indicators as of May 31, 2009

INDICATOR		END OF PROJECT TARGET	END OF PROJECT RESULTS	EOP RESULTS IN PERCENT
# OF HECTARES UNDER IMPROVED NATURAL RESOURCE MANAGEMENT ¹⁰		61,500	55,288	90%
# OF HECTARES IN AREAS OF BIOLOGICAL SIGNIFICANCE UNDER IMPROVED MANAGEMENT	MARINE ¹¹	105,000	106,148	101%
	TERRESTRIAL ¹²	190,000	242,556 ¹³	128%
# OF HECTARES OF NATURAL RESOURCES SHOWING IMPROVED BIOPHYSICAL CONDITION ¹⁴		35,000	35,377	101%
# OF HECTARES IN AREAS OF BIOLOGICAL SIGNIFICANCE SHOWING IMPROVED BIOPHYSICAL CONDITION	MARINE	105,000	106,148	101%
	TERRESTRIAL	220,000	221,647	120%
# OF POLICIES, LAWS, REGULATIONS PROMOTING SUSTAINABLE NRM / CONSERVATION IMPLEMENTED (CUMULATIVE NUMBER)		400	480	120%
# OF PEOPLE WITH INCREASED ECONOMIC BENEFITS FROM SUSTAINABLE NRM / CONSERVATION (CUMULATIVE NUMBER)	MALE	35,000	53,970	154%
	FEMALE	25,000	23,190	93%
# OF PEOPLE TRAINED IN NRM &/OR BIODIVERSITY CONSERVATION AS A RESULT OF USG ASSISTANCE (ANNUAL NUMBER)	MALE	650	1,331	205%
	FEMALE	350	451	129%

⁸ All cumulative numbers

⁹ Year to date

¹⁰ This category includes all lands including customary lands outside of protected areas (forest reserves, national parks, Wildlife Reserves, and Sanctuaries managed by the DNPW).

¹¹ Since Malawi is landlocked, "marine" was taken to mean water bodies of biological significance. Only Lake Chilwa, a Ramsar site, is in this category.

¹² Includes hectares within protected forest or grassland ecosystems

¹³ As management plans begin to be implemented or NRBE is initiated, land in this category is included in the category of "Areas of biological significance showing improved biophysical condition".

¹⁴ Defined to include reduced incidence of bushfires, poaching, or other practices leading to degradation of ecosystem health; increased forest or wildlife populations, including natural regeneration; or other verifying evidence of improvement to biophysical condition as a result of management. Area of land showing improved biophysical condition is *part of* area of land under improved natural resources management.

MONITORING AND EVALUATION

Data gathering methodology employed for monitoring and reporting consisted of field data gathering and assessments by COMPASS II staff members and regular reports from various partner organizations throughout the country.

Ground survey using Global Positioning System (GPS) receivers, geographic information systems (GIS) and satellite imagery were used to measure areas under improved management and those showing improved biophysical condition.

In addition, specific surveys were conducted to assess the performance of particular elements of the program. In 2006 and 2007 a survey of the effects of the *Chuma Chobisika* radio and television broadcasts was undertaken. The results were published in *Chuma Chobisika: National Survey Report*. K. Sichinga, *et al.* April 2007. An assessment of the uptake and benefits derived from the drip irrigation trials carried out with COMPASS support published as *Agro-Forestry Home Gardens: Impact Assessment Report on Drip Irrigation Field Trials*.

COMPASS also introduced the concept of participatory monitoring and evaluation. This activity is crucial in CBNRM, as it allows communities to monitor the benefits and effects of their management regime on the natural resources and to adapt their management to changing circumstances. Extensive field work led to the development of a system detailed in *Measuring your own Progress: Participatory monitoring and evaluation for adaptive management. A Manual for Facilitators*. M. Mpezeni. January 2006. The framework for COMPASS II monitoring and evaluation is contained within *COMPASS Monitoring and Evaluation Plan, August 2005*.

In addition to monitoring project performance goals, COMPASS II also estimated overall impact of these activities on conservation objectives by measuring progress toward several key targets on the biodiversity front. With regard to monitoring the impact of COMPASS II on the conservation of priority species, COMPASS II tracked the number of Elephant and Buffalo in the protected areas of the fifteen target districts. COMPASS II also tracked the presence of endangered bird species (Gunning's Robin in the lakeshore forests of Nkhata Bay district; White-winged Apalis, Yellow-throated Apalis; and Thyolo Alethe in forests of Mt. Mulanje). With regard to conservation of forest and woodland ecosystems, COMPASS II has monitored:

1. Area of natural forest and woodland habitat under sustainable community management; and
2. Extent of natural forest and woodland habitat in key areas.

Though no specific fish species identified as conservation targets, COMPASS contributed to the conservation of the biological diversity of freshwater ecosystems in Malawi – notably fish-breeding areas on the shores of Lake Malawi, in Bana Lagoon and Unaka Swamp (Nkhotakota district), and Lake Chilwa.

The end-of-project monitoring assessment of the impact of COMPASS II on biodiversity and natural resources indicates that there have been recognizable improvements in the status of biodiversity in the priority sites where COMPASS II had been active. These include important protected areas such as the National Parks of Nyika and Lengwe, Wildlife Reserves such as Nkhotakota, Viphya Plateau, and Mulanje Mountain and parts of Lake Malawi and Lake Chilwa. As the monitoring assessment reports, there have been increased reporting of animal sightings in key sites such as Nyika National Park and Nkhotakota Wildlife Reserve. Circumstantial evidence of increased degradation of woodlands in areas where COMPASS was not active, might also provide an indication that COMPASS influence had been generally positive with regards to conservation efforts since the project was not active in these geographical areas where degradation is occurring.

The methodology applied for monitoring impacts on biodiversity was simple but provided tangible measure of the extent and status of property conservation areas and the effectiveness of threat reduction activities. COMPASS II used satellite imagery, ground census (in Nkhotakota Wildlife Reserve), and periodic site visits to measure the areal extent of biologically important sites. The scientific rigor that was used to make these on-the-ground assessments is limited but the results are scientifically valid (see *Monitoring the Impact of COMPASS II on Biodiversity and Natural Resources – End of Project Report*. Andrew Watson, May 2009).

II. COMPASS II APPROACH AND STRATEGY

OVERVIEW OF COMPASS II APPROACH

CBNRM Guiding Principle 6 forms the backbone of the approach taken by COMPASS II. The principle states “*To ensure sustainability, natural resources should be treated as economic goods – hence, short- and long-term benefits directly related to the use of the resources should be tangible and obvious to the communities*”. COMPASS’ central tenet was that unless the intrinsic long-term value of natural resources can be released, resource-poor communities will always choose to exploit their short-term value, which inevitably leads to their degradation and eventual destruction.

The incentive for conservation of natural resources must be a perception that their long-term value is greater than that of short-term exploitation. In developed societies, the “emotional” value of wilderness, and the wildlife it contains, is often sufficient to ensure or at least support awarding conservation a priority role. In resource-poor and financially constrained environments, where sufficient cash for tomorrow’s meal is not a foregone conclusion and the wildlife that conservation is meant to conserve are a constant threat to livelihoods and life, such considerations have little space. The challenge facing COMPASS II was to provide means for rural households to benefit substantially from sustainable natural resource use.

To address this challenge, COMPASS pursued a site-based, market-driven value chain approach especially in the second half of the project in order to speed up and better focus COMPASS activities that improved livelihood options, increased household incomes while also achieving long term sustainability in both economic and environmental terms. COMPASS II approach was further strengthened by the incorporation of a framework that specifically promoted smallholder commercialization. Integration of smallholders and communities, particularly those that lived around the periphery of important natural resources, within natural resources-based products (NRBP) value chains was key since these communities were the primary threat to sustainability. The notion was that successful integration of smallholders and communities in commercial value chains, bundled with the introduction of value added activities, would have the clearest prospect for increasing income and multiplier effects to the levels that could stimulate high levels of participation and production by the communities such that the natural resource base then would be protected as an investment asset versus being viewed and used as free-for-all gift of nature.

This is turning out to be the case in many communities, especially where for example, forest honey, has begun to flow commercially into the marketplace. Nyika, Mzimba, Kabunduli, Mkuwazi, Balaka, Mulanje are key areas where beekeepers are now successfully responding to market signals such that in the last two (2) years of the project, approximately 210 tons (cumulative) of forest honey have formally exchanged hands. Because of this financial incentive, we believe that it has encouraged communities to seriously consider sharing responsibility for co-managing these resources given that they now see the link between financial gain and conservation. For example, important natural resources such as Mkuwazi Forest Reserve, Nyika National Park and Nkhotakota Wildlife Reserve, Kasungu National Park and Mulanje Forest Reserve now have formal resource co-management documents; co-management plan in the case of Mkuwazi and Mulanje, and resource use agreements in the case of Nyika, Nkhotakota, and Kasungu. Both documents are legally binding agreements that permit communities to jointly share the responsibility for management and conservation of the protected areas.

COMPASS’ site-based approach targeted those locations, particularly areas of biological significance such as the Nyika National Park, Nkhotakota Wildlife Reserve, Mkuwazi Forest Reserve, Lake Chilwa (given that it is the only RAMSAR Site in Malawi) and Mulanje Forest Reserve. COMPASS’ value chain approach focused on select products with high promise of success, increased sale, and expanded scope in terms of further facilitating sector growth, horizontally as well as vertically.

For product selection, COMPASS generally applied the following criteria:

1. **Demonstrated market demand** – that the domestic demand for the product exceeds current supply, and that there are possibilities for regional or global export markets;

2. **Scale of impact** – that production, processing and trade in the product has the potential to significantly increase the income of hundreds or thousands of households in rural Malawi;
3. **Conservation incentive** – that there is a direct, identifiable link between profitable enterprises in the subsector and positive incentives for improved natural resource stewardship; and
4. **Non-exclusionary** – that the barriers to entry into the production, processing or trade in the product are low enough to not exclude participation by marginalized households such as those which are HIV-affected, women- or youth-headed, and others.

Many of the communities targeted for the site-based approach lay well within COMPASS II priority or strategic eco-systems, established early on in the life of the activity. In the first year of COMPASS II, a rapid appraisal of Malawi's ecosystems delivered a six-category classification of the country as development pathways for conservation enterprise (high and normal priority); natural resources-based enterprise (high and normal potential); agriculture; and agro-industry. These development pathways formed the basis for selecting, with technical officers in target districts, priority ecosystems (see Figure 1 under Section I) where COMPASS conducted its fieldwork.

HIGHLIGHTS OF COMPASS II STRATEGY

As mentioned in earlier sections, the conceptual evolution of CBNRM from being conservation-oriented toward household income generation served as a major force in the implementation of COMPASS II. Right from inception, COMPASS focused on achieving sustainable increases in rural incomes and more openly advocated the use of natural resources utilization to first address community needs for livelihoods while continuing to promote CBNRM as a means to achieve long-term conservation by demonstrating tangible direct benefits. The expected result was that communities which are making significant income from natural resources stewardship have personal and collective incentives to ensure long-term health of the resource base, which in turn secures the rural economic health.

Three principal themes underlie the strategy that has driven community-based management of natural resources under COMPASS and its effort to genuinely mainstream CBNRM as a viable rural development strategy for Malawi.

SUSTAINABILITY

The first of these themes is to build the institutional strength across a wide range of institutions within Malawi for community-based management to sustainably continue after the conclusion of COMPASS II. Sustainability consists of three parts:

1. **ecological sustainability**—that the health of ecosystems – including their ability to provide a long-term supply of goods and services – at a landscape scale is resilient to disturbances, much as a human being is considered healthy if they are able to get well quickly when exposed to illness;
2. **economic sustainability**—that household financial and aggregate economic benefits from CBNRM are sufficient to encourage additional investments by private sector individuals and business, rather than rely on subsidized support; another aspect of economic sustainability is that the increased economic activity results in an expansion of the tax base, thereby providing the public sector with resources to maintain their support;
3. **social sustainability**—that tangible benefits from CBNRM accrue to a critical mass of households, to reduce or prevent conflicts over natural resource use and management while also encouraging those households to manage resources well; that the communities engaging in CBNRM are empowered to more fully participate in their other development efforts; and that genuinely decentralized governance is progressing closer to management units.

These elements of sustainability may be summarized as economic development efforts supporting the transformation of a country toward eventual “**graduation**” from donor support. COMPASS made significant contributions toward the goal of graduating natural resources management to one day making conservation pay it own way. While the goal is yet to be completely attained, significant changes have

been achieved at the community levels that has the potential of conserving Malawi's natural resources, particularly since community members are now beginning to actively view their resources as not gifts of nature but as resources for investment decisions, since thousands now are earning money from products and activities that depend on the sustainability of the natural resources.

DIVERSITY

The second major theme of the COMPASS II strategy was to spread the natural resource conservation and economic development efforts to better insure against extraordinary risks that could lead to collapse. The need to diversify beyond wildlife hunting and photographic safaris is often cited by other CBNRM programs in southern Africa as a key challenge to their efforts to mainstream CBNRM into rural economies. For the COMPASS team, this was overlain by the wide range of contexts in different parts of the country. Therefore, the project focused on two types of diversity:

1. **diversity of natural resources**—including fisheries, forests, and other biodiverse ecosystems within the realm of community-based management, and the full range of natural resource-based products and services that those ecosystems can produce; also included the range of ownership or custodial regimes for these ecosystems, whether public sector protected areas, customary lands under traditional leadership, or privately held or titled lands;
2. **diversity of approaches**—recognizing the differences in both resource base and skills sets found among organizations in the target districts, applied a range of nuanced approaches to development rather than a standardized approach applied universally;

INTEGRATION

The third theme for COMPASS II efforts to mainstream CBNRM as a viable rural development strategy recognized that successful economic development, no less than successful ecosystem function, requires that each of the components be interlinked with other parts of the economic system.

This did not necessarily mean that skills building of beekeepers must be part of a company processing honey, or that the company must be vertically integrated from beehive to retail shop; rather, that authority to manage a piece of forest land, and the skills needed by a beekeeper to meet the processor's quality standards, and support to growth of the honey industry are thematically and geographically integrated.

This integration is best achieved in consultation and collaboration with relevant government departments and the private sector, so that institutionalized service provision is more complete. CBNRM service provision must be integrated into the Malawian economy rather than the donor economy, meaning that fees for services must be tied to the ability to pay of those procuring services. This last point was a message that COMPASS shared repeatedly with all its partners and demonstrated through its activities as well. Increasing household income from, for example, beekeeping has seen demand for purchased (rather than homebuilt) beehives and requests for beekeeping training increase especially during the last two years of the project.

In short, COMPASS II followed the strategy of **marrying biodiversity conservation with economic growth**, where the above three themes played a strong role in delivering the results through implementation of three technical modules:

4. Module 1: Decentralized Management of Natural Resources
5. Module 2: Enhanced Community Capacity for Managing Natural Resources Sustainably
6. Module 3: Increased Sales of Natural Resource-Based Products (NRBP) by Households

Successful implementation of these three modules required working closely with communities, private sector and government partners both at the central and district levels to essentially focus on the following technical focus areas that match the modules:

1. Institutional Development

2. Capacity Building
3. Enterprise Development and Market Linkage

COMPASS II applied an integrated approach in which assistance for institutional development, targeted capacity building, and establishment of small-scale enterprises based on natural resources-based products to create a conducive environment for resource conservation and economic development. However, the conceptual shift of CBNRM from conservation-oriented toward emphasis on household income generation meant that within COMPASS II, “*increased sales of natural resources-based products,*” achieved through enterprise development and market linkages, had to become the “driver” of the program to help move activities toward achieving sustainable natural resources management and biodiversity conservation. In reiterating the importance of increasing household income to increase sustainable conservation, it was often mentioned, that “in reality, Module 3: *Increased Sales of Natural Resource-based Products by Households* is the COMPASS II program.” Furthermore, by the end of FY2006, it was clear that development of enterprises based on sustainable utilization of natural resources had to be placed at the forefront of COMPASS efforts to conserve those same resource-bases. Given this emphasis placed on Module 3, we begin the following technical focus discussion with “Enterprise Development and Market Linkages.”

COMPASS II TECHNICAL FOCUS

ENTERPRISE DEVELOPMENT AND MARKET LINKAGES

Malawi’s rural families and communities living in proximity to natural resources had generally been unable to participate more inclusively in formal supply chains due to various constraints and challenges. Often perceived as purveyors of lower-end products, who are not interested in “serious” enterprise, rural communities and smallholders had been consistently disadvantaged. With little or no support systems (weak or missing marketing systems and poor or non-existent infrastructure) in place, smallholders and rural communities suffered poor terms of trade under which sales at very low prices and capricious relationships with traders turned out to be disincentives. As a result, they were left on their own, in terms of establishing formal relationships and linkages with legitimate businesses and processors to meet the nation’s demand for natural resource based products. In large part, they continue to engage in subsistence-level extraction of natural resources, struggling to either sufficiently gain from enterprise or trade.

With the focus on increasing sales of NRBP, COMPASS II addressed head on the challenges facing rural communities by first identifying opportunities that had ready markets; required minimal capital investment or simple technologies; were “smallholder friendly;” and offered the opportunity to add value on-farm or near-farm gate. Value-adding in addition to primary production can contribute to faster income and employment growth. NRBP that demonstrated potential to generate employment, increase household income, and support sound natural resource management ranked high as screening criteria with COMPASS. It was also important that the identified opportunities be able to promote the integration of smallholders and communities in the NRBP value chains to participate not only as suppliers, but also as partners adding value, while encouraging effective utilization practices that create economic incentives for conservation of natural resources.

In the process, three core products (Forest honey, aquaculture, and mushroom) were identified for COMPASS II support primarily because all three products had and continue to have strong rising domestic demand, while meeting the overall COMPASS II mandate and criteria discussed above. Ergo, beginning in 2007, COMPASS accelerated its effort to work with hundreds of communities to successfully establish several value-chain partnerships and linkages with the private sector to facilitate “market pulls.” When “market pulls” remain steady over time, communities respond by producing consistently. The development and progress that continue to take place within the honey subsector demonstrates this dynamic. This kind of commercial approach is critical for rural households because it enables them to shift away from subsistence-level “mining” of natural resources toward profit-making, business-oriented asset-management of those same resources.

There were challenges in all three subsectors. Malawi's natural resources based private sector remains "thin," with few processors and business-houses strong and willing enough to take risks and invest in industry expansion. While the demand for all three products was strong, the private sector had been unable to successfully tap the production bases. With support from COMPASS II at all levels, from production to processing and marketing, the sector gradually transformed into a relatively more organized and coordinated commercial sector, contributing to the "market pull." By supporting downstream processors as well as upstream service providers, the industry was strengthened such that, for example, almost 210 tons (cumulative over 2 years) of honey were gradually able to move into the formal marketplace, primarily to some of Malawi's key honey processors, who have now organized themselves into an industry organization called the Malawi Bee Products Association (MBPA). MBPA now boasts 11 formally registered honey processors and 23 support industry representatives, not to mention a database of 152 Malawi Gold Standard (MGS) service providers, of which 25 are active, running their extension services business and providing beekeeping training for a fee.

The COMPASS II team increased the pace of its activities, particularly during the last half of the project, to lay a strong foundation for enterprise development and expansion. A large segment of COMPASS Module 3 activities focused on directly working with communities to establish reliable and consistent production bases, because the downstream processors were unable to consistently source commercial volumes and quality products. Because production and marketing in Malawi's rural areas are notable for being fragmented and spread-out across great distances, COMPASS II developed an implementation framework that successfully enabled communities living around Malawi's natural resources to consolidate their production by establishing formal groups so that they could gain from enterprise and trade. Such efforts have already contributed to smallholders profiting from not only their individual activities but also from economies of scale as a result of being part of a group, engaged in business-oriented enterprises.

Overall, as part of its assistance package, the COMPASS team focused on delivering four categories of action to ensure successful implementation of the smallholder commercialization approach so that enterprises could serve as driver of conservation and sustainability. The four categories of action were:

1. Working directly with rural producers, to support their capacity building along three tracks to accelerate smallholder production and commercialization resulting in increased sales and incomes:
 - A business track, focusing on business organizational development and business management, including business financing to enable producers to better understand the importance of applying sound business principles and operating along commercial lines to increase profit and income.
 - A technical track, providing skills and technology transfer to enable production of quality and competitive NRB products, including value addition.
 - A market development and linkages track, focusing on improving market access, increasing market share, and establishing commercial partnerships/alliances between smallholders and the private sector. This was carried out to create innovative market linkages, which are now operating successfully to help rural households better market their products and to join the mainstream value chain in their trade, becoming partners in the industry.
2. Generating broad-based awareness of the opportunities presented by natural resource-based products, primarily through the *Chuma Chobisika* radio program, supplemented by consistent messages from COMPASS staff about transforming natural capital assets into products of higher value, as an incentive to manage the resources sustainably;
3. Conducting analyses of natural resource-based products to better understand their market potential and dynamics, as well as impediments to achieving expanded production of higher quality products resulting in higher incomes for producers, processors, and traders in the value chain;
4. Developing methodologies for enlarging the natural resource-based products sector, including:
 - Widespread replication of successful production business models --- through a series of "Malawi Gold Standard" titles --- and mechanisms for decentralized provision of business services to rural entrepreneurs; as mentioned above, the MGS for Honey production and

Pond Aquaculture were successfully launched and are being carried out by the extension service providers for a fee. Because the honey sector for example is picking up financially, the demand for MGS training in beekeeping has also increased. The expectation is similar for the Aquaculture.

- Documenting the economic value of natural resources, and the links between products derived from natural resources and conservation of those resources; and
- Encouraging investments in natural resource-based enterprises, through a Natural Resource-Based Products Enterprise Fund of loans and grants for existing and new products, respectively. During the life of the project, COMPASS worked with two local banks (National Bank of Malawi and NBS Bank) to develop loan products, tailored specifically to small-scale commercialization of NRBP in order to assist with mainstreaming financial assistance to the natural resources sector.

In addition, the Enterprise Fund has added an Innovations product to its portfolio, aimed at reducing the commercial risks of upgrading processing technologies and processes for new or existing natural products. This Innovations product, which was managed internally by COMAPSS, it was offered alongside the Pre-Commercial and Pilot Commercialization co-financing products offered for new commodities.

In short, the above key elements were applied as building blocks for the development of market solutions that contributed to stimulating growth of livelihood options and increased household income while supporting natural resources conservation through sustainable utilization.

INSTITUTIONAL DEVELOPMENT

When COMPASS II started community involvement in natural resources management and utilization was basically understood mainly at the central level. Consequently, very few management agreements had been signed with communities in any of the three sectors (forestry, fisheries, and wildlife) the project was mandated to work (two forest co-management agreements existed for small parts of the Chimaliro Forest Reserve in Kasungu District and Machinga Forest reserve).

These three primary natural resources sectors, forestry, fisheries and wildlife, all had and continue to have very supportive legislation governing community involvement in natural resources management and utilization. However, the already existing policies and legislation had yet to be implemented. The implementation of these policies and legislation only could confer on the producers to right to access natural resources legally and to control access to those resources. What all three sectors required was the formulation of a legally constituted local level authority that was willing to sign management agreements with the relevant director, which would then transfer a measure of management control and access rights to local communities. It was this background combined with the national Decentralization Policy that required COMPASS to facilitate the transfer of signatory powers for management agreements from central government to district assemblies. Unfortunately, the decentralization process stalled in 2005.

In response, COMPASS strove to work closely with those communities who showed promise and demonstrated effort to implement CBNRM despite lack of support from district assemblies. Together with local non-governmental organizations (NGOs) and responsive district technical officers, COMPASS began the process of helping these communities establish the institutions necessary for them to take a leading role in resource management, and build CBNRM within their respective sectors, to provide examples of what could be achieved and to set the stage for expansion once the assemblies were back in place. But district assemblies remain absent.

A major hurdle encountered in the process in most locations (and have not yet completely vanquished) was widespread misconception about CBNRM and the role of the various committees that had often already been put in place by previous projects. To begin to change people's understanding (not just communities', but also the service providers themselves, whether government or NGO) required considerable awareness-raising through a variety of media, not least through patient discussion in the field.

Institutional development required first and foremost creating a clear understanding amongst rural people about the purpose and meaning of CBNRM. Previous attempts to establish CBNRM had most often emphasized environmental issues, often erroneously (for example claiming that small areas of forest have significant effects on rainfall) but had not considered the economic value of the resources to those living around them. Hence, for example, the Nyika Vwaza Association for Rural Development and Environmental Protection's (NVA) approach to communities living close to the protected areas focused on wildlife conservation and prevention of poaching. Apart from some income from revenue sharing between the Department of National Parks and Wildlife (DNPW) and NVA, few people benefited directly from wildlife conservation, while poaching brought cash to poachers and cheap protein to local households.

COMPASS II emphasized the economic and financial benefits that *could* be gained by local households through engaging in conservation – be it honey production, mushroom sales, eco-tourism or, indeed, carbon credits through avoided deforestation. This approach began to work well, particularly with the acceleration of the enterprise development program, in those areas where access to the resources was strongly and effectively restricted and where the resources were of significant value (Nyika National Park, for example, or Mkuwazi Forest Reserve). The program took a longer time to take hold in areas where community-based forest management on customary land was the objective of COMPASS support, since often the resources within customary land forest were freely available to anyone anyway.

COMPASS assisted local groups to elect representative committees, formulate constitutions and management plans and local resource use regulations. This effort was made easier COMPASS' decentralization team when communities began to understand that such organizations were necessary to empower them to safeguard “their asset”—the natural resources. Once the link between increased household income (whether from forest honey, wild mushrooms, eco-tourism or carbon credits for example) and protecting the natural resources base sustainably became clearer, communities became eager to increase the pace of group formation, management plan development and registration. Through COMPASS, communities were assisted with registration of community level CBNRM organizations.

Although COMPASS II's technical staff numbers were relatively high, with at the peak, 16 professionals in the field, clearly it was unfeasible for COMPASS personnel alone to achieve the ambitious targets set. As was anticipated in the contract, COMPASS worked through partner organizations, largely, at first, local NGOs but also government personnel, to facilitate institutional development and capacity building. This approach was not without challenges.

Local NGOs in Malawi, large and small, depend on donor-funded projects to operate. None have their own sources of funds. The smaller organizations also lack capacity, their staff generally comprising 2 or 3 technicians. They rely on co-opting government field workers to actually implement the programs. This situation does not breed sustainability. But of more concern, it leads to a lack of innovation. Local NGOs follow government approaches to CBNRM, focusing on environmental issues, taking a paternalistic attitude towards rural communities, and expecting to be paid allowances and even salaries when contracted by a donor-funded project. Their lack of resources can mean they even have no access to transport to reach the field and no fuel to put in the tank even when they have.

In some areas, no appropriate local NGOs existed. In Nkhonkhotakota District, for example, only the Wildlife and Environmental Society of Malawi's (WESM) Dwangwa Branch and the regional NGO Total Land Care (TLC) have a presence. WESM is constrained by lack of resources and concentrates its work only around Dwangwa itself, while TLC is in Nkhonkhotakota implementing a project of their own, and their personnel fully committed to their projects. In such areas, COMPASS resorted to working directly with government staff. The same lack of resources that faces smaller NGOs seriously reduced the ability of local government to function as field-based service providers. However, once government personnel understood that COMPASS could only provide transportation support (for example providing motorcycles purchased by USAID/Malawi) for project-related field work, frequently they provided effective support to establishment of CBNRM in local communities.

In the fisheries sector, with the exception of WESM-Dwangwa, there are no local NGOs with experience in participatory fisheries management (PFM). As a result, in partnership with district fisheries officers, COMPASS worked directly with the communities to assist the beach village committees (BVC) and river

village committees (RVC) to develop their PFM institutions and establish fishermen's associations. Initiated around Lake Chilwa, where fishermen had already expressed dissatisfaction with their previous management regime, dominated by chiefs, and a wish to fully participate in the management of their fishery, PFM was extended to the northern part of Nkhosokota District.

With the exception of Majete Wildlife Reserve, where Africa Parks Malawi have a management concession, a similar situation with regard to competent local NGOs exists in the wildlife sector. This situation led COMPASS II to work closely with DNPW personnel at protected area level to assist the establishment of collaborative management. Similar efforts to mobilize DNPW personnel were carried out under COMPASS II around Nyika National Park as well as Nkhosokota Wildlife Reserve and Kasungu National Park.

Paralleling decentralization, the contract envisaged and COMPASS was required to facilitate and encourage the transfer of signatory powers for signing management agreements from central to local government. The lack of any progress on decentralization meant that devolution of signatory powers also did not happen. The only exception was within the forestry sector, where authority to sign community-based forest management agreements for customary land forest was devolved to the district forestry office. COMPASS therefore ensured that management plans and management agreements for fisheries and forest reserves, while being respectively endorsed and signed by the directors of the relevant departments, included signatures of district commissioners and traditional authorities, indicating their agreement and at least giving some semblance of decentralized authority to CBNRM. Within the Wildlife sector, in fairness, devolution of authority to local government over national parks and wildlife reserves was never intended. Park managers already have a considerable degree of autonomy over their protected area but it is still the Director of DNPW who signs collaborative management or any other agreement.

In the process, COMPASS worked with various players over the life of project to help implement a number of policies, laws, regulations promoting sustainable natural resources management and conservation. Additionally, by the end of the project, COMPASS also had assisted rural communities in developing and implementing their management plans with their accompanying resource use regulations.

CAPACITY BUILDING

Many aspects of the approach being taken by COMPASS II towards mainstreaming CBNRM as a development strategy in Malawi were unfamiliar both to communities and to service providers. COMPASS devised a program of targeted capacity building that would provide the skills necessary for the wider adoption of CBNRM. Early in the project, much of the training was contracted out to local NGOs and third party providers, such as the Malawi College of Forestry and Wildlife (MCFW), which undertook nationwide training of district forestry personnel on Participatory Forest Resource Assessment (PFRA).

COMPASS II strove to provide targeted training, as much as possible on a demand-driven basis. In the forestry sector it was clear that not only were communities lacking skills to put community-based forest management (CBFM) into practice, but also that district staff and even NGO personnel were in need of skills training. In particular, even basic understanding of PFRA and of participatory forest management planning (PFMP), were found to be lacking.

At community level, previous attempts at implementing CBNRM in all sectors had frequently concentrated on establishing committees (village natural resources management committees (VNRMC), BVCs and the like) as a first step. In the process, accidentally, an "elite" was set up in the village, ignoring the wider community and often the village leadership. The lack of fundamental awareness creation amongst the community further encouraged the feeling that the committees being a special authority, rather than representatives of the community. This often resulted in alienation since those in the committee who were in charge of forest management or fisheries regulation enforcement, would often be the ones talking to the technical service providers. Such relationships contributed to raising suspicions of gaining from these contacts. Unsurprisingly, the task of resources management was left to the committee – it was irrelevant to the remainder of the population.

To overcome such situations required a major effort in public awareness and capacity building. The job is far from finished, however. Most fishermen, even where COMPASS has been working, and indeed many

fisheries department staff at all levels, still think of the BVC as the 10-member sub-committee, not, as stated in the Local Community Participation (LCP) Rules – “A [Beach Village] Committee shall consist of persons who are engaged in any aspect of fishing industry associated with a fishing beach.” And “for the proper management of the affairs of a Committee [BVC], each Committee shall form a sub-committee.”

As COMPASS’ enterprise development program accelerated, so the need for enterprise/business development, business management and financial management training, aimed squarely at the producers became apparent. Rural men and women, for so long thought of as subsistence producers, who therefore had no need of commercial skills, were woefully lacking in even the simple knowledge needed to operate small-scale businesses. COMPASS devised training modules, often delivered by COMPASS staff, in the absence of qualified service providers elsewhere, to provide basic business skills for beekeepers, cage fish farmers, mushroom producers, dried fruit processors, as well as clubs and associations.

More than this though, and especially in the NRBP businesses (whether it be honey, or mushrooms, or aquaculture) it was clear that major efforts needed to be aimed at enhancing technical production skills. Often production quantities were well below potential and product quality unacceptable to commercial buyers. To address these shortcomings, especially in the honey and aquaculture sectors, COMPASS developed the Malawi Gold Standard for Beekeeping and Pond Aquaculture programs, combining technical written and video manuals for trainers and guides for practitioners, based on current best practice in Malawi. To ensure this knowledge reached as many people in the honey sector in Malawi as possible, a cadre of 152 service providers were trained by expert beekeepers. The training of trainers was charged at cost to all trainees. Although many of these trainees were sponsored by NGOs, government or other projects, 42 trainees paid their own fees and returned to set up fee-for-service businesses. Although all are not successful, sufficient numbers have overcome the many challenges they faced and established successful service provision businesses.

The extension materials were further bolstered by the creation of an effective public outreach program for CBNRM called the *Choma Chobisika*. *Choma Chobisika* or Hidden Treasures was a weekly radio program designed to disseminate information on CBNRM and later on developing small-scale businesses based on production or processing of natural resources-based products. Given the radio show’s popularity, the program diversified into TV broadcasts ensuring full coverage across the entire country.

III. COMPASS II PERFORMANCE AND ACHIEVEMENTS

As mentioned in earlier sections, four sets of results measurements were used to guide and monitor the overall progress and performance of COMPASS II. COMPASS II had 3 technical assistance components or modules with outputs, each contributing to the performance targets and the ultimate impact measurement of the IR indicators listed in Table 6 below. Table 6 lists the actual results against the indicators that served as the contractual measurements. All numbers are cumulative.

Table 6: COMPASS II End-of-Project IR Targets and Results

IR Indicators	Life-of-Project Target	Total Project Achievement	In Percent
Total Revenue Households Receive from Participation in CBNRM-Based Activities (measured in US\$)	US\$1,000,000	US\$ 1,873,061	187%
Number of Communities Adopting CBNRM Practices	1,000	2,405	241%
Number of Households Participating in CBNRM	80,000	92,678	116%
Number of Community Members Trained in CBNRM	4,000	8,700	217%

PROGRESS TOWARD INTERMEDIATE RESULTS (IR) INDICATORS

The above four indicators all contribute to USAID/Malawi's Results Framework, particularly Intermediate Result 6.3: *Household Revenue from Community-Based Natural Resources Management Activities Increased*. As indicated in Table 6, the project overshot achievement of all four targets at the IR-level.

The first target "Total Revenue Households Receive from Participation in CBNRM based Activities" is defined in the Strategic Objective Results Framework as "Cumulative yearly income¹⁵ at household level realized from CBNRM activities. The initial target number established for revenue generation by 2007 was US\$750,000. This was adjusted upwards to US\$1 million in 2008. Through COMPASS II, households participating in the various value chains were able to earn income from sales of natural products primarily forest honey, baobab-based products, wild mushroom and cultivated mushroom, aquaculture, smallholder coffee and products using drip irrigation kits to stimulate agro-forestry home gardens. While investments were made in, for example, aquaculture namely in a modern, state-of-the-art hatchery, the impact of this investment have not been realized yet. Once the hatchery comes into full production in September 2009, we expect revenue from sales generated at the hatchery as well as at the household income to increase significantly. The hatchery's primary objective was to make available 1,000,000 single-sex tilapia fingerlings per month to Malawi's current fish farmers engaged in pond and cage aquaculture. The expectation is that the hatchery alone would add another US\$500,000 annually in income from sales of fingerlings.

Investments were also made in other subsectors, such as Tree seeds, honey, mushroom, carbon credits, and fair trade certification. However, the returns from these investments had not matured to be counted toward the indicator. That said, it is expected that the revenue will increase significantly as a result of these investments. The information on revenues households received was gathered from the data sources described on page 7 of this Report. Details can be found in Annex A.

The second target "Number of Communities Adopting CBNRM Practices" is defined in the Strategic Objective Results Framework as "A cumulative figure representing number of communities that "adopt" CBNRM practices. "Adoption" is judged to have occurred when a set of criteria are met. For example, when a number of communities that have organized themselves with the purpose of managing renewable

¹⁵ The SO Team clarified the definition of "income" in 2004 to include non-cash (i.e., in-kind) income that households receive.

communal natural resources in a sustainable way. CBNRM practices may include adoption and/or implementation of CBNRM action plan, best practice in forest management, or sustainable harvesting. Over 33 percent of communities participating in COMPASS activities are those engaged in honey production. The number of communities and households participating in CBNRM is taken from district reports which have been validated by field visits by COMPASS II monitoring and evaluation staff members.

The third target “Number of Households Participating in CBNRM” is defined in the Strategic Objective Results Framework as: “Number of households that are involved in CBNRM activities. ‘Involvement’ is defined as any action by an individual that advances community NRM. The data on number of households participating in CBNRM are from the same sources, and have the same limitations. The number reported above is for the number of communities adopting CBNRM.

The fourth target “Number of Community Members Trained in CBNRM” is defined in the Strategic Objective Results Framework as: “Number of individuals trained in CBNRM.” The data on number of community members trained came from the district-based service providers, as well as district government data. Only those receiving USAID support for training are included here. The initial target number of people trained by 2007 was 4,000. This was adjusted upwards to 7,500 in 2006. The cumulative number of community members trained at the close of the project far exceeds the target set for the project. It is important to note that this number excludes the 6,035 people (1025 women) that were trained in beekeeping by the Malawi Gold Standard Honey Production Service Providers and 24 farmers trained by Tree Crops Limited in baobab seed quality assessment.

This indicator is disaggregated by gender. Of the 8,700 people trained through COMPASS II, 56% were male and 44% were female.

ACTIVITY DESCRIPTION

As noted in earlier sections, the purpose of COMPASS II was to enhance household revenue from participation in CBNRM initiatives that generate income as well as provide incentives for sustainable resource use in Malawi. COMPASS II sought to contribute to project goal through the accomplishment of the following three objectives:

1. Increase the Decentralization of Natural Resources Management
2. Enhance Rural Communities’ Capacity to Sustainably Manage their Natural Resources, and
3. Increase Sales of Natural Resource-based Products.

Each objective corresponds to one of the three technical assistance Results Modules implemented by the COMPASS II technical team. The three Results Modules, each with its set of tasks and subtasks, contributed to the achievement of Strategic Objective. Together, the three results modules were supported by a total of 10 tasks as indicated in Table 1 under Section 1 in this report. The three Results Modules are:

1. Results Module 1: More Decentralized Management of Natural Resources in Malawi.
2. Results Module 2: Enhanced Community Capacity for Managing Natural Resources in a Sustainable Manner
3. Results Module 3: Increased Sales of Natural Resources-Based Products by Households

The following three subsections of this report cover progress made by the field implementation team toward the COMPASS II indicators and targets as defined in Section C: Description / Specifications / Statement of Work from the reference contract. Where no targets were specified in Section C, the performance indicators and targets in the 2008/09 Annual Work Plan and Performance Monitoring Plan have been used. The Performance Monitoring Plan was incorporated into subsequent revisions to the Annual Work Plan on a quarterly basis, along with quarterly performance reports.

RESULTS MODULE #1: MORE DECENTRALIZED MANAGEMENT OF NATURAL RESOURCES IN MALAWI

Result Module 1 comprised tasks that supported two key aspects of CBNRM in Malawi: the recent legislation in the forestry, fisheries and wildlife sectors that provide the legal basis for communities to take or share responsibility for natural resources management with government; and the national policy of decentralization of decision making from central to local government. In general terms the Module was designed to facilitate and accelerate the transfer of management rights and rights of access and harvesting of natural resources from central to local government and from local government to local communities.

Three Tasks guide efforts to achieve Results Module #1: More Decentralized Management of Natural Resources in Malawi. These Tasks are as follows:

1. Decentralization process as related to CBNRM;
2. Increased local government capacity to take on the decentralized responsibilities; and
3. Enhanced co-ordination between CBNRM stakeholders at all levels.

The key performance indicator for this Result Module is the “Number of districts in which NRM devolution plans are adopted and fully implemented.” The contract target was 15 districts. For reasons that will be explained more fully later, related to the lack of progress nationally towards devolution of government functions and budget authority, no district devolution plans were prepared. However, significant progress towards decentralization of natural resources management was achieved in twelve districts. The Modification of Contract states “In the final 18 months of the contract (September 2007 to March 2009), COMPASS II should prioritize the seven Districts that have demonstrated most commitment to improved management of natural resources (Mulanje, Phalombe, Zomba, Machinga, Nkhosakota, Nkhata Bay and Rumphu).” As well as this list, significant achievements have been made in Lilongwe, Chitipa, Karonga, and Kasungu districts.

These Tasks, and noteworthy progress attained during the life of the project, are as follows:

TASK 1.1: PROMOTE GREATER DECENTRALIZATION OF KEY NATURAL RESOURCE DECISION-MAKING

The first task aimed to assist the implementation of the policy and legislation supportive of CBNRM in the fisheries, forestry and wildlife sectors. Much of this policy had been formulated with assistance from previous USAID activities, notably the NATURE program and COMPASS (I).

At the inception of COMPASS II, only two small portions of two forest reserves had been placed under co-management (as part of a trial initiated by the Forest Research Institute of Malawi). While many customary land forests were nominally under community management, village natural resources management committees having been formed and village forest areas identified, in practice communities did little forest management and there was widespread confusion as to the meaning of community-based forest management.

In the fisheries sector, attempts to implement PFM for over a decade around Lake Malombe and the South-East Arm of Lake Malawi had been largely unsuccessful and COMPASS (I) support to PFM in Lake Chilwa had also floundered as the Lake Chilwa Fisheries Association committee was made up exclusively of traditional leaders, not fishermen. The most successful example of PFM is at Lake Chiuta, in Machinga District. There, largely without assistance from either government or projects, the local fishermen had developed their own PFM institutions based on the principles intended for Lake Malombe developed their own regulations and implemented a management system that was successful in at least maintaining fish stocks. The catalyst for this was the threat of over-fishing arising from “immigrant fishermen” from Mangochi District and elsewhere using damaging gear in the lake. At the start of COMPASS II, seine net fishermen on Lake Chilwa had requested assistance from the Department of Fisheries, being unhappy with the existing fisheries “association” whose committee was made up entirely of (non-fishing) chiefs. Their basic complaint was that the association did not represent the fishermen and the chiefs were taking gifts to allow fishermen to break the regulations related to the closed season on the lake. This gave COMPASS II the mandate to take up the fishermen’s concerns and assist with the establishment of true PFM on the lake.

Collaborative management of protected areas had been initiated around Nyika National Park and Vwaza Marsh Wildlife Reserve in the late 1990's, with the establishment of the NVA, World Bank funding was supporting some collaborative management activities around Lengwe National Park in the Lower Shire valley and Africa Parks had been awarded a concession for management of Majete Wildlife Reserve. All these efforts were having mixed results, and local involvement in management were weak, illegal activities within the reserves was still a concern and local people were yet to benefit significantly.

Within this framework, COMPASS II was mandated to work with all three departments to contribute toward achieving some level of decentralization. COMPASS' decentralization activities were organized along four sub-tasks:

- a. Develop guidelines for community management of natural resources;
- b. Promote devolution of authority to approve natural resource management agreements;
- c. Facilitate Natural Resources Management Agreements between communities and district authorities; and
- d. Support efforts to review and revise the local government act.

Sub-task 1.1.1: Develop guidelines for community management of natural resources

The objective of this sub-task was to provide written guidelines on the implementation of CBNRM in the various sectors for government staff, NGOs and other projects, the District Executive Committees (DEC), natural resource management committees and village level resource users. The contract also required the revival and reinvigoration of quarterly Environmental Coordination Meetings, formerly organized by the Coordination Unit for the Rehabilitation of the Environment.

COMPASS prepared guidelines suitable for front-line staff and literate community members on the procedures for implementing community-based management of customary land forest, PFM and collaborative management of protected areas. The guidelines not only covered the steps needed to achieve CBNRM but also outline the opportunities for income enhancement that CBNRM presents to households.

In the forestry sector, of notable significance was the publication in November 2005 of "Standards and Guidelines for Participatory Forestry in Malawi". This handbook, intended for forestry department staff, provided, for the first time, guidelines and standards for the establishment of participatory forest management. It was followed in March 2008 by "Guidelines for Co-management of Forest Reserves in Malawi". This document provided the basis for further work by the EU-funded Improved Forest Management for Sustainable Livelihoods program, which in turn developed more detailed guidelines for procedures leading to the establishment.

COMPASS took an innovative approach to guidelines development with the publication of a five part series called "Know Your Forest Policy". These booklets, aimed at front-line forestry extension staff, use short, humorous stories, illustrated by cartoons, to highlight key areas of forest policy related to participatory forest management. They are intended to help less-educated extension personnel understand and adapt to the changes wrought by the "new" policy, after years of policing and enforcement.

The final document prepared for the Forestry Department with COMPASS II support was the "Guidelines for Registration of Local Forest Organizations".

In the wildlife sector, a round table meeting held in December 2008, organized and funded by COMPASS on behalf of the DNPW, prepared guidelines for creating a more robust institutional framework for collaborative management of protected areas.

COMPASS also assisted the Department of Fisheries to update the section on PFM in the fisheries extension handbook, based on COMPASS' experience during four years of implementation.

COMPASS did not attempt to revive the quarterly Environmental Coordination Meetings since COMPASS recognized early that such fora can only function while donor funding is available. Immediately after funding is withdrawn, meetings cease. The USAID/Malawi mission agreed with this analysis. Instead, COMAPSS supported the establishment of a National CBNRM Forum, which was part of a Regional CBNRM Forum

initiative, with guaranteed funding and a mandate to establish financial sustainability (see Sub-task 1.3.3 for more details).

Sub-task 1.1.2: Promote devolution of authority to approve NRM agreements

This sub-task envisaged signatory powers for NRM agreements between local communities and government being devolved from central level to the districts, in line with decentralization policy. COMPASS II's task was to "facilitate dialogue and broker natural resource management agreements between communities and government departments, always ensuring that district authorities are not only fully engaged in the process but also are empowered to act on behalf of central government."

The target for this sub-task was that all target districts have devolved authority to sign management agreements.

The contract modification altered this target to "the goal shall be that by the end of 2008, the local authorities in priority districts are signatories to community natural resource management plans."

Successfully achieving the goals for this sub-task critically depended on the national decentralization process continuing and accelerating, as well as the relevant departments implementing their own devolution policies.

During 2005 four regional CBNRM workshops were held (one each in the north and centre, two in the south). These workshops, attended by government and NGO personnel, considered the status of decentralization of natural resources-related sectors in Malawi and how COMPASS could assist in promoting devolution of authority.

COMPASS commissioned three studies on decentralization: the status of decentralization of CBNRM in general, the status of decentralization in the fisheries sector, and in the forestry sector. These studies highlighted the weaknesses of the decentralization process in Malawi but also pointed out the opportunities that existed for progress.

In the forestry sector, the Department's policy is to devolve authority for signatory powers on management agreements for customary (non-state) forest land. Management of forest reserves, and so co-management agreement signatory powers, however, remains the responsibility of central government.

In a circular, dated 21st March 2004, the Department explicitly devolved responsibility for customary land forest to district assemblies, through the district forestry offices. COMPASS worked with the Department of Forestry to prepare a detailed framework for devolution of forestry functions to local government, contained within "Decentralization in Forestry – Moving Forward Together", published in March 2006. This document was accompanied by a technical order that explicitly transferred licensing rights for *some* (i.e. non-wood) forest products to local assemblies. Licensing of commercial exploitation of timber products remains the prerogative of central government.

COMPASS successfully facilitated the registration of four local forest management organizations with the District Assembly in Chikwawa District and the signing of management agreements for customary land forest.

Authority for signing PFM agreements still rests with the Director of Fisheries. However, all fisheries management plans, on which the agreements are based, are endorsed not only by the fisheries associations themselves and traditional authorities, but also by the district fisheries officers and district commissioners. Presently, while *authority* has not been transferred, the district assemblies do have the opportunity to comment on and object to fisheries management agreements.

The DNPW was not included in the list of government agencies for decentralization to district assemblies. National Parks and wildlife reserves are considered national assets and, as with forest reserves, several cross district boundaries or are bordered by more than one district. Hence, authority to sign collaborative management agreements remains with the Director. That said, significant decision making authority has been devolved to individual park managers, who are also signatories on collaborative management agreements and resource use agreements (RUAs).

Sub-task 1.1.3: Facilitate NRM agreements between communities and district authorities

This is the central sub-task under Result Module 1. Without signed agreements with the relevant authority, communities cannot gain legal access to the resources they need to improve their incomes and livelihoods. They cannot become partners with government, or other agencies, in the management of those natural resources and they have no powers to exclude those who are not mandated under the agreement. Most importantly, lack of legal access and agreed co-management plans means they cannot establish the small-scale commercial enterprises, based on sustainable harvesting, processing and sale of natural resource-based products that are so essential to bestowing a value on the *conservation* of those resources.

The contract target was to have “at least 250 agreements approved and implemented by the end of 2006 and; by the end of COMPASS II, the goal shall be to have at least 500 agreements under implementation in the target districts.” This was modified in the Contract Modification dated March 2008 to read “The goal shall be to have at least 250 agreements prepared and submitted for approval by the end of 2006 and; by the end of COMPASS II, the goal shall be to have at least 400 agreements under implementation in the target districts.”

Agreements or Management plans for any specific area require more detailed assessment of available resources. DAI has developed a process for community resource mapping. This procedure, documented in *Occasional Paper No. 2: Community Resource Mapping: Land Use Mapping - for the People, by the People*¹⁶ was applied by COMPASS, and included considerable training effort in all target districts (see Section 3 and Sub-task 2.1.1).

Clearly, in order to achieve 400 management plans or agreements signed and being implemented by project close, COMPASS needed to work through other organizations with the mandate, capability and capacity to promote field implementation of resource mapping and assessment. COMPASS signed memoranda of understanding with several local NGOs to become technical partners, as well as contracting some to undertake training of communities in participatory forest resource assessment (PFRA) and participatory forest management planning. In addition, technical personnel in all districts were trained in community land use mapping and PFRA. (See Sub-task 2.1.1, 2.2.1 and 2.2.2 for more details)

Table 7 summarizes the status of the Management Plans at the end of the project.

Table 7: Management Plans Prepared and Under Implementation as of May 31, 2009

Location	Type	Units	Number	Comments
Nyika NP	Resource use agreement	Beekeeping clubs	154	RUAs signed and collaborative management implemented
Kandoli FR	Strategic Forest Area Plan	Villages	30	SFAP ¹⁷ endorsed by Director of Forestry
Mkuwazi FR	Co-management agreement	Beekeeping clubs	12	Co-management agreement signed
Nkhotakota WR	Collaborative management plans	Villages	95	CM ¹⁸ plans completed and being implemented
Nkhotakota fishery	PFM agreements	BVCs/RVCs	37	PFM plans prepared and being implemented
Kasungu NP	Resource Use Agreements	Villages	45	RUA signed and collaborative management implemented
Sendwe VFA	Community-based forest management agreement	Villages	20	CBFM agreement signed and being implemented
Lake Chiuta	PFM agreements	BVCs/RVCs	15	PFM plans prepared and being implemented
Lake Chilwa & Mpototo Lagoon	PFM agreements	BVCs/RVCs	42	PFM plans prepared, agreement signed and being implemented
Mulanje FR	Co-management agreement	Villages	6	Co-management plan signed and being implemented
Joseph VFA	Community-based forest management agreement	Villages	7	CBFM agreement signed and being implemented
TOTAL			463	

The most innovative form of agreement introduced under COMPASS II is the RUA. Developed initially for beekeepers around Nyika National Park, its use has been extended and expanded to beekeepers on the

¹⁶ Bouvier, R. October 2004, COMPASS II/USAID, Blantyre, Malawi.

¹⁷ Strategic Forest Area Plan

¹⁸ Collaborative management

northern boundary of Kasungu National Park and beekeepers and mushroom pickers on the western boundary of Nkhhotakota Wildlife Reserve. This agreement not only provides legal access to protected areas for harvesting specific resources but also confers a responsibility of the signatory resource user groups to undertake management activities as well as endeavoring to prevent poaching, uncontrolled burning, unlicensed charcoal production, logging and other illegal activities.

RUAs do not take the place of collaborative management agreements but rather are supplemental to it. In the case of Nyika National Park, a collaborative management agreement already existed between the DNPW and the Nyika Vwaza Association. The RUA confers specific right on well-organized beekeeping enterprises comprising a number of clubs. Each enterprise also signs a collaboration agreement with the NVA, which specifies how the organizations will work together and the nature of their relationship.

For Nkhhotakota Wildlife Reserve and Kasungu National Park, COMPASS also facilitated the formation of natural resource management groups at GVH level that enter into collaborative management agreements with DNPW. Resource user groups, primarily concerned with beekeeping, sign resource user agreements with DNPW and collaboration agreements with the natural resource management associations, similar to the situation in Nyika National park.

In the fisheries sector, the legislation, in the form of the Fisheries Management and Conservation Regulations and the LCP Rules, is specific about the form PFM institutions should take. COMPASS initiated the program or establishing PFM on Lake Chilwa. There, previous attempts to establish community-based fisheries management institutions had floundered, not least because the executive committee of the Lake Chilwa Fisheries Association as it then was made up entirely of traditional leaders, none of whom were fishermen. This is in clear contradiction of the LCP rules. Notably, seine net fishermen on the lake were so dissatisfied with the situation that in 2004 they called for, organized and paid for a meeting with the fisheries department to request a solution.

This initiative provided COMPASS with a clear mandate to support a true grass-roots effort to develop community management of a very important natural resource. COMPASS assisted the three district fisheries offices (Phalombe, Zomba and Machinga) to re-establish the BVCs and RVCs, to hold secret ballots to elect their executive, then to form six associations, one in Phalombe, three in Zomba and two in Machinga, to represent the BVCs and RVCs to the fisheries department. Constitutions were developed, the associations submitted for registration under the Trusts and Trustees Incorporation Act and PFM plans developed.

Implementation of the management plans began almost immediately, despite the fact that the associations were not yet registered and management agreements were yet to be signed. The fisheries associations organized joint patrols with Fisheries Department, confiscating gear being used during the closed season and destroying illegal gear, as well as fining offenders. This met with resistance from some fishermen but appears in general to have been accepted by the majority as a necessity. Perhaps more importantly still, BVCs are now issuing fishing permits to BVC members. The permits, legally backed by the LCP Rules, allow BVCs to control fishing effort "within their area of jurisdiction". BVC members will be issued with a permit (which can be revoked if, for example, a fisherman contravenes regulations), while fishermen from outside must also purchase a permit or can be refused a permit and the right to fish if the BVC deems there are already enough fishermen fishing its water.

At a series of meetings with senior fisheries department technical personnel, fisheries association representatives negotiated the final fisheries regulations applying to Lake Chilwa, bringing them in line with national fisheries regulations. Fisheries Department was concerned that some of the regulations developed by the fishermen themselves, especially those related to mesh sizes and certain types of gear, such as *nkatcha* nets (a form of seine net), contradicted those contained within the Fisheries Conservation and Management Regulations of the Fisheries Conservation and Management Act. As a result, without a revision of the national Regulations, these local rules are illegal and could not be applied.

Lake Chiuta followed a rather different path. In early 2000, the fishermen there had established PFM for themselves with some technical assistance from the Machinga District Fisheries Office. They formed an association and established regulations to govern fishing in their lake and, most importantly, enforced those regulations, sometimes with rather strong-arm tactics. COMPASS technical assistance simply helped them

refine their institutions and their management plan as well as facilitating the process of registration for their association.

Nkhotakota district followed a similar process to Lake Chilwa. Dr. Tony Seymour made a study of the existing fisheries institutions in Nkhotakota district in late 2005 (The Nkhotakota Lake Fishery: A Strategy for Participatory Fisheries Management Institutional Development and Development of the Offshore Fishery: Seymour, T. January 2006).

With COMPASS technical and financial support between 2006 and 2008, the BVCs and RVCs held elections for their executive committees, then for association committees. These associations existed previously but, with the exception of Kambindingu Association, covering the beaches from Dwangwa to the Dwambazi River mouth on the Nkhata Bay District boundary, were largely non-functional. COMPASS worked with the district fisheries office to revitalize two associations on Lake Malawi (Kambindingu and Liwaladzi) and create two more on the Bua River (Bua North and Bua South) and one on Lake Chikukutu, a small body of water about 10 Km. west of Nkhotakota town. COMPASS provided technical assistance for the participatory process for development of constitutions and management plans.

At a meeting held in Nkhotakota during 2008, between Fisheries Department senior staff and the fishermen's associations' representatives, a problem similar to that encountered in Lake Chilwa arose. Some of the local regulations governing mesh sizes contradicted the national Regulations.

Implementation of the management plans has not been quite as intensive or effective as that on Lake Chilwa. However, all associations are maintaining patrols and excluding illegal gear and fishing activities. On Lake Chikukutu, for example, fishermen from Lake Malawi beaches, who visit the Lake Chikukutu during the Lake Malawi closed season, are being excluded and illegal gear such as mosquito nets impounded.

By the end of March 2009, eleven of the twelve fisheries associations formed with COMPASS assistance were registered under the Trusts and Trustees Incorporation Act, thus gaining legal status.

In March and April 2009, COMPASS has supported the Department of Fisheries in a review of the fisheries legislation, including the Fisheries Conservation and Management Regulations and the LCP Rules. One outcome of this review is the addition, in the draft of the LCP Rules, of a further fisheries institution at district level termed the Fisheries Conservation and Management Association (FCMA), whose function is unclear. It is the Department's effort to ensure that more serious effort is placed on fisheries conservation when management plans are being formulated.

The Director of Fisheries signed the first participatory fisheries management agreement with six fishermen's associations around Lake Chilwa on 16th May 2009.

In the forestry sector some progress was made early in the program, with the signing of a customary land forest management agreement between the Director of Forestry and 20 communities around Sendwe Hill in Lilongwe District on 12th May 2006. The 73 Ha. Sendwe Hill had been protected under the leadership of the group village headman and the local population were keen to manage it themselves for beekeeping, poles and other resources. COMPASS assisted them to develop the institutional requirements for entering into a management agreement with the Forestry Department.

In Chikwawa District, seven VNRMCs registered with the district assembly as local forest organizations and signed management agreements for 370 Ha. of customary land forest, developed with COMPASS technical assistance, with the District Forestry Office.

Also in Chikwawa and Mwanza Districts, COMPASS has had a long relationship with Africa Parks, who have a management concession from DNPW for Majete Wildlife Reserve, COMPASS helped Africa Parks in the initial establishment of community-based organizations around the reserve, who benefit from resource sharing, and more recently with the development of markets for honey production for 19 beekeeping clubs around the reserve.

COMPASS II worked with the Department of Forestry to establish co-management of the 1,767 Ha., Mkuwazi Forest Reserve in Nkhata Bay District. This reserve is of special importance, being a remnant of low-altitude broad-leafed woodland, which contains endemic forms of insect life and rare bird species. By helping local communities to develop small-scale beekeeping enterprises and eco-tourism, the perceived value

of the reserve to local households increased substantially, providing an incentive for the reserves conservation. The Director of Forestry signed a co-management agreement with the communities around Mkuwazi Forest Reserve in April 2009.

Also in Nkhata Bay District, COMPASS assisted the Regional Forestry Office and the district assembly to gazette Kandoli Mountain, containing over 9,000 Ha. of miombo woodland, as a 13,000 Ha., district forest reserve, only the second in Malawi and by far the largest.

Finally, signing of co-management agreements for two blocks of Mulanje Forest Reserve took place on 25th March 2008. COMPASS, in cooperation with Mulanje Mountain Conservation Trust (MMCT) and WESM, was involved in the establishment of these co-management areas, which provide the basis for the eventual inclusion of the whole of Mulanje Forest Reserve under co-management.

Sub-task 1.1.4: Support efforts to review the local government act.

This sub-task was included in the contract on the basis that “incompatibilities between the Local Government Act (1998) and forestry and fisheries legislation are constraining the ability of district authorities to play their rightful role in implementing effective CBNRM.” In fact, the Local Government Act is largely silent on issues related to community involvement in forestry and fisheries management. Furthermore, protected areas under the mandate of the DNPW are not intended to be devolved to local government authority.

More importantly, as COMPASS began to implement the various policies related to CBNRM, certain weaknesses in the sectoral legislation were discovered. The Mission agreed, as did government, that COMPASS could more usefully support efforts to remove these weaknesses and strengthen the legislation.

As a result, this activity was changed to “Support efforts to harmonize sector legislation with decentralization policy”.

The original goal of this sub-task was to “help Government reconcile current resource policies with the Local Government Act as well as ensure consistent devolution of functions related to local governance of natural resources.” The Contract Modification adjusted this goal to provision of “technical assistance to relevant Government of Malawi (GOM) departments to review the legislation and make adjustments to natural resource policies and legislation as appropriate”.

In fact, as has been stated elsewhere in this report, the 2004 amendment to the National Parks and Wildlife Act completed the adjustments needed for sectoral legislation to reflect the policies of decentralization of decision making and local involvement in natural resources management. What was required was fine tuning of the legislation, based on field experience in its implementation – which COMPASS II provided.

The publication by the Department of Forestry with COMPASS II support of the Standards and Guidelines for Participatory Forestry in Malawi, the Guidelines for Registration of Local Forest Organizations, together with the supporting Technical Order from the Director of Forestry and the Draft Forest Rules, 2007, as well as the Department of Forestry policy document, Decentralization in Forestry, Moving Forward Together, have combined to remove, at least in principle, most constraints to the implementation of the decentralized forestry policy.

The 2004 amendment to the Wildlife Act has provided the legal basis for community involvement in the management of protected areas. COMPASS’ work to implement the legislation has provided a sound basis for the DNPW to continue implementing collaborative management in the future.

Fisheries legislation was already largely sound in the theory of PFM. COMPASS II support to the implementation of the policy (as well as its support to aquaculture and, particularly, cage aquaculture (see Results Module# 3)) has, however, highlighted a number of weaknesses as well as clarifying a number of issues and has led, amongst other things, to the introduction of a permit system for BVCs and RVCs as stipulated in the legislation and almost to agreement on the status of local fisheries regulations, so essential for the participation of local fishermen in sound fisheries management. However, policy and legislation related to aquaculture posed barriers to establishing a robust cage aquaculture industry in Malawi.

In 2009, COMPASS supported the revision of the legislation. As a result of this revision, the Fisheries Conservation and Management Regulations and most significantly the LCP Rules, were adjusted in ways that

could alter the functions of local fisheries organizations. A new institution, the Fisheries Conservation and Management Association was added, which appears to assume the responsibility of emphasizing conservation of fisheries within management plans. The membership of these associations includes representatives of BVCs and fishermen's associations, and will also include officers of district government and all chiefs. It remains to be seen, if this legislation is passed, how this development affects PFM in Malawi

Table 8: Summary of targets and achievements by sub-task – Task 1.1

Sub-task	Achievements	Target
1.1.1: Develop guidelines for community management of natural resources	<ul style="list-style-type: none"> Guidelines on CBNRM in forestry, fisheries and wildlife completed; Guidelines on Registration of Local Forest Organizations completed and disseminated; Standards and Guidelines on Participatory Forest Management completed and disseminated; 	Guidelines completed and disseminated for all relevant sectors
1.1.2: Promote devolution of authority to approve natural resources management agreements	<ul style="list-style-type: none"> Devolution of authority for signing community-based forest management agreements to all (28) districts achieved; District assemblies are signatories on PFM agreements; 	15 district assemblies are signatories to CBNRM plans
1.1.3: Facilitate Natural Resources Agreements between communities and district authorities	<ul style="list-style-type: none"> Forestry sector: 46 agreements signed and under implementation; Fisheries sector: 98 agreements under implementation; Wildlife: 294 agreements signed and under implementation 	400 agreements under implementation in the target districts
1.1.4: Support efforts to harmonize sector legislation with decentralization policy	<ul style="list-style-type: none"> Forestry sector: Forest rules, 2007 drafted; Technical Order on Regulation of Forest Produce from Customary Land; Fisheries Sector: Support to revision and production of draft fisheries policy, act and regulations; Wildlife sector: clarification of the roles of stakeholders, as specified in the 2004 Amendment to the National Parks Wildlife Act and in the Wildlife Policy; 	Provide technical assistance to relevant GOM departments to review the legislation and make adjustments to natural resource policies and legislation as appropriate

TASK 2: INCREASE DISTRICT CAPACITY TO SUPPORT NRM

It was recognized in COMPASS II's statement of work that the capacity at local government level to implement CBNRM on any meaningful scale was inadequate. A major task of this result module was to enhance capacity of district assemblies, district technical personnel, local NGOs and of communities themselves, to enable the establishment of effective CBNRM nationally. Results Module 2 had the task of providing training and other capacity building at local government level as well as creating widespread awareness of the potential benefits of community involvement in natural resources management; hence there was some overlap in activities between this task and Module 2.

The contract defined four sub-tasks within this Task:

1. Build awareness of the opportunities for Community-based Management of Natural Resources;
2. Build district capacity to support natural resource management
3. Build district-level capacity to deliver natural resources management services
4. Build a database of CBNRM best practice sites

Sub-task 1.2.1: Build awareness of opportunities for CBNRM

The contract required that COMPASS worked "to enhance the understanding of CBNRM and the opportunities that sector policies and legislation present for improved management of natural resources ...". District staff, NGOs, traditional leadership and private sector were seen as key targets. It was envisaged that COMPASS would develop policy briefs for the key natural resources sectors in the main languages of the country.

The goal of this sub-task was that all 15 target districts should receive and use natural resources policy materials by 2006.

Initially, COMPASS' focus was on broadening the understanding of people of CBNRM in general, particularly the opportunities it offered for enhancing income and improving livelihoods and how they could become involved. In time, as enterprise development moved from the theoretical to the practical, the emphasis shifted towards building awareness of specific opportunities such as honey production or fish farming.

Written material is of value only to the literate section of the population. Nevertheless, it is important that particularly extension personnel working with local households have access to clear documentation that they can use to develop their own messages for the communities. As already detailed under Sub-task 1.1.1, COMPASS produced a range of guidelines and other documents aimed at various levels of education and ability with the intention of ensuring that all forestry, fisheries and parks personnel had access to at least basic information about the objectives, opportunities and implementation methodologies related to CBNRM.

Radio and, to a lesser extent, television were very successful in creating widespread awareness of natural resources management and their potential for enhancing incomes and improving livelihoods. The *Chuma Chobisika* program on radio, in particular, was very well received and effective for spreading messages about CBNRM widely within the country. COMPASS broadcast public awareness activities are detailed under Sub-task 2.3.

Drama is a traditional method for informing rural communities about important subjects. A combination of entertainment and information not only draws large audiences (typically several hundred and in a few cases over 1,000 people attending) but also imprints the messages more firmly in the minds of the audience. COMPASS supported drama groups and bands to provide information related to CBNRM, particularly in fishing communities, but also to villages in Traditional Authority (TA) Laston Njema in Mulanje District, where the Chisongoli Watershed Partnership Program was implemented¹⁹.

Each drama group and band was given three or four topics on which to base drama performances or songs. Subjects would be relatively simple but crucial to the participatory process, the role of chiefs in PFM, for example, or why there is a closed season for fishing.

In 2005, COMPASS signed a Memorandum of Understanding (MOU) with NICE, an EU-funded national program that set out to provide civic education about democracy and governance but had expanded its mandate to include issues related to environment and natural resources. NICE maintained an office in each district and a team of volunteer "para-civic educators", local villagers who were provided with training on key topics and how to impart information to local communities.

COMPASS provided training and written materials on CBNRM, its purpose, what opportunities it offers and how it can be implemented to the para-civic educators. This approach was successful in many districts, proving to be an effective means of expanding knowledge and understanding of CBNRM and raising community interest in it.

Sub-tasks 1.2.2 and 1.2.3: Build district-level capacity to support and deliver natural resource management services

With the agreement of the USAID Mission, these two sub-tasks were integrated in 2005. Although each had a different goal, the two activities were complementary and their implementation processes overlapped considerably.

Recognizing that district personnel had few of the skills required to implement and support CBNRM, the contract required that COMPASS provide capacity building to enable them to provide high quality services to rural communities. Much of the capacity building effort was allocated to Result Module 2, but RM 1 was also required to support capacity building.

¹⁹ This program was funded through the Water and Development Alliance between USAID and the Coca Cola Company. DAI was asked by USAID/Malawi to supervise the program's implementation. COMPASS personnel provided technical assistance.

The activities envisaged COMPASS supporting and strengthening the DESC to provide improved CBNRM technical services to the district. COMPASS was to provide training in aspects of appreciative enquiry, gender mainstreaming and analysis, and integration of HIV/AIDS awareness into CBNRM. In addition, DESC members (district staff, NGO personnel and traditional leaders) were to be trained in provision of essential CBNRM support services.

A third, seemingly unrelated task, was to support the CBNRM Working group to lobby for devolution of authority to approve management plans and byelaws.

The goals of the two sub-tasks were respectively:

- All target districts have a formal process for integrating traditional authorities into natural resources planning and decision making; and
- At least 2,000 communities in the target districts receive top-quality services by 2008.

The first target was altered in the Contract Modification to read: “Success shall be measured in terms of the number of districts where district technical personnel are providing regular technical services to rural communities.”

The key institution for implementing these two activities was expected to be the DESC. Unfortunately, in almost all target districts, the DESC no longer functioned (see challenges below). COMPASS therefore worked with individual district offices’ personnel to provide the necessary training, both formal and informal, to enhance capacity for service provision and support to CBNRM.

District technical personnel and NGO staff benefited from training on appreciative inquiry techniques, finance management for community-based organizations, participatory forest resource assessment and participatory community mapping (see Tasks 2.1 and 2.2).

COMPASS II helped to considerably enhance the levels of understanding of CBNRM and the opportunities for natural resources-based enterprise through frequent visits to each district, field work in conjunction with district personnel at all levels and practical, on-the-job training at community level. This high level of contact, combined with formal and semi-formal training and the various guidelines produced with COMPASS support (see Sub-task 1.1.1 and 1.2.1) has, without doubt, significantly enhanced district technical personnel’s ability to provide services to local communities related to community-based management of natural resources. Over 900 district, national parks and NGO service providers have received training through COMPASS. One hundred and fifty two Malawi Gold Standard (MGS) beekeeping service providers had trained over 6,000 beekeepers by the end of 2007.

The challenge remains the extremely low level of resources available to district sectoral departments, which constrains their ability to operate outside a project context. To counteract this lack of resources to some extent, COMPASS provided motorcycles, computers (pre-loaded with ArcView GIS software) and peripherals (purchased directly by USAID not through COMPASS project funds) and GPS units to some district offices and NGOs. These grants were tied to criteria which essentially measured the commitment of the district or NGO to assisting the establishment of CBNRM in Malawi. In support of this, all districts that received computer hardware were provided training in the use of the ArcView GIS software.

The innovative approach of establishing a cadre of well-trained, for-fee service providers under the MGS Honey Production System (see RM 2 and 3 and Section 3 for more details) expanded and diversified the pool of expertise that local people can draw on for technical advice. One hundred and fifty two MGS service providers were trained in the MGS Honey Production System by some of the most successful commercial beekeepers in the country. Many paid a fee for the training (apart from those sponsored by NGOs or government) and set themselves up to provide beekeeping training and other services for a fee in their community. While not without problems, this approach proved that for-fee service provision, provided the services provided are of high quality, can be successful even in a country like Malawi with a largely impoverished rural population, as well as providing a sustainable means of providing extension services to beekeepers after COMPASS closes.

Sub-task 1.2.4: Build database of CBNRM best practice sites

COMPASS II was required to establish a database documenting best practices in CBNRM in Malawi, following on from a similar listing developed under COMPASS. The database would act to highlight locations where successful activities related to CBNRM are taking place, to facilitate their replication in other areas. Under COMPASS, 32 sites were identified.

COMPASS II developed a range of criteria that were used to allocate locations where CBNRM is being practiced to the category “Best Practice”. To qualify, sites must be:

1. Ecologically/Environmentally sound
2. Economically viable
3. Socially justifiable/acceptable

And at least some of the following criteria should also apply for best practice

- a. Activities with proven experience
- b. Can easily be scaled up and & replicated
- c. Uses skills technology that is appropriate and can be adopted
- d. Has relevant success stories which can be educational models
- e. Can be maintained for a foreseeable future
- f. Have stimulated or contributed to the outcome related to the target areas ecologically, economically and socially

Initially an assessment of the success or otherwise of the COMPASS sites indicated that of the original 32 sites, only 17 still qualified for the title. In 2008 a further assessment was made of both some of the old sites and several new ones, identifying 33 sites classed as best practice.

The target for this sub-task was to expand COMPASS database to include at least 70 sites. While an activity might be environmentally sound and socially acceptable, its economic viability may be difficult to show.

Table 9: Summary of targets and achievements by sub-task – Task 1.2

Sub-task	Achievements	Target
1.2.1: Build awareness for opportunities for CBNRM	<ul style="list-style-type: none"> • 35 drama performances on CBNRM issues staged reaching an audience exceeding 5,000 people; • 392 hours of radio and 66 hours of TV broadcasts on CBNRM and the opportunities for income generation it offers; 	Build on [previous] efforts, particularly in relation to disseminating information and printed material and training district staff on how to engage local community leaders
1.2.2: Build district level capacity to support natural resources management	<ul style="list-style-type: none"> • Over 900 district, national parks and NGO service providers trained; • Resources permitting, in all districts technical personnel are now providing good support services to communities engaged in CBNRM; 	In all target districts district technical personnel are providing regular technical services
1.2.3: Build district level capacity to deliver natural resources management services (combined with 1.2.2)	<ul style="list-style-type: none"> • Well over 2,000 communities are now receiving these services 	At least 2,000 communities to receive top-quality services by 2008
1.2.4: Build database of CBNRM best practice sites	<ul style="list-style-type: none"> • 42 best practice sites identified and documented 	70 best practice sites listed in database

TASK 3: IMPROVED CBNRM STAKEHOLDER COORDINATION

This task required an improvement of coordination of CBNRM activities at all levels – nationally, as well as at local government and at community levels. The rationale was that through coordination of activities, successful strategies could be highlighted and followed by all practitioners, while duplication of mistakes would be avoided.

COMPASS had made major efforts to establish strong coordination amongst stakeholders in the CBNRM field. The CBNRM Working Group was created and a loose grouping of practitioners, the Partners' Association, formed. COMPASS had also worked closely with the Task Force on Land and Natural Resources.

Sub-task 1.3.1: Strengthen national coordinating bodies

The contract envisaged COMPASS II supporting quarterly meetings of the CBNRM Working Group, set up and financed under COMPASS.

In the COMPASS Summary Report 1999-2003, published in December 2003, the author wrote "...the [National Council for the Environment (NCE)] approved revised terms of reference that essentially perpetuated the CBNRM Working Group's existence for as long as NCE wishes and as long as it can finance its operations. The costs are minimal (about \$600 to \$700 per annum for each member to attend four meetings per year). Key departmental directors have indicated they could support this using discretionary funds ...". The COMPASS II Annual Progress Report for 2004 reported that "... government agency staff ... have not met in more than 10 months to coordinate CBNRM implementation – solely because no donor projects would sponsor them to meet ..." In other words the CBNRM Working Group had ceased to meet immediately funding from COMPASS ceased.

COMPASS argued that further support would not be the best use of available funds without developing a sustainable funding mechanism. Previous experience in Malawi suggested that this was very unlikely to be achieved. This analysis was agreed by the USAID/Malawi mission.

As a result, COMPASS provided technical support to the National CBNRM Forum, Malawi's contribution to the Regional CBNRM Forum comprising member states of the Southern African Development Community (SADC) region. The Regional CBNRM Capacity Building Project in Southern Africa was initiated in 2002 with funding from the Norwegian Government through WWF Norway. The WWF Southern Africa Regional Program Office (SARPO – based in Harare, Zimbabwe) is implementing the project in partnership with a number of organizations in seven countries within the SADC region. The overall goal of the Project is to contribute to poverty alleviation and sustainable livelihoods at rural household level from management of natural resources by communities in Southern Africa and its purpose is that CBNRM principles, policy and practice are adopted as a mainstream strategy for rural development in southern Africa.

The project's implementation phase has five outputs:

1. Support in creation of regional and national CBNRM fora.
2. Identifying best practices and developing curriculum for mainstreaming of CBNRM in formal and non-formal training institutions.
3. Capacity building in CBNRM best practices development based on themes.
4. Policy and legislation support i.e. integrate natural resource use policies.
5. Undertake strategic interventions.

COMPASS provided technical support, in the person of the COMPASS II Training Specialist to the first output. The Malawi National CBNRM Forum was successfully established in 2007.

Sub-task 1.3.2: Strengthen district coordinating bodies

The purpose of this sub-task was to provide technical support to the DESC in the target districts, helping them to prepare action plans for approving and implementing CBNRM in each district.

The target was to support the realization of the target for sub-task 1.1.3, at least 500 (later reduced to 400) natural resource management agreements under implementation by 2008.

Given that, as detailed under sub-task 1.2.3, the DESC's had ceased to function, COMPASS considered other means for ensuring coordination at the district level. The DEC functioned in most districts without donor support and included representation from all the key natural resource sector departments. The DEC, however, was more of a monthly reporting session and not an activity coordinating body. This is a direct

result of the lack of progress in decentralization by many line ministries. As mentioned above, each sectors agenda is still set by the headquarters offices and not by the district themselves.

No district was in a position to prepare integrated CBNRM plans, since (a) the districts were not empowered to approve such plans and (b) as indicated, sector activities were allocated from headquarters, not by the district.

COMPASS therefore adopted the approach of selecting specific CBNRM interventions sector-by-sector in each district, where opportunities existed for the development of robust natural resources-based enterprise as an incentive for communities to become involved in management of natural resources, where communities were willing and able to take an active role and, finally, where district technical personnel showed enthusiasm and a willingness to support the activities. Through frequent interaction at district level, at least informal coordination of activities has been achieved.

Sub-task 1.3.3: Strengthen local coordination bodies

The contract specified that COMPASS must promote exchanges to best practice sites. The rationale behind this sub-task was that exposing local communities to examples of good CBNRM, and especially locations where households are benefiting financially from engaging in natural resources management will create a demand from these communities for technical support to replicate the activities in their own area.

The target for this sub-task was “at least 1,250 people [exposed] to best practice in CBNRM and enterprise development”. The contract modification reduced this target to 500 people.

Study tours and exchange visits related to community involvement in management of natural resources have focused on the fisheries sector, beekeeping and, recently, eco-tourism. Particularly around Lake Chiuta, fishermen have established robust PFM institutions. The Fisheries Department provided technical assistance but the concept and its implementation was solely in the hands of the fishermen themselves. As such, fisheries management there is successful and brings real benefits to the fishermen. Fishermen from around Lake Chilwa and from beaches in Nkhotakota have been taken to Lake Chilwa and also to a successful BVC on Lake Chilwa, to learn from their peers the benefits gained from participation in fisheries management.

To experience examples of successful PFM, fishermen from Lake Chilwa have visited Lake Chiuta and fishermen from Nkhotakota have been taken to Lake Chilwa.

Small-scale cage fish culture is a new technology in Malawi. Initially fishermen from Nkhotakota District and later fishermen from Lake Malombe in Mangochi District were taken on study tours to learn about the technology and business of cage fish culture. A group of fishermen from Nkhotakota District accompanied government fisheries personnel to Lake Kariba, in Zambia, to learn from the successful cage farming businesses there.

The first beekeeping enterprises around Nyika National Park are now operating successfully. Members of other newer enterprises around Nyika, Kasungu National Park, Mkuwazi Forest Reserve and Nkhotakota Wildlife Reserve took part in study tours to the Nyika enterprises. One newer enterprise in Nyika, Fulirwa, provided a very useful destination for study tour groups. This enterprise, although it had not benefited from honey equipment loans, nevertheless shows a very positive attitude, is well organized and is cooperating strongly with DNPW in park management activities. Some poachers have requested to join the beekeeping clubs, promising to stop poaching if accepted.

A group of ten farmers from Nkhotakota were taken to Dwangwa to learn about the operation of a mango drier. On the basis of this, two villages constructed their own driers, one of which with some modification (see Results Module#3) is now operating successfully.

Eight members of the Mkuwazi Eco-tourism Association visited the Takwonda Natural Resources Management Association eco-tourism club in Nkhotakota, ten fishermen and traditional leaders from the Lake Chikukutu area visited Ngala to discuss ideas related to eco-tourism focusing on wildlife on the lakes and members of the Kambindingu and Chikukutu Fisheries Associations visited Lake Chilwa Bird Hunters' Association to learn about their eco-tourism enterprise.

Some 28 beekeepers from around Majete Wildlife Reserve visited Sapitwa Beekeepers Association in Mulanje District and a similar number made a study tour to Nali Ltd. to inspect the new honey processing equipment, procured with COMPASS funds. Similarly nearly 70 beekeepers from various beekeeping enterprises around Nyika visited MCPCU processing plant in Mzuzu.

Table 10: Summary of targets and achievements by sub-task – Task 1.3

Sub-task	Achievements	Target
1.3.1: Strengthen national coordinating bodies	<ul style="list-style-type: none"> • Provided support to the establishment of the National CBNRM Forum as part of the southern Africa Regional CBNRM Forum 	No numerical target.
1.3.2: Strengthen district coordinating bodies	<ul style="list-style-type: none"> • 12 districts have demonstrably improved coordination across sectors. 	No numerical target
1.3.3: Strengthen local coordination bodies	<ul style="list-style-type: none"> • 525 people participated in exchange visits and study tours 	At least 500 people exposed to best practice in CBNRM and enterprise development

RESULTS MODULE #2: ENHANCED COMMUNITY CAPACITY FOR MANAGING NATURAL RESOURCES IN A SUSTAINABLE MANNER

Result Module 2 recognized that capacity for implementing CBNRM in Malawi is weak. All stakeholders needed enhanced knowledge and skills to achieve meaningful results that would eventually improve incomes and livelihoods and act as an incentive for conservation of natural resources. The contract required that COMPASS “Increase(s) the capacity and knowledge of local service providers to enable them to provide services that help user groups develop and implement CBNRM and engage in alternative income generation strategies.”

COMPASS focused on four groups of stakeholders in its capacity building: community members practicing CBNRM, government officials and NGO personnel who provide technical support to these communities, private sector service providers including industry/trade associations and business chambers and private firms; and traditional leadership.

The contract specified four tasks, respectively:

1. Increasing capacity of communities to manage natural resources;
2. Strengthening the capacity of service providers to support these communities;
3. Increasing public awareness and understanding of CBNRM roles and opportunities;
4. Strengthening the knowledge and accountability of the traditional leadership with regard to CBNRM

The key performance indicators for this Result Module were the “Number of communities adopting CBNRM practices” and the “Number of households participating in CBNRM activities”. The end-of-project targets were at least 1,000 communities adopting CBNRM and at least 80,000 households participating in CBNRM.

TASK 2.1: INCREASE CAPACITY OF NATURAL RESOURCES MANAGEMENT AT COMMUNITY LEVEL

The first task was designed to address the critical lack of capacity amongst rural communities to manage natural resources. The target groups were to be VNRMCs (in the forestry sector) and BVCs (in the fisheries sector).

The Department’s of Fisheries, Forestry and National Parks and Wildlife had been active during previous years in establishing community based natural resources management organizations, variously termed VNRMCs in the forestry sector, BVCs and RVCs in the fisheries sector and VNRCs in the wildlife sector. In many, if not most cases, however, these organizations effectively consisted only of the ten-member committee, the wider population was not involved in activities related to management of natural resources and the committee itself often had little understanding of its role.

Capacity building, therefore, required not only technical skills training but also enhancing both the committees’ and the communities’ understanding of the functions of these organizations and the opportunities offered by communities gaining a degree of control of management and use of resources.

Only one sub-task was included under this task.

Sub-task 2.1.1: Train community representatives participating in VNRMCs and BVCs

The objective of this sub-task was to enhance capacity and levels of understanding of both natural resource management committees and the wider population so that they can effectively take responsibility for proper management of natural resources. The target for this sub-task is “to serve at least 500 communities in both [sic] sectors – at least 350 VNRMCs and 150 BVCs.”

The Sub-task title and target was felt to be unnecessarily restrictive. There were many more CBNRM-oriented organizations than only VNRMCs and BVCs. At community level, COMPASS has been involved in training not only VNRMCs and BVCs but also associations, clubs and enterprises.

Early in the program (September 2004), a Stakeholders' Consultative Workshop discussed, amongst other topics, the training needs of both rural communities and local extension agents to bolster their ability to implement CBNRM. This was followed in 2005 with a more detailed training needs assessment within each of the target districts. On this basis, new curricula were developed and the existing ones modified.

It was clearly impossible and also unnecessary for COMPASS personnel to provide training directly to 500 communities. The solution was, as envisaged in the contract, to partner with local NGOs and to enhance the capacity of district technical personnel who would provide the training (see also Sub-tasks 1.2.2, 2.2.1 and 2.2.2). Service contracts were signed with several NGOs to provide specific training courses – participatory forest management planning and participatory forest resource assessment - at community level.

COMPASS personnel did provide training on organizational development, business management and finance management to specific groups who were organizing themselves to engage in CBNRM or small-scale enterprise.

Apart from formal, village-based community training, COMPASS field personnel continuously mentored community groups on issues related to CBNRM and small-scale enterprise development. The benefits of this frequent, informal contact, while unquantifiable, are undoubtedly significant, both to transfer new ideas to households and community groups and to bolster skills and concepts learned during more formal training sessions.

As COMPASS' focus evolved from developing the institutions for accessing natural resources to establishing small-scale enterprise to harvest, process and market natural resource-based products, so the emphasis of training at community level moved from building capacity for governance committees to function towards helping emerging small-scale businessmen and women develop the skills necessary run their business as a commercial entity. Hence, rather than training for VNRMCs, BVCs and the like, more training was provided to clubs and enterprises in areas such as organizational development, business management, financial management and production skills.

Table 11: Summary of targets and achievements by sub-task – Task 2.1

Sub-task	Achievements	Target
2.1.1: Train community representatives participating in VNRMCs and BVCs	<ul style="list-style-type: none"> 515 communities trained. 	At least 500 communities in the fisheries and forestry sector – 350 VNRMCs and 150 BVCs trained

TASK 2: STRENGTHEN THE CAPACITY OF CBNRM SERVICE PROVIDERS

The contract recognized that for sustainability, the project must develop the capacity of local service providers, who can continue support to communities practicing CBNRM and small-scale natural resources –based businesses in the long term. Moreover the contract placed emphasis on building the capacity of local firms and organizations (i.e. the private sector) and local NGOs.

COMPASS understood that for more certain sustainability, not only must these service providers have the capacity to support CBNRM but must also possess financial capabilities. Without a sustainable source of funding, their activities would continue to rely on donor support, with its well-known drawbacks. For this reason, COMPASS II explored, the option of service providers charging fees to local households for training and other technical support. Clearly, not all types of capacity building encourage fee charging. It was considered reasonable that cash-poor rural households would only pay for training in topics that have a reasonable expectation of providing the recipient with a significant increase in income. The contract defined two sub-tasks within this Task:

- a. Promote participation of qualified local firms and organizations;
- b. Strengthen and support local NGOs

Sub-task 2.2.1: Promote participation of qualified local firms and organizations

Although COMPASS reported this and the next sub-task as separate activities, they tended to merge into one in their field application. There was a blurring of distinction between “locally qualified firms and organization” and NGOs, just as there was between promoting their participation and strengthening and supporting. The former could not happen without the latter. Therefore, this section covers both sub-tasks.

COMPASS made a concerted effort during the first three years of operation to locate, train and involve local NGOs in implementing CBNRM in various roles. Memoranda of Understanding were signed which, while non-binding, highlighted the roles of the two parties and their joint responsibilities. Service contracts were also signed with three organizations for specific training services.

The development of the Malawi Gold Standard Production System series for honey and aquaculture and, in the honey sector, the establishment of a cadre of for-fee service providers was a qualified success (see Module 3, sub-task 3.1.3).

The development of the Malawi Gold Standard Honey Production System was one of the lasting achievements of COMPASS II. Ensuring that the production system reached as many beekeepers as possible was a challenge, given that government and NGOs lacked the capacity to reach more than a few, without external support. The other challenge was how to guarantee sustainability of the system in the post-project period. Clearly, a fees-for-services approach would solve some of these problems, if it could be made to work. But it represented such a departure from normal practice; there was widespread skepticism about its viability.

Nevertheless once the production system was agreed and materials, including a trainer’s guide and beekeeper’s manual, published, an invitation for Expressions of Interest to become a service provider was published in the national newspapers, with a surprisingly good response, considering that all costs for training would be paid by the trainee. In addition, the trainer’s guide was sold to the trainees at printing cost price.

Four sets of training were provided to a total of 152 trainees, in four different locations: Rumphi in the North (and a training course in Chitipa for Eco-products Ltd. extension staff), Mponela in the centre and Lunzu in the south. It should be said that of the 152, only 42 were self-sponsored the remainder being funded by NGOs, projects or government. Nevertheless, at an average cost of MK 20,000 each for the course, even 42 people paying all their own costs represented a significant step in the right direction (more detail of the Malawi Gold Standard can be found in section 3).

The Malawi Gold Standard service providers were an attempt to initiate a sustainable system. In principle, since beekeeping, following the Malawi Gold Standard system, is a potentially lucrative business, beekeepers should be willing to pay for services that will help them achieve this income. In practice, the ingrained assumption that training should be free and even profitable for the *trainee* has hindered the success of this approach. Some of the trainers were able to persuade beekeepers to pay for services and one or two actually made a reasonable living, particularly when combined with sale of equipment. But most face an uphill struggle, many beekeepers being unwilling – or perhaps unable – to pay for services, competition from free training from NGOs and projects in the area and even suspicion amongst beekeepers that the trainers were being paid by COMPASS, and were demanding extra payment from the beekeepers to provide training.

Sub-task 2.2.2: Strengthen and support local NGOs

The activities and challenges related to this task have largely been covered under activity 2.2.1.

Table 12: Summary of targets and achievements by sub-task – Task 2.2

Sub-task	Achievements	Target
2.2.1: Promote participation of local qualified firms and organizations	<ul style="list-style-type: none"> Service contracts signed with three local organization 152 MGS service providers trained as honey production trainers Directory of qualified local service providers published 	No numerical targets
2.2.2: Strengthen and support local NGOs	<ul style="list-style-type: none"> MOUs signed with thirteen local NGOs 250 NGO and district government staff trained in appreciative inquiry 	No numerical targets

TASK 3: INCREASE PUBLIC AWARENESS AND UNDERSTANDING OF CBNRM ROLES AND OPPORTUNITIES

COMPASS was required to “Increase [natural resources] users’ understanding of CBNRM concepts, rights and responsibilities and legal issues ...” and to “Improve knowledge among the general public regarding the environmental and economic benefits that can be generated from CBNRM.

This task aimed to widely disseminate the message about CBNRM and the revenue-generating opportunities that good management and sustainable use of natural resource offers to a wider audience, including children, the next generation of resource users and policy makers, as well as the general public. WESM’s schools program presented an opportunity to reach out to school children, while radio’s almost complete coverage of the country and the expansion of the television audience also offered a medium to inform a majority of the population with information about CBNRM.

The Task required three activities/sub-tasks, each aimed at a different audience:

- a. Expand the Environmental Education program through school clubs;
- b. Develop a public outreach program on TV and radio for Malawi
- c. Establish a web site for Malawi environment and CBNRM activities.

Sub-task 2.3.1: Expand the environmental education program through school clubs

WESM has established over 1,000 school environmental clubs throughout Malawi. This sub-task was intended to support the expansion of the primary and secondary school environmental education. Shortly after COMPASS’ inception, it was agreed with WESM that further expansion of school clubs was not the issue, rather strengthening them and helping them become more effective.

WESM and COMPASS agreed to contract an independent consultant to make an assessment of the program and to develop a plan of action. In 2008, COMPASS supported WESM to carry out an independent assessment of the program.

Sub-task 2.3.2: Develop a public outreach program in TV and radio for Malawi

The widespread availability of radios in Malawi, coupled with the almost 100% national coverage by the state broadcaster MBC2 (Malawi Broadcasting Corporation), suggested an opportunity for COMPASS to create an effective public outreach program for CBNRM. Spectrum Media, of Boston, USA, was sub-contracted by DAI to develop and lead this program. COMPASS produced a weekly radio program called *Chuma Chobisika* or Hidden Treasure. The focus of the broadcasts was initially on general issues related to what CBNRM is and how it can be adopted by rural communities. Later, once the principles of CBNRM were well established, the program’s emphasis moved to how people could benefit from CBNRM through developing small-scale commercial businesses based on the harvesting and processing of natural resources-based products.

As the radio program became well-known and feedback indicated its popularity, COMPASS diversified into TV broadcasts. Although the potential audience for TV is considerably smaller than for radio, nevertheless, Television Malawi (TVM) has an almost nationwide coverage and TV ownership is not uncommon.

A survey of the impact of *Chuma Chobisika* was carried out in 2007 (*Chuma Chobisika* National Survey Report. COMPASS II, April 2007). It showed that almost 50% of Malawi’s adult population listened frequently to *Chuma Chobisika*.

In addition to *Chuma Chobisika* COMPASS provided financial support to WESM to produce and distribute the *Nantchengwa* magazine to raise its circulation.

The targets for this activity were:

- Place four hours of NRM and conservation programming on radio per month;
- Place one hour of NRM and conservation programming on TV every month
- Raise the circulation of *Nantchengwa* magazine to 10,000 copies per issue.

This activity received intensive technical support from Spectrum Media, the team of Jamil Simon, Eric Neudel and Leila Simon providing strong guidance to the COMPASS public awareness specialists. Within two months of the team being in place a weekly half-hour radio program was being broadcast on MBC Radio 2 and a weekly column was appearing in the Nation and Daily Times newspapers.

Spectrum designed a communication strategy for COMPASS that formed the basis for the development of public awareness during the remainder of the program.

The key productions of the public awareness team were the weekly *Chuma Chobisika* radio program, initially broadcast on MBC Radio 2, but eventually on six national and local radio stations; and the design and publication of the written materials (trainers' guides and practitioners' handbooks) and the DVD video sets for the Malawi Gold Standard Production series on beekeeping and pond aquaculture.

Chuma Chobisika began as a general CBNRM awareness program, helping people to understand what CBNRM offered and how they could become involved with it to improve their livelihoods. As COMPASS began to encourage the establishment of robust markets for natural resource-based products, especially honey, the programs emphasis shifted to reflect this and to help producers access these markets. By the time of the last broadcast of *Chuma Chobisika*, MBC had broadcast some 71 hours of original programming and local radio stations re-broadcast a further 321 hours.

A survey carried out by COMPASS in early 2007 indicated that nearly 50% of respondents (2,700 households in 27 districts or about 0.15% of the population) regularly listened to *Chuma Chobisika*. Since some 90% of the respondents reported they listened to radio frequently, the implication is that some 800,000 households were exposed on a regular basis to the *Chuma Chobisika* broadcasts.

In June 2005, TVM aired the first television broadcast of *Chuma Chobisika*. COMPASS appreciated that the audience for television in Malawi is considerably smaller than that for radio and also that the majority of television ownership is amongst the urban middle class – not COMPASS' primary target audience (the *Chuma Chobisika* national survey indicated only about 14% of the rural population had access to television and, indeed, only 4% reported having watched *Chuma Chobisika* television broadcasts). Nevertheless, the urban middle class include the decision makers and, despite decentralization policy, this group has far more influence over policy than the rural populations. They are also the largest users of charcoal. In total some 66 hours of *Chuma Chobisika* television programming was broadcast. By the end of the project, COMPASS' *Chuma Chobisika* radio and TV program had reached been broadcasted for 75 hours with 321 hours of rebroadcasts and 66 hours of television plus 11 hours of *Chuma Chobisika Special* on Cage Culture and Mushroom production and cooking had been aired. During FY2008, COMPASS managed to negotiate with TVM to rebroadcast some of the programs due to demand from the viewers. These rebroadcasts were aired for free by TVM.

Table 13: Summary of *Chuma Chobisika* Broadcast & Print Dissemination

FORMAT OF DISSEMINATION	BROADCAST & REBROADCAST ²⁰ HOURS / EDITIONS PUBLISHED				BROADCASTING / DISTRIBUTION
	FY2005	FY2006	FY2007	CUM. TOTAL	
RADIO	PRODUCED: 41 PROGRAMS BROADCAST: 20.5 HRS	PRODUCED: 53 PROGRAMS BROADCAST: 26.5 HRS REBROADCAST: 165 HRS	PRODUCED: 37 PROGRAMS BROADCAST: 18.5 HRS REBROADCAST: 156 HRS	PRODUCED: 131 PROGRAMS BROADCAST: 75 HRS REBROADCAST: 321 HRS	1. MBC 2 FM 2. RADIO MARIA 3. RADIO ALINAFE 4. NKK RADIO 5. DZIMWE RADIO 6. TIGABANE
TELEVISION	3 PROGRAMS 3.5 HRS	22 PROGRAMS 22.5 HRS	28 PROGRAMS 28 HRS	53 PROGRAMS 77 HRS	TVM
NEWSLETTER	3 EDITIONS	5 EDITIONS	1 EDITION	9 EDITIONS	1. 4 GOVT DEPTS. 2. 12 NGOs 3. 10 MEDIA 4. ALL TRAININGS

²⁰ Each original program was broadcast on MBC 2 Saturday evenings at 20:30-21:00; Radio Maria and Radio Tigabane both rebroadcast once per week; Dzimwe Radio, Nkhotakota Community Radio, and Radio Alinafe each rebroadcast twice per week.

In addition to Choma Chobisika materials, COMPASS also supported the WESM's publication and dissemination of 12,000 copies of *Nantchengwa* magazine, which focuses on wildlife and safeguarding the environment.

The Malawi Gold Standard Production Systems for honey and pond aquaculture were designed to provide practitioners with the best possible technical information in an accessible format. For each, the starting point was a thorough analysis of best practice in Malawi carried out by scientists and acknowledged expert practitioners. The results of the analysis were then transformed into print and video technical materials. The print media consisted of two volumes, a trainer's manual and a practitioner's handbook, the latter with minimal text, uses cartoons to describe the techniques to be used. The video sets were filmed by the public awareness team and compiled on DVDs, primarily for trainers to use when teaching practitioners. Initially published in English, a Chichewa set was also produced

Trainers and anyone else who wanted the sets of training materials (or parts of the sets) paid the printing cost for the manuals and the DVDs. Demand for these documents was high, from individual beekeepers as well as from NGOs, other projects and even government departments. The first print run sold out in mid-2007 and a second print run was produced.

The public awareness program also produced a print newsletter, newspaper articles and posters.

Sub-task 2.3.3: Establish a web site for Malawi environmental and CBNRM activities

The contract specified that COMPASS must establish a website, promoting CBNRM and environmental issues in Malawi. .

Initially, the intention was to host the web site on the DAI site, as the first COMPASS' site had been. However, technical challenges eventually thwarted this idea. COMPASS then looked at local organizations that could host the site. The COMPASS team felt that, for a site to be useful it must (a) be independent of COMPASS, that is a Malawi CBNRM site that all stakeholders could contribute to during and after COMPASS was completed and (b) it must be capable of sustaining itself without project funding for web hosting and so on. A further debate centered on whether the web site should promote CBNRM in general or whether it should focus on natural resource-based products, or whether there should in fact be two sites, one covering each aspect.

Finally, however, a decision was taken to locate a simple site outlining COMPASS work with FRAMEWeb, a site sponsored by USAID. COMPASS developed a site, which is, at the time of writing, being relocated to USAID's "Development Resource Management Portal".

Table 14: Summary of targets and achievements by sub-task – Task 2.3

Sub-task	Achievements	Target
2.3.1: Expand the environmental education program through school clubs	<ul style="list-style-type: none"> Independent assessment of WESM's schools program completed 	No numerical targets
2.3.2: Develop a public outreach program in TV and radio for Malawi	<ul style="list-style-type: none"> Nantchengwa production raised to 12,000 per issue 66 hours total TV programming on NRM and conservation (1.4 hours pr month) 392 hours total radio programming (7.25 hours per month) 	Raise production of Nantchengwa magazine to 10,000 per issue; Place 1 hour of NRM and conservation programming per month on TV Place 4 hours of NRM and conservation programming per month on radio
2.3.3: Establish a website for Malawi environmental and CBNRM activities	<ul style="list-style-type: none"> COMPASS website established 	No numerical target

TASK 4: STRENGTHEN KNOWLEDGE AND ACCOUNTABILITY OF TRADITIONAL LEADERS AND RELATED OFFICIALS IN CBNRM

The role of the traditional leadership in mobilizing public opinion in Malawi is undoubted. In rural areas, the allocation of land and agreements on use of land are substantially the responsibility of the traditional leaders. “Ownership” of CBNRM by rural communities requires strong support from traditional leaders.

COMPASS’ role was to engage the traditional leadership in establishing and expanding CBNRM practice, to ensure they had the requisite knowledge to support CBNRM developments in their area of jurisdiction and to help them understand their role within the new natural resources management decentralization policy. Two sub-tasks/activities were required:

- a. Train traditional authorities in CBNRM;
- b. Host a traditional authorities’ conference. This activity was later changed under the contract modification from: Host the annual traditional authorities’ conference.

Sub-task 2.4.1: Train traditional leaders in CBNRM

The purpose of this activity was to help “traditional authorities monitor and track the effectiveness of CBNRM initiatives, along with the associated enforcement systems, within their jurisdiction.”

Early in the life of COMPASS, a policy decision was made not to train traditional leadership separately from their subjects, a practice that can engender jealousy and suspicion, but to consciously include them in community-based training sessions. This approach has been successful, village headmen and group village headmen especially benefiting from being able to participate directly in training, gaining a clear understanding of the topics to which their subjects are being exposed. Partly as a result of this policy, numbers of traditional leaders participating in training courses were not rigorously tracked. However, from records we know the minimum number trained.

Sub-task 2.4.2: Host a traditional authorities’ conference

It was agreed with the mission and later incorporated into the contract modification that the results likely to emerge from annual conferences of this nature would not justify the cost involved in their organization. COMPASS’ instead ensured that Traditional Authorities and the wider traditional leadership were involved at all stages in the development of CBNRM institutions in their areas.

During early 2005, COMPASS hosted two regional workshops for traditional leaders, one in Mzuzu (30 participants) and one in Liwonde (32 participants). The National Conference, held in October 2005, attended by 35 traditional authorities. This conference generated 13 resolutions (see Proceedings of the COMPASS II 2005 Traditional Authorities Conference: Moyo, N., January 2006).

Table 15: Summary of Targets and Achievements by Sub-Task – Task 2.4

Sub-task	Achievements	Target
2.4.1: Train traditional leaders in CBNRM	<ul style="list-style-type: none"> • At least 200 traditional leaders have participated in CBNRM-related training and exchange visits and study tours. 	No numerical targets
2.4.2: Host a traditional authority conference	<ul style="list-style-type: none"> • Traditional authority CBNRM conference held in October, 2005 	One traditional authority CBNRM conference

RESULTS MODULE #3: INCREASED SALES OF NATURAL RESOURCE-BASED PRODUCTS BY HOUSEHOLDS

COMPASS II mandate was to enhance household revenue from participation in CBNRM activities that generated income as well as provided the incentives for sustainable resource use. However, income had to be generated through production and sale of products based on sustainable harvesting and processing of natural resource based products, that have a good national or international market and that provided substantial benefits to rural households. During the life of the project, COMPASS identified several major subsectors that fit the requirement and had significant potential to help rural households move away from subsistence to commercial production. These subsectors such as forest honey, mushroom (wild and cultivated), fish (capture and aquaculture – pond/cage), smallholder coffee (especially those being produced around the Nyika National Park), tree seed products (such as baobab powder and oil) and processed fruits (such as dried mangoes), among others, engaged large numbers of families in rural Malawi, who stood to gain from continued conservation of their natural resource assets and to lose from their destruction. COMPASS' implementation approach to increasing household revenue was based on promotion of small-scale commercialization, which successfully integrated smallholders in the NRBP value-chains and ensured communities gained from economies of scale and growth of the subsector. The commercialization approach also focused on enhancing smallholder capacity to participate more equitably while creating value for smallholders through commercial linkages established with private businesses. The increased wealth generated from sale and processing of these products is expected to lead to demand from rural households for conservation of their resources.

Results Module 3 required that project activities expand sales of natural products by identifying commodities that had not only the potential to increase household income, support sound natural resource management, but they had to also generate employment for rural households and members of surrounding communities. Accomplishment of these requirements under Results Module 3 called for implementation of three contract-specified tasks:

1. Enhance Market Access by Entrepreneurs, Households, and Community Groups that Produce Natural Products;
2. Identify Production and Harvesting Opportunities for New Natural Resource-Based Products to be Actively Exploited on a Sustainable Basis; and
3. Develop and Strengthen Partnerships Between Communities and the Private Sector.

The key performance indicator for this Results Module, and life-of-project target, was the “Total Revenue Households Receive from Participating in CBNRM activities.” The target for this indicator was originally established at **US\$ 750,000** earned by the end of the activity. However, due to significant progress accomplished during implementation, particularly during the latter half of the project, a Contract Modification approved in March 2008 raised the target upward to **US\$1 Million** earned by the end of COMPASS II. The project-end revenue result was **US\$1.87 Million**.

The following subsection details the three tasks supporting this module. It also presents some noteworthy progress attained during the life of the project, which are continuing to contribute to conserving biodiversity while sustaining economic growth.

TASK 3.1: ENHANCE MARKET ACCESS BY ENTREPRENEURS, HOUSEHOLDS, AND COMMUNITY GROUPS THAT PRODUCE NATURAL PRODUCTS

This first task aimed to identify viable natural products that could be supported to increase the marketability and sale of the products. Identifying national and regional market opportunities was central to the success of the module since it was clear at the outset that once smallholders learned the basics of production, processing, and marketing, managing supply would be critical. In Malawi, like elsewhere, smallholders tend to learn from demonstration, first producing little but once convinced, produce large

volumes of the same product at the same time. In small markets, such production practices often lead to suppressing price. Understanding local production patterns, COMPASS placed significant emphasis on market diversification and expansion, increased opportunities to expand market entry for entrepreneurs and producers, and also examined competitiveness of products to improve their productivity, production capacity and profits. All throughout the project, COMPASS followed a series of well-defined steps to encourage small-scale commercialization along several identified value-chains to strengthen the flow of products. COMPASS also worked directly with SMEs to help improve and strengthen their businesses and production/processing systems so that they were better able to withstand competition and were able to increasingly contribute to “market pull.” A series of well-defined steps, listed below, were followed consistently over the life of the project to encourage commercialization:

1. Identify existing or new natural products that have potential national and/or international market;
2. Provide increased firm-level technical, marketing and innovative financing support to Malawi's Small and Medium Enterprises (SME) so that they are better able to conduct the “market-pull” of products from the nation's rural supply-bases and transform those same products through better processing, packaging and marketing to meet market demand, domestically and internationally.
3. Continue to provide technical support to producers and processors in developing market linkage where necessary;
4. Continue to assist producers in organizing themselves into groups to improve market access, gain economies of scale and add value to their products;
5. Continue to increase producers' access to skills that will help them to increase their production volumes while improving quality;
6. Continue to promote products to encourage more producers, processors and buyers to enter the market;
7. Continue to facilitate innovative financing possibilities for production, processing, packaging, and marketing or for the development of new, untested products, input supply chains, or business services provision

Within this framework, COMPASS II was mandated to enhance market access through activities categorized along four sub-tasks:

- a. Identify Clusters and Complete Sub-Sector Analyses for Key Natural Products
- b. Organize National and Regional Natural Products Conferences
- c. Promote Sustainable Business Development Services
- d. Build Capacity for Monitoring and Sustainable Harvesting.

A fifth sub-task “Implement Small Grants Program” was later (in the beginning of FY 2006) combined with another sub-task “Explore and Promote Sustainable Financing Strategies” under Task 3.3.

Sub-task 3.1.1: Identify Clusters and Complete Sub-Sector Analyses for Key Natural Products

The objective of this sub-task was to identify viable natural products that could be supported to increase marketability and sales of the products, which would then contribute to increasing rural household income. In order to narrow down key natural products, COMPASS conducted various rapid market assessments and analyses to evaluate the profitability and potential of contributing significantly to natural resources conservation via expansion of livelihood options. By the end of the project, a total of 18 such analyses and assessments had been conducted, out of which 9 were subsector analyses focusing on: forest honey, wild mushroom, aquaculture, traditional-use plants, Ncheni (capture fisheries), baobab, guinea fowl, dried fruits and carbon credits through avoided deforestation. The subtask target was set at 8 subsector analyses.

In addition to subsector analyses, COMPASS carried out several product assessments and screening exercises covering such products as nature-based tourism, wildlife ranch products (e.g. crocodile and other meat species), *Jatropha*, *Artemisia*, *Uapaca Kirkiana*, Moringa oil, and bamboo among others. Screening consisted of market characterization by size, location (i.e., local, national, regional), dynamics, and likelihood of Malawian production gaining market share in a way that increased income of enough households to provide a critical mass of individuals with the financial incentive to conserve the resource base. While no targets were established for product assessments, COMPASS carried out 18 such assessments and product screenings.

Over the project period, COMPASS focused on developing and strengthening 8 high-potential subsectors using a value chain approach:

FOREST HONEY

In the honey sector, COMPASS focused on strengthening this value chain through support provided to not only beekeepers through regular beekeeping training, but also to processors to enable them to expand their processing capacity and increase “market pull.” The following key accomplishments directly support the enabling of sector growth:

- Establishment of Two (North & South) Modern, State-of-the-Art **Honey Processing Plants** ;
- Establishment of **Honey Sachet Production Facility** (Central) to Expand Market for Honey;
- Establishment of Honey Grades and Standards – **Honey Standard (DMS: 366)**;
- Product Segmentation -- **Fair Trade Honey Certification**;
- Market Expansion -- **EU Accreditation** Preparation required for Malawi to Export to the EU;
- Formalization and Registration of industry Association -- **Malawi Bee Products Association (MBPA)**;
- Establishment of the **Honey Business-Relationship Registry**;
- Development and Dissemination of **Malawi Gold Standard (MGS) Honey Production System** package of extension training materials.

At the production level, COMPASS provided technical training directly to beekeepers and also through MGS service providers (trainers of trainees) who were trained to serve as private extensionists in beekeeping. Many of these same beekeepers as well as service providers benefited from the MGS honey production system package of training materials. Training on business management and organizational development were also delivered in order to help strengthen community-based beekeeping enterprises. Over time, these enterprises took on the role of consolidators and market-link on behalf of the clubs and their beekeeper-members. By the end of the project, close to 60 such enterprises were actively working to increase honey production from close to 550 clubs to supply the major processors in Malawi.

During the life of the project, COMPASS also facilitated what the technical team referred to as “Relationship Honey.” This concept is based on a model which promoted alliances and collaboration between producers and buyers in order to support growth in production. As a result of COMPASS support, rural households benefited from such partnership models. COMPASS facilitated similar linkages between processors and these enterprises in order to reinforce the supply-base for the processors and strengthen markets for the beekeepers. These relationships were sealed with formal sales agreements signed by both processors and beekeeping enterprises. For example, a total of 550 sales agreements between processors and beekeeping clubs were in force at the end of COMPASS.

Furthermore, at the production level, processors pre-financed and distributed a total of 6,300 hives to beekeeping clubs, with participating households receiving 10 hives each. By the end of the project, 630 beekeeping households, who were directly supported with top-bar hive by processors, were beginning to produce reasonable volumes of honey. Of the 6,300 hives, 2,200 were facilitated through grants supported by COMPASS.

As a result of such business-to-business linkages, honey production (primarily forest honey) and sale was remarkably higher than in the past. Processors reportedly were able to absorb approximately 110 tons on average from beekeepers every year. For example, over a two year period, approximately **210 tons** of forest honey formally exchanged hands, from small-scale beekeepers to Malawi’s processors, who in the

past had complained about the lack of a consistent supply base. Furthermore, farm gate price for honey has also come down steadily, ranging from MK150 to MK250, down from MK350 and higher. Beekeepers on the other hand, have steadily increased their household income from expanded production and improved production practices.

To keep up with progress made in honey production, COMPASS provided grants to two processors to increase their processing capacity to enable them to further absorb the increased production. Mzuzu Coffee Planters Cooperative Union (MzCPCU) in the North and Nali Ltd in the South were selected to receive grants primarily consisting of modern state-of-the-art honey processing equipment imported from France. These equipments were installed and are operational, in Mzuzu and Limbe. With the added machinery, for example MzCPCU's capacity increased 600 fold, increasing their bottling capacity from the current 400 bottles per day to 2,880 bottles per 8 hour day, processing 1,440 kgs per day. If, for example, MzCPCU were to produce at capacity, it would require roughly 350 tons of honey per year. If both processors were to produce at capacity, the demand for honey from beekeepers would then be roughly 700 tons per year.

Malawi's domestic demand for honey rests roughly around 250 tons per year. While Malawi is yet to satisfy its internal demand, COMPASS worked with processors to help them look outward to further expand their sales in order to prevent prices and markets from slumping. For example, requests for Malawi honey from importers in Europe and the Middle East have been rising especially for **Fair Trade** and also conventional honey. However, given the inability of Malawi to supply the volume required, export sales of Fair Trade Honey have not yet been realized.

Furthermore, in order to export to the EU, Malawi needs to be formally accredited by the EU commission in Brussels. Foreseeing this need, in early FY2009, COMPASS worked with the Ministry of Agriculture and Food Security (Department of Animal Health and Livestock Development) to help them complete the obligatory technical documents required by the EU before accreditation can be concluded. However, while these technical documents have been completed (with support from COMPASS), the application for third country accreditation submission to the EU is not yet completed by the Ministry.

At the industry level, COMPASS worked closely with businesses at the firm level, encouraging them to work together and present a consistent voice and help move the industry forward. This resulted in the facilitation of their industry organization, the Malawi Bee Products Association (MBPA). The MBPA is now a formally registered industry organization mandated to serve as the voice of the industry and help expand and improve the sector. A total of 11 formal processors serve as members; the organization is being guided by a 5 member board of trustees. In addition to maintaining a list of processors and other industry partners such as packaging companies, bee-suit manufacturers, smoker makers, banks etc, the association also houses a registry of formal relationships established by its members with beekeeping enterprises and their respective clubs. The **Business-Relationship Registry** focuses on keeping a formal record of two instruments: (1) credit facilities in place between processor and beekeeping communities, and (2) sales agreements in force between processor and beekeeping communities. The establishment of a registry is to prevent future conflicts among members created by side-selling and side-buying from areas where someone else has made an investment.

At the behest of the Association, COMPASS assisted members of the MBPA and the Malawi Bureau of Standards (MBS) to refine and finalize the Nation's **Honey Standards (DMS: 366)**. The Honey Standards was in the process of becoming law for enforcement by the MBS.

CARBON CREDITS (REDD)

At the start of FY09, COMPASS carried out the 9th and final subsector analysis of the potential of benefiting from carbon credits made available especially through avoided deforestation and degradation (REDD). Recent developments and opportunities particularly related to deriving financial benefits from sale of carbon credits in the voluntary markets, required COMPASS to look into the bio-sequestration sector as a potential revenue source to reinforce the mechanism for safeguarding Malawi's Parks and Reserves.

While COMPASS had been promoting the expansion of such non-timber forest products (NTFP) as honey through formal establishment of apiaries in, for example, Nyika National Park and forest reserves, it was somehow felt that income from sale of NTFPs alone would not sufficiently contribute to

household income in such a way as to completely stall unsustainable practices. COMPASS was of the opinion that more income derived from these same resources (Park/Reserve) would assure their survival and sustainability, thereby helping prevent habitat loss and protect biodiversity. It was for that reason, to supplement income from the same resource base that COMPASS brought on board “green” credits as another natural product to further assure continuity of the income stream for rural households particularly those living on the periphery of Parks and Reserves. In addition to conducting a feasibility study and later a subsector analysis, support in the following key areas was also provided to help make revenue generation from sale of Carbon Credits a real possibility:

- **Carbon Stock Estimation** of Mkuwazi Forest Reserve & Thazima region of Nyika National Park
- Development and implementation of community based **Plan Vivo projects** with a total of 21 villages in Mkuwazi and Thazima/Nyika—**Plan Vivo Project Development Document (PDD)**;
- Development and finalization of resource management plan and Revenue Sharing Framework for sharing revenue earned from sale of REDD credits – **Mkuwazi Forest Reserve Co-Management Plan** and **Thazima Resource Use Agreement (RUA)**.
- Selection and training of local **Project coordinator** and technical support team – MEET, FRIM and LEAD-- to build capacity for monitoring and activities requiring quantification of potential carbon benefits.
- **Training** of a cadre of technical staff from FRIM and Students tied to LEAD to expand the base of trained members capable of conducting carbon stock assessments and Estimation
- Third Party **Validation Assessment** on Plan Vivo Projects in Mkuwazi and Thazima.

COMPASS viewed carbon credits earned from avoided deforestation vis-à-vis Malawi’s standing forests compelling, particularly the miombo woodlands’ ability to sequester carbon and credits convertible to revenue for rural households. Green credits as a natural resource-based product had the potential to generate income for those managing and living around such forests, while providing revenue source for government departments as well once a revenue-sharing frame-work was agreed and established.

Based on the promise it held, combined with the fact that deforestation/forest degradation is noted to be the cause of a fifth of man-made CO₂ emissions – second to power sector—an analysis of the subject area was considered to be well-worth the investment. The subsector analysis/ assessment carried out under this sub-task in FY08/09 determined the approximate stock and compensation derived from avoided deforestation and similar green credits sold in the voluntary markets. While not *the silver bullet*, this “product” nevertheless increased incentives for natural resource conservation in Malawi. Based on the carbon stock estimation study carried out in the two protected areas/pilot sites, it was determined that the amount of carbon benefits (emission reduction) that could be generated through avoided deforestation were substantial. For Mkuwazi Forest Reserve, the potential carbon benefits (after adjusting for leakage) derived from conservation was estimated around **99,404 tons**; for Thazima, a block within Nyika National Park, the estimated figure is about **357,977 tons**. The current value of carbon credits in the voluntary market ranges from \$5 to \$20 per ton. The table below summarizes the carbon stocks, possible emissions reductions, and potential (ex-post & ex-ante) benefits for the two pilot sites.

Table 16: Potential Carbon Benefits and Annual Ex-Post or Ex-Ante Payments for Emissions Reductions from Forest Conservation Activities in Mkuwazi Forest Reserve and the Thazima Region of Nyika National Park

	Mkuwazi	Thazima
Carbon stock of forested land (tC) ^a	188,195	875,061
Carbon stock of deforested land (tC) ^b	63,939	427,589
Potential carbon benefits of forest conservation (tC) ^c	99,404	357,977
Tradeable emissions reductions credits (tCO ₂ e) ^d	328,331	1,182,398
Annual ex-post payments for emissions reductions (USD) ^e	\$39,400	\$141,888
Annual ex-ante payments for emissions reductions (USD) ^f	\$197,000	\$709,438

^a Lower 95% confidence limit of estimated carbon stock

^b Assuming a carbon stock of deforested land equal to the upper 95% confidence limit of customary land in Thazima (18.46 tC), and a loss of 75% of forest area as even in the most severely threatened forest areas 100% deforestation is unlikely to occur

^c Assuming that project activities prevent 80% of deforestation

^d After converting tC to tonnes of carbon dioxide equivalent (tCO₂e), and removing 10% of credits as a risk buffer to insure against the permanence of emissions reductions

^e Assuming annual payments over a 50 year period at a carbon price of \$6 per tCO₂e

^f Assuming annual payments over a 10 year period at a carbon price of \$6 per tCO₂e

Source: COMPASS II Technical Report, November 2008.

At the close of FY08, COMPASS partnered with the Plan Vivo Foundation to help the two pilot communities develop and package their carbon credits for sale. Given COMPASS' own community based approach, the Plan Vivo system was utilized as the most appropriate system and protocol for the two communities. Plan Vivo is a system for planning and implementing community based sustainable energy projects, and the system provides the framework through which activities can be evaluated for their ability to offset carbon emissions. The Plan Vivo System is governed and overseen exclusively by the Plan Vivo Foundation, whose activities include registering and reviewing projects and issuing Plan Vivo Certificates, which can then be placed in the voluntary markets for sale. COMPASS II began working with Plan Vivo Foundation to help COMPASS move the two pilot sites to successful registration, enabling the communities to eventually sell the tradable emission reduction credits to potential buyers.

Being part of the Plan Vivo system required identifying and working with a local project coordinator, with administrative and technical capacity, to provide guidance on project management. The Malawi Environment Endowment Trust (MEET) and a technical team comprised of the Forest Research Institute of Malawi (FRIM) and Leadership for Environment and Development (LEAD), a local NGO, based in Chancellor College, together worked to help raise awareness about carbon credits, its benefits and forest conservation among members of the communities living in the two pilot sites. The team also trained communities and district government staff to enable them to understand not just what carbon credits are, but also to comprehend what the Plan Vivo system is and how they can work together to benefit from conservation efforts. Together, they designed and developed Plan Vivo Projects, which if managed properly, ensure sustainable utilization leading to conservation. COMPASS also offered training of trainers to technical staff from these institutions on such topics as carbon stock estimation, evaluation, and monitoring carbon stock. The technical training were provided to approximately 35 technical members in order to create a cadre of technical service providers to enable Malawi to conduct its own technical measurements of carbon stock, assessment and monitoring necessary for estimating carbon credits and potential emission reductions required by future buyers.

Prior to finalizing certification of the two pilot sites, MEET in partnership with district government officers and community members, developed several key formal documents that established a revenue sharing mechanism. In the case of Mkuwazi, a co-management plan signed and endorsed by the Director of the Department of Forestry was concluded in April 2009; a similar document referred to as the Resource Use Agreement was submitted by the Thazima group and endorsed by the Director of Parks and Wildlife. Both documents provide a legally binding mechanism to benefit from the resource-base while sharing the responsibility for management and conservation of the area.

By the end of the project, the two pilot communities and their carbon credits were successfully certified and placed on the web by the United Bank of Carbon (UBC). The *Scotland–Malawi Business Partnership* was scheduled to carry a story on these two communities in their monthly newsletter to highlight availability of carbon credits from Malawi.

AQUACULTURE

COMPASS contributions in the aquaculture sector span across not only technical assistance and training, but also in policy review/reform and technology transfer. In the policy area, COMPASS worked closely with the Department of Fisheries in their effort to review and revise several key policy documents that are central for the growth and development of the Fisheries sector, which includes aquaculture. The country's ***National Fisheries and Aquaculture Policy*** has not been amended since 2001, yet many key issues such as use of hormones (for sex conversion of tilapia into male); introduction of exotic species for commercial expansion; introduction of cage aquaculture in Malawi's waters at the smallholder level; and climate change were some that needed to be addressed. COMPASS assisted the Department address these issues, in conformity with applicable international as well as regional instruments (of which Malawi is part of), to provide a more comprehensive framework for priority setting by the Department. By the end of the project, the Policy review was complete, awaiting submission at the Ministerial level.

In addition to the 2001 National Fisheries Policy Review and amendment, COMPASS also supported the review and amendment of the following key policy implementation documents:

1. Fisheries Conservation and Management Regulations (2000), and
2. The Fisheries Act (1997).

Both amendments were finalized through consultations with all relevant stakeholders and ready for submission to the Parliament for approval during its November 2009 sitting.

While Malawi is blessed with large water bodies such as lakes and rivers, the country's fishermen remain one of the poorest in the nation. The approximately 7,000 ponds are mostly unproductive, and increasingly a large percentage of the roughly 45,000 fishermen travel farther and deeper into Lake Malawi to deliver sufficient catch. It was obvious that the sector had great promise but was fraught with various challenges, which were preventing growth of the sector. COMPASS provided assistance in the following key areas to unlock the constraints to help move the sector forward:

- **Cage Culture** introduction at the smallholder level;
- Cage Culture Expansion **Loan Scheme** Establishment with OIBM;
- Modern State-of-the-art **Hatchery Establishment** producing single-sex (male) tilapia fingerlings;
- **NAC Staff Training at a Commercial Hatchery in Thailand** on single-sex fingerling production, brood stock selection and management, and hatchery operation;
- Small-Scale **Cage Construction Training** using locally available materials to create a certified cadre of need-based service providers operating their cage making activity as a business;
- **MGS Pond Aquaculture Production System** package Endorsement by Government.

Fishermen who rely on capture fisheries throughout Malawi have seen a drastic decline in their catch of especially Chambo and related species in recent years. It seems most likely that too many fishermen and the unregulated use of illegal gear (itself a reaction by fishermen to declining incomes as fish stocks are depleted) are the main culprits. However, as the fishermen themselves point out, they are aware of this but see no other choice if they are to earn a living, knowing that stocks will continue to be depleted. To help address this challenge, COMPASS introduced the concept of cage aquaculture, the first ever at the smallholder level in Malawi.

COMPASS assistance was piloted in Nkhoswe District, with the introduction of cage culture technology suitable for the local environment, and relying on locally available resources. Fish Cages are floating impoundments, where fish are grown-out in nets until ready for sale. COMPASS introduced two types of cages. The first was a medium-scale cage imported from Zambia, which was launched on the open waters of Lake Malawi. However, the Zambian cage proved to be unsuccessful since it was unable to withstand the consistent high winds and frequent violent storms.

The second type of cage was designed for inland water bodies and made from locally available materials such as wood, bamboo and drums (required to keep the cage afloat). While the wood and nets were sourced locally, the drums were donated by Illovo Sugar (Dwangwa and Nchalo) as part of a community partnership program struck between Illovo and local fishing communities. COMPASS played an instrumental role in facilitating this business to community partnership, which is continuing even after project closure.

The second type has caught on with local fishing communities since they understand that the technology of cage fish farming is not so drastically different from what they are already used to. Instead of paddling out to fishing grounds or beach seining to capture wild fish, they grow fish in nets in the lake or rivers for harvest when they reach marketable size. They control fish size and improve quality. Harvest time can be predicted, which is attractive to buyers. The income derived from sale of cage-raised fish will eventually allow fishermen to reduce their wild catch effort, which in turn should, allow fish stocks to recover.

To support the growth of cage aquaculture, COMPASS also collaborated with the Department of Fisheries to conduct a fish cage construction workshop in order to create a cadre of cage builders to respond and profit from increased demand from fish farmers. As a result of this collaboration, 25 interested entrepreneurs (mostly fish farmers themselves with carpentry skills) from Lake Chikukutu, Unaka Lagoon, and Lake Malombe were trained in cage construction using locally sourced materials.

To date, 35 cages are in the water being managed in three communities in Nkhoswe. With financial support (loans) administered through the Opportunity International Bank of Malawi (OIBM), more fishermen have the option of taking part in cage aquaculture. In support of cage aquaculture, COMPASS

partnered with OIBM to establish a cage culture expansion revolving loan scheme. Under this scheme, a total of 150 small-scale fish farmers will be able to kick-start their cage culture business in Nkhosha district. While the cost of a cage is less than US\$180, the key factor slowing the growth of cage or even pond aquaculture has been the shortage of sufficient and affordable quality fingerlings.

The absence of good quality, mono-sex fingerlings in Malawi that is reasonably priced is the most critical challenge for fish-farmers deeply interested in making a living off of it. The few hatcheries in place in Malawi are not able to offer good quality fingerlings, nor do they have a system of ascertaining parentage or sex of fingerlings to assure fish-grow-out/business success. Observing the dire need for a modern, hatchery able to produce mono-sex (male) fingerlings, COMPASS worked with the National Aquaculture Center (NAC) to first, conduct a feasibility assessment of their current facility to operate a modern hatchery. Based on the assessment, COMPASS engaged a commercial hatchery and fingerling production farm (based in Thailand) to provide technical guidance to NAC to set up a modern hatchery.

To date, the hatchery at NAC in Domasi, designed to produce at least 1 million male tilapia fingerlings on a monthly basis, is now complete and operational. The hatchery is scheduled to produce its first commercial batch of fingerlings at the end of the winter months, which begins in October in Malawi. Single-sex (male) fingerlings should be available approximately 21 days after hatching and a little longer if buyers do not wish to invest in nurseries and therefore require larger sized fingerlings.

To ensure that the hatchery in Domasi is managed properly, three NAC technical staff members (plus one private farmer) were sent to Thailand to learn, hands-on, all about fingerling production and commercial hatchery management. While in Thailand, the participants also visited small-scale Thai cage fish-farmers so that their understanding of cage culture was further enhanced. The Department of Fisheries has assured COMPASS that these participants (the NAC Staff) will serve as the management team of the hatchery, responsible for operating the hatchery on a commercial basis.

The availability of quality, single-sex fingerlings should boost the aquaculture sector since male fingerlings have higher growth rates. Fast growth rate is important for a fish grow-out business since profits can be registered with increased turnover. Malawi currently has approximately 7,000 ponds languishing with dismal production record, while cage culture is only now gaining in speed. With the operationalization of the hatchery, cage culture as a commercial effort is poised to benefit multiple folds since each cage, on average, will require at least 1,000 fingerlings to be attractive and profitable, helping fish-farmers earn close to \$600 in gross margin per annum.

In pond aquaculture, the roughly 4,000 pond fish-farmers with close to 7,000 have been unable to neither meet nor benefit from Malawi's high demand for fresh fish. There are factors constraining growth, such as low yield and outdated practices leading to low production. COMPASS working in partnership with the Department of Fisheries, World Fish Center, developed the **Malawi Gold Standard (MGS) Aquaculture Production System**, which is a management system designed for small-scale commercial pond aquaculture. The MGS system was developed to facilitate a rapid growth of aquaculture, so that small-scale fish-farmers are enabled to fulfill market demand and benefit financially from the existing supply deficit in the market.

In July 2008, the Department of Fisheries formally endorsed the MGS Aquaculture Production system as the standard practice for small-scale aquaculture. The NAC, as the proud owner of the MGS system, is also responsible for ensuring that all those engaged in facilitating and promoting small-scale aquaculture development in Malawi are aware of the importance of adhering to the nation's standard.

WILD AND CULTIVATED MUSHROOMS

Mushrooms, particularly wild mushrooms, are highly favored by Malawians and viewed as a delicacy, when they become available right at the heels of the first rain. Since wild mushrooms are intrinsic in the national diet, it is high in demand. However, production or availability of wild mushrooms does not meet demand, particularly in light of the country's receding forests.

Malawi's wild mushroom subsector was dominated by two commercial processors, and a multitude of smallholders who "forage" the reserves and parks. Given the unwillingness of the two commercial operators (of which, one had filed for bankruptcy in South Africa in November 2008 and the second

company, based in Malawi, has become unstable) to engage in partnership with the communities, wild mushroom collection remains a subsistence source of income for many living in proximity to Malawi's forests. The absence of a reliable buyer/processor was a serious handicap in taking this value chain forward even though export markets were available and willing. At the end of the project, Chipunga Farms approached COMPASS with interest in working in this sector. In early 2009, Chipunga Farms had begun diversifying from his core business (organic coffee) into other food processing. Because of his interest in investing in this sector, COMPASS linked Chipunga Farms to a buyer in the UK, keen on importing at least one ton of dried porcini mushroom from Malawi. At the production end, COMPASS assisted Chipunga Farms by linking the business with communities around Chikangawa pine plantation, porcini mushrooms are found. A total of 15 mushroom collection clubs made up of 237 members were mobilized to gather wild mushroom, primarily porcini, for sale to Chipunga Farms.

At the domestic market front, local demand remains unmet. To address this shortage, COMPASS worked with local entrepreneurs to promote alternatives such as cultivated mushrooms production. Production of cultivated mushroom had the opportunity to "extend" the mushroom season and open additional income and employment generating opportunities for rural communities. However, in this sector too, a key constraint was the shortage of quality mushroom spawn. Toward this end, COMPASS partnered with ASNAPP (based in South Africa) to provide technical support to the Natural Resources College (NRC) to become the spawn-supplier of choice. In addition to spawn, COMPASS also provided technical assistance in the following areas to help improve livelihood options and increase food security:

- Establishment of a Modern **State-of-the-Art Laboratory** for spawn production;
- **5 New Varieties** of Mushroom Spawn Imported and Introduced within industry;
- Mushroom House Construction Training Provided;
- Spawn Distribution System Established;
- Experimentation and introduction of water-hyacinth as substrate for mushroom production
- Supported Formalization of industry Association – **National Mushroom Industry Association (NMIA)**

As mentioned, this sector too was plagued by a lack of good quality mushroom spawn. Without access to quality spawn, large numbers of mushroom producers, who generally tended to be smallholders, had been left to languish. This resulted in loss of an income source and contributed to increasing poverty. COMPASS worked with ASNAPP to equip NRC with a complete modern, state-of-the-art laboratory machines to establish a spawn production unit. The establishment of such a modern production unit has enabled NRC to offer consistently high quality mushroom spawn. As a result of this support, farmers are now able to access spawn to engage in mushroom production for sale in the local market. For example, twenty two (22) mushroom production clubs from Lilongwe and Mchinji, under the National Association of Small and Medium Entrepreneurs (NASME) signed spawn sales agreements with NRC. Through these sales contracts, NRC is expected to continue supplying these 22 clubs.

To give consumers wider options, COMPASS and ASNAPP worked further to introduce 4 new varieties of oyster mushrooms (pink, yellow, abalone and brown) and 1 variety of straw mushroom. Straw mushrooms are more heat-tolerant, fruiting in temperatures as high 40°Celsius. NRC and Mvumbwe research station were each provided with mother spawn of straw mushroom for multiplication and production.

COMPASS also worked with NRC to experiment with water-hyacinth as an alternative substrate for mushroom production, which typically utilizes maize stalks. Given that maize stalk is in high demand, often producers face a shortage of appropriate substrate. NRC results indicated that water-hyacinth actually make good, productive base to grow oyster mushrooms. However, NRC is yet to disseminate this very important information and know-how to communities at large.

Several communities, particularly those around forest reserves and national parks, in Nkhotakota and Mzuzu were assisted with construction of mushrooms houses using locally available materials. All mushroom houses were constructed with full community participation and contribution of local materials such as poles, reed, grass and material for substrate production. Approximately 200 men and women have now been trained in construction of mushroom houses. With proper care and successful colonization, each mushroom house can produce as much as 20 kgs per week over a two month period.

These same communities were also linked to commercial spawn suppliers, namely NRC and Eshar Farms in Mvumbwe, through their distribution network in order to ensure continuity and independence from donor support. At the marketing front, these same communities were linked to Lakeshore Lodges and boma markets. To support sales, COMPASS aired community radio jingles to raise awareness of the benefits of consuming oyster mushroom. As a result of this radio advertisement, 17 buyers showed interest and were linked to the producing communities.

At the industry level, COMPASS assisted members from the industry to formalize, register and launch their National Mushroom Industry Association (NMIA) to serve as the voice of their members.

SPECIALTY AND FAIR TRADE COFFEE

Approximately 3,500 smallholders through the Mzuzu Coffee Planters Cooperative Union (MZCPCU) – formerly Smallholder Coffee Farmers Trust – are engaged in producing about 450 tons of green beans per year. Many of these smallholders live in close proximity to the Nyika National Park, and a substantial number also live around the Vipya Forest Reserve. While about 15% of the smallholders earned around \$500 a year, a large proportion continue to remain poor, forcing them to depend on the Park and Reserve for survival. While COMPASS did not engage directly in the production or the agronomy side of coffee, the project believed that with 85% of the 3,500 coffee smallholders still making a living from around the National Park and forest reserves, it would be prudent to assist these smallholders in key strategic areas that helped boost income. As such, COMPASS worked with Mzuzu Coffee to help increase income gained through improved quality and expanded marketing. The premise underlying support provision for smallholder coffee was that with increased income, households living around national parks and reserves would exert less pressure on the natural resources, particularly through decreased poaching and destruction of habitat.

With that in mind, COMPASS continued to support MZCPCU and members of the Coffee Association of Malawi (CAMAL) in the following areas to improve coffee quality to boost coffee sales and eventually income:

- Product Differentiation through **Fair Trade Certification** of Smallholder Coffee
- Market Expansion and Improved Marketing – **Sale in the US** for the first time.
- Processing Enhancement – From Pulper to Roastery
- Cup Quality Improvement - **Cupping Program** Initiated
- Industry Association (CAMAL) Support

Recognizing the importance of increasing income for smallholder coffee producers, COMPASS worked with MzCPCU's management team to develop a strategy, which focused on delivering quality, differentiation, and competitiveness to expand sale and increase revenue. The strategy involved first pursuing the Fair Trade market segment within the Specialty coffee industry. Working closely with FloCert, the umbrella certifying body based in Germany, MZCPCU was able to successfully achieve the certification this year. With the **Fair Trade Certificate**, Malawi's coffee smallholders will now be able to successfully export Fair Trade certified coffee to the world at a better price. Successful certification carries the promise of further enhancing smallholder coffee producers' income and improving their standard of living.

COMPASS support to smallholder coffee sector also looked at a two-pronged approach. The first was to improve access to external markets and the second was to support the industry's interest in increasing domestic coffee consumption. In terms of expanding access to external markets, Mzuzu coffee in particular benefitted from market and buyer linkages support provided by COMPASS. For example in 2007-08, US buyers such as *Atlas coffee* and *Pete's Coffee* together bought close to 6 containers of Malawi coffee. Both buyers are now repeat customers. This year, as a result of the Fair Trade Certification, the London-based *D.R. Wakefield & Company Ltd.* has committed to purchase that genre of coffee from MzCPCU.

The importance of direct marketing, by coffee producers and processors themselves, cannot be over emphasized. To initiate this "learning through exposure" program, COMPASS supported the

participation of MzCPCU and CAMAL members in the SCAA Conference and Trade Show held annually. Given that neither MzCPCU nor CAMAL had ever participated in the SCAA conference before, their exposure to the event proved to be very educational and instructive since both indicated that they had learned a lot about not only marketing their coffee beans but also about how the industry works and what is important for growth of the sector within Malawi. The SCAA conference is the largest specialty conference in the world, and draws key buyers, roasters and brokers from around the globe.

In addition to smallholders, Malawi's coffee estates have also benefited from COMPASS supported training activities and also through participation in other coffee industry events. For example, participation in the EAFCA coffee conference provided the participants the opportunity to meet buyers, market Malawi coffee and also learn new ideas and gather up-to-date information on industry development that could be useful for Malawi. MZCPCU's participation in the 5th EAFCA coffee conference held in Uganda in February 2008, for example, assisted MzCPCU in identifying several new buyers. These buyers eventually contracted MzCPCU to deliver about 4 containers of smallholder coffee.

At the domestic front, information on coffee green beans processing, roasting, brewing and cupping were offered through CAMAL to all its members. Further, local coffee retailers, including a total of 14 coffee shops, hotels, and restaurant, for example, were invited to participate in COMPASS supported training events, where the retailers learned about proper roasting, brewing, packaging, and retailing in order to boost domestic coffee sales. They were also trained in such topics as marketing, information delivery, and improving coffee cup quality at the retail level.

In addition to training targeted at retailers, coffee quality improvement training courses were also provided to all 13 members of the Coffee Association. Cupping specialists were invited to Malawi to train CAMAL members on such important topics as cupping technique, coffee roasting, flavor exploration, and learning to establish cup profiles using SCAA standard protocols. Participants learned how to use sensory tools and sensory analysis, cupping protocols, process and procedures, to appreciate roasting variations and implement a quality controlled lab. The aim guiding the cupping quality improvement training was to promote Q-Cupping program in Malawi so that the country could be ready to promote its brand of specialty coffee in the near future.

COMPASS also worked directly with CAMAL until the end of the project providing technical as well as marketing support in order to further strengthen the organization. CAMAL received training and guidance from COMPASS on such topics as: how to better serve membership base; how to create value for its members. In the area of improving its service, COMPASS recently equipped CAMAL with a complete set of coffee testing and tasting equipment, which included a roaster, grinder and brewer so that the association would be better able to add value to its services. In addition, when COMPASS closed, the project provided CAMAL with complete sets of office furniture, including a desk top computer and a motor-cycle to enable the industry association become a better service organization.

DRIED/PROCESSED FRUITS

Aside from the above products, COMPASS also looked into the possibility of producing dried fruits such as dried mango in Malawi. While mango is not truly a wild fruit, the prolific propagation of the feral plant since colonial times makes it a widely available fruit during the season. Furthermore, the variety available around the Lakeshore areas, particularly around Nkhhotakota district, is surprisingly good given its large size, sweetness, and relatively fibreless quality--qualities good for producing dried mangos. Given that mangos were plentiful in communities where COMPASS was already working, adding another income stream (albeit seasonal) was viewed as being beneficial for the participating households. As such, COMPASS proceeded to support the development of this value-adding opportunity since there was market interest for dried mangos, and the potential to replicate the model was strong. With that in mind, COMPASS worked first with Chanterella Ltd (the buyer of dried mangos) and then procured voluntary technical support from Bestobell (an alternative energy company based in Blantyre) to establish the mango drying production system. COMPASS provided support to one pilot community, Tongole (near the Nkhhotakota Wildlife Reserve) in the following areas to help improve community household income:

- Buyer Linkage for Dried Fruits (Mangos) first with *Chanterella Ltd* and then with *Chipunga Farms*;
- Establishment of the First Solar Dryer for drying fruits, including Mangos and also mushrooms;

- Training on Dried Fruit (Mango) production/processing and storage;
- Training on Construction of the Dryer;
- Training on Business Management of the Dried Fruit/Mango Enterprise.

With technical and organizational support from COMPASS, and working in partnership with the Buyer, Tongole, one of the communities bordering the Nkhotakota Wildlife Reserve, was able to successfully pilot its first sale of dried mangos in FY07/08. The Dried Fruit Enterprise in Tongole is managed by a group of 15 women and men from 6 clubs. The trial batch of 40 Kgs was sold for approximately MK350 to MK600 per kg. In FY 09, the same group, having learned the art of managing a solar-powered dryer to produce dried mangos, successfully managed to dry 70 Kgs for sale, which were all bought locally by various buyers and Chipunga Farms. While the Tongole community was able to almost double their production of dried mangos, they faced two key challenges in FY09, which prevented the producers from making the most of this new technology. First, technical problems related to the solar dryer delayed a timely start of the activity in FY09, and secondly, the 2008/09 mango season started early catching many by surprise. With regards to the technical problem, help from a local alternative energy company (Bestobell) made it possible to operate the solar panel and operate the drying house. Toward the end of the mango season, the dryer was running efficiently and effectively. So much so that other development organizations such as *Total Land Care* (TLC) have now replicated the dryer with slight modification to produce dried fruits and mushrooms.

Even though the mango season is a short one in Malawi, the advantage of the solar dryer was that it could be used for drying other products fairly cost-effectively. Another product targeted by the community was oyster mushrooms, which they have been producing for the local market. The community is planning to use any excess mushroom production in order to maximize the dryer's use and save fresh mushrooms from wastage. A small trial/demonstration for mushroom drying was also conducted by COMPASS in cooperation with the Tongole Mushroom Club. While the production of dried products such as mangos and mushroom still remains marginal, the opportunity to gain from its growth remains fairly large for smallholders particularly given their proximity to source.

BAOBAB FRUIT POWDER

The rise in demand internationally for indigenous and natural fruit flavors and extracts combined with biodiversity conservation interest resulted in COMPASS providing support to a local company, Tree Crops, in its effort to commercialize the Baobab fruit and its related by-products. Demand for Baobab products is in the vicinity of roughly \$900 million worldwide per Phytotrade, the regional industry organization headquartered in Zimbabwe. Support for this subsector, through Tree Crops, was provided in order to firmly establish a "market pull" for baobab so that smallholders could gain from trade. Traditionally, baobab fruits are collected by smallholders from trees growing on personal or customary land. The fruits are then sold for a pittance to roving traders. Prior to Tree Crops interest in formal collection and trade, baobab fruits were traded informally. In this sector, support was through:

- Establishment of a Complete Baobab Powder Manufacturing Equipment to increase throughput
- Buyer Linkages for Baobab products

With Tree Crops entry into the marketplace, strengthened by support from COMPASS in the form of a complete set of machinery/equipment to produce quality baobab powder, trade in baobab is slowly shifting to the formal sector. COMPASS also assisted Tree Crops by linking the company to various buyers in the flavors/additive industry. However, given Tree Crops' link with Phytotrade vis-à-vis baobab products, active product promotion was pursued by the trade organization. Tree Crops works directly with communities in several districts in Malawi through a network of trained buyers. These trained buyers then collect the fruits in centralized locations from about 175 households belonging to 5 villages.

In addition to purchasing the fruits through registered traders, from verified communities, Tree Crops is also paying attention to such issues as the environment, and socially responsible practices vis-à-vis fair trade. In terms of environmental issues, baobabs are not yet endangered in Malawi but Tree Crops nevertheless has prepared a sustainable plan for propagation and planting new trees. In terms of socially

responsible practices, Tree Crops continues to work with local organizations such as Village Hands to train farmers on how to collect the fruits, how to comply with international organic production standards, and how to become a part of the supply network that embodies the spirit of sharing, to create a better world through trade.

As of project-end, Tree Crops had purchased a total of 80 tons of baobab from local communities to produce baobab powder, baobab fiber (which is reportedly high in anti-oxidants), and baobab oil. Total export sales recorded was approximately US\$35,000. Export markets for Malawi's baobab products to date have been South Africa, United Kingdom, Zimbabwe, and Italy; prospects to expand sales into France and Germany look strong.

DRIP IRRIGATION AND AGRO-FORESTRY HOME GARDENS (FIELD TRIALS USING DRIP IRRIGATION TECHNOLOGY)

As the assessment of the traditional-use plant products sector work commenced, it became clear early on in the assignment of the potential opportunity to produce a wide range of these plants in backyard home gardens. Drawing on DAI's successful experience with similar kinds of gardens using drip irrigation technology elsewhere in Africa, a program was initiated to test the applicability of the technology to rural communities in Malawi. DAI's success with drip irrigation especially in Zimbabwe and Ethiopia targeting HIV/AIDS-affected households to engage in urban home gardens became successful primarily because it was accessible and appropriate for nearly all segments of society due to: low capital requirements, low labor requirements, and high value production. In Malawi, because of the HIV/AIDS cross-cutting theme, COMPASS looked at finding profitable enterprise options appropriate for those affected by the pandemic. The Agro-Forestry Home Garden drip irrigation program was introduced to help increase household income and improve food security of vulnerable or HIV/AIDS affected households through engagement in production of horticultural crops and green maize. A total of 1,000 households received support through five NGO partners (NASFAM, SCF (USA), FHI, TLC and GOAL Malawi), who promoted the drip irrigation program across 13 districts of the country. In addition, COMPASS provided the following support channeled through its implementation partners to contribute to the expansion and growth of this cluster:

- Distribution of 1,000 Drip Irrigation Kits to 1,000 participating vulnerable households through the five NGO partners.
- Technical training on drip irrigation technology provided to 1,000 participating households interested in growing horticultural crops on a minimum land-holding size of 100m²
- Establishment of Field-Trials and On-Farm Demonstration Plots to further educate participants and interested community members.
- Development of the Agro-Forestry Home Garden Drip Irrigation Extension Manual.
- Support provided to Implementing Partners to promote low-cost soil fertility improvement.
- Identified Local drip irrigation equipment suppliers and one potential manufacturer to facilitate linkage of potential customers to service providers and ensure ongoing expansion of the technology beyond the first 1,000 participants.

COMPASS' collaboration with the five NGO partners was based on the recognition that all five partners were already on the ground in all the 13 districts, providing social, health, or economic services to the targeted population. Furthermore, all five organizations had the necessary skills and resources to implement the program, ranging from selection of the beneficiaries to their training. The organizations were also fully on board with regards to carrying out on-going extension technical support, and providing first-line monitoring and evaluations of the trials that needed to be conducted. In addition to implementing partners, COMPASS also engaged two local drip irrigation equipment suppliers (Variety Irrigation Center and Pipeco) and manufacturer (Pipeco) in the promotion of the technology since early impact assessment revealed that there were high potential for adoption and commercialization of the irrigation kits within the smallholder sector, especially for the production of green maize and horticultural crops.

Overall, enthusiasm amongst the 1,000 households was high given that the participants were able to understand the positive income impact, the technology could have on their individual households. The

first impact assessment also revealed that subsistence farmers were indeed able to increase income when utilizing this technology as they were able to grow vegetables with high local demand. Furthermore, many of the farmers who traditionally produced maize and vegetables under bucket, flood, or treadle pumps were most enthusiastic about the drip irrigation technology given that it was easy and simple to use. The most common crops that were grown during drip irrigation system trial were maize, tomatoes, onion, cabbages, mustard, Chinese cabbage, pumpkin leaves, beans and to a lesser extent amaranths and Irish potatoes. The trials showed that a 100 square meter drip kit with access to reliable water source and some gardening experience had the possibility of making money for smallholders engaged in this activity.

To reinforce uptake of the drip irrigation by interested partners, COMPASS initiated commercial development of the technology through the two local drip irrigation suppliers: Variety Irrigation Centre based in Lilongwe and Pipeco based in Blantyre, who was also a manufacturer. Requests and enquires on drip irrigation to the COMPASS office by interested partners were channeled to these two suppliers so that they could pick up on the demand for kits and services.

To increase general awareness of drip irrigation technology and support its expansion, COMPASS worked with its implementing partners to conduct field days and on-farm demonstrations. A notable event was the one conducted in partnership with NASFAM in Mchinji where a full demonstration was carried out. The event attracted not only beneficiary farmers and the two suppliers, but also other interested individuals keen on being part of the growth to increase their income base. In fact, already there were other commercial suppliers that had taken up the distribution of the drip kits through linkages established with the manufacturers.

Other approaches to transferring knowledge and technology were also supported by COMPASS. Appropriate extension training materials such as a manual, and information sheets were also produced to support expansion of the program. Suppliers and manufacturers were further encouraged to support the growth of the sector by attempting to keep cost of the kits as low as possible for the sake of affordability. Micro drip irrigation, despite its effectiveness in producing higher yields and high value crops of good quality, has until recently been inaccessible to poor, rural smallholder farmers, primarily because of the high initial investment required. In Malawi, availability had also been an issue. It is COMPASS' hope that with the successful introduction of this "new" technology in small-scale horticultural production, smallholders will be able to take advantage of the increasing demand for horticultural crops and off-season vegetables to improve their livelihood options. Commercialized micro drip technology at smallholder level has real potential of evolving into a full-fledged livelihood activity through growing of high value horticulture crops, especially if the smallholders continue to focus on producing high value quick turnaround cash crops to achieve more than one cycle per year, and meet market quality, quantity and variety in a timely manner.

Sub-task 3.1.2: Organize National and Regional Natural Products Conferences

The purpose of this sub-task was to help raise the profile of natural products and promote its commercialization through events that increased awareness and marketability of natural products. National and regional trade fairs and conferences are useful tools for promoting natural resources based products (NRBPs) as well, particularly for Malawi NRBPs given that the sector is still in the early development stages. Natural resources based trade shows, exhibitions, conferences and meetings are forums where various actors directly or indirectly related to natural resource based enterprises meet and interact. They help create and increase awareness about where the products exist, where the markets are and what the requirements are for increasing competitiveness. These meetings also help to establish relationships by linking not only producers and processors, but also other important players that have an influential and critical role in safeguarding the natural resources sector and moving it forward.

The level of NRBP commercialization continues to be low or young in Malawi. As such, it was more important to attract producers, processors, input suppliers, and others in the value chains to increase commercial interest and demand by organizing events at local levels, where they could begin to make the business linkages required for sector growth. Several of these localized trade shows and fairs focusing on natural products were supported by COMPASS to help expose rural areas to new production as well as to

raise awareness about marketing possibilities. Such national (limited) events held all throughout the life of the project focused on honey, specialty coffee, mushroom, aquaculture, traditional-use plants, carbon credits as well as Agro-Forestry Home Garden Drip irrigation (study tour). COMPASS also partnered with the EU Funded IFMSLP to conduct a fair for forest based enterprises in Blantyre. Market linkages meetings were also held for Malawi businesses with invited international buyers, such as the US based *International Market Systems*, *Talier Trading Group*, and *Atlas Coffee* (for coffee producers).

COMPASS also strongly supported the participation of NRBE industry players in similar events organized by others in Malawi and internationally. For example, for international events, COMPASS supported the coffee industry's participation in the SCAA conventions held annually in the US. The Dubai Food Show in February 2008 was a key event as well, since it was first time ever that Malawi had participated in the international event. The success achieved at the 2008 Gulfood Show boosted the confidence of Nali Ltd, Mulli Brothers and Satemwa Tea and Coffee Estate, since they together scored close to 300 serious orders and deals worth US\$50 million. Furthermore, the experience gained from participation in the Dubai event has motivated many businesses, including Mulli Brothers, who participated in the 2009 Dubai Show as well to market Malawi's products. They report success in further identifying buyers and increasing their understanding of market dynamics in the Middle East. In the coffee sector, the 5th EAFCA conference held in Uganda helped Mzuzu Coffee sell 7 containers of coffee green beans as a result of the business linkages and connections made at the conference.

In the area of wildlife and national parks, COMPASS worked closely with the Department of Parks and Wildlife to host a regional conference/roundtable meeting on Collaborative Management of Protected Areas in order to seek the best possible strategy to safeguard Malawi's biodiversity. Based on the experience of participants working with communities close to protected area boundaries in Malawi and drawing on expertise from outside Malawi, the objective of the roundtable was to seek consensus on the strategies that DNPW should take to optimize the benefits – to people and to wildlife – from collaborative management of the biodiversity and natural products within. This regional level meeting brought together private sector as well as public sector participants from Malawi and its neighbors-- Zambia, Zimbabwe and Tanzania; Namibia was invited as well, however due to their own constraints they were unable to participate in the conference.

The target of this subtask was to organize 1 national and regional level conference to help promote Malawi's Natural Products Competitiveness and contribute to establish business relationships between the private sector and community groups, entrepreneurs and households that produce natural products. COMPASS II organized 1 regional level conference and multiple national level events to contribute toward the achievement of this sub-task.

Sub-task 3.1.3: Promote Sustainable Business Development Services

It is common knowledge that government funded extension services is virtually non-existent, especially in the natural resources sector in Malawi. At one point, the country's extension service providers used to be the source of training, new knowledge and/or technology for those living in rural parts of the country. However, with such government services now non-existent and with sporadic assistance provided by NGOs and donors, those engaged in natural resources based enterprises in Malawi were virtually left to fend for themselves. A lack of investment in the area, over time, led to constraining growth of the sector, despite strong demand for some natural resources based products. Honey is a case in point for Malawi.

Given that natural resources-based enterprises were not expanding and markets were distant, those engaged in the enterprises continued to demonstrate a lack confidence in their ability to pay for reliable business development service providers. Consequently, market dynamics played its hand vis-à-vis business development services, in that those who wanted to provide business development services for a fee failed or were employed by donor projects and other similar initiatives to provide the services. In the case of honey, prior to COMPASS II, there were no legitimate private sector business development service providers in Malawi.

In an effort to change this trend, COMPASS first worked on unblocking the constraints that hindered the growth of the honey sector, provided support to not only beekeepers through their clubs and

associations, but also through linkages established between beekeepers and honey processors to revive a direct link between buyer and seller. COMPASS II's work with the value chain players to get the product to market assisted in ensuring that honey flowed out of the forests to the consumers. This approach helped bring the market closer to the beekeepers, many of whom live in remote areas of the country. Over the years, with repeated sales of honey taking place, beekeepers have become more confident in their ability to pay for services that improve their prospects for more profits. Simultaneously, COMPASS began training a cadre of specialized trainers in beekeeping to provide private extension services for a fee.

By the end of the project, COMPASS had developed and disseminated hundreds of copies of the comprehensive set of Malawi Gold Standard (MGS) handbook on beekeeping and trained a team of 152 MGS service providers in beekeeping. The MGS trainers or private beekeeping extension service providers operate their service delivery as a business. Of the 152, approximately 25 are relatively successful, making a reasonable income from training rural community members to engage in beekeeping; about 5 are highly successful and are in constant demand for their services. MGS service providers in beekeeping train a group of 15 or 20 individuals in not only beekeeping, but they also impart business advice, link them to manufacturers of beehives and other equipment, mentor them, provide them additional information, and link them to markets and processors as well. Some served as buyers as well.

Along the same lines, COMPASS II also developed the MGS Production System for Pond Aquaculture. While COMPASS did not train a cadre of MGS Aquaculture development service providers like it did for the honey sector, efforts were made to identify various organizations, institutions, and private individuals who would be interested and readily accessible to various fish-farmers and groups across the regions. In the aquaculture sector, COMPASS II also worked with the National Aquaculture Center (NAC), a government managed institution to strengthen its capacity to better serve its customers and become the center of learning in Malawi. With the installation of a modern, state-of-the-art hatchery based in Domasi, NAC will be able to provide better services to its clients/fish-farmers by offering them high quality fingerlings at competitively priced rate. In addition to the hatchery, NAC was supported in sharpening its technical skills, which it intends to transfer to other staff members and new recruits, so that knowledge and skill continue to be shared with the fish-farmers in Malawi in order to help them further improve the performance of their business: Fish farming.

Another sector where COMPASS was instrumental in introducing the concept of BDS was in the area of carbon credit measurement. Working in partnership with the Department of Forestry (DOF), the Forest Research Institute of Malawi (FRIM) and Leadership for Environment and Development (LEAD), COMPASS organized training for a group of individuals with background in either forestry or environment and interest in carbon credits. Training focused on building a cadre of service providers so that those communities and organizations interested in moving into carbon credits are able to call upon these service providers to conduct carbon stock estimation, assessment and the necessary monitoring. By the end of the project, a total of about 35 individuals were trained in carbon credit technical assessment and monitoring. Many of trainees were either from FRIM, DOF, or LEAD. Some of them have already provided their services to communities through the Malawi Environment Endowment Trust (MEET).

In the COMPASS II Performance Monitoring Plan, the target for this sub-task was to “develop sustainable mechanisms for providing basic business development and financial management training to entrepreneurs and local user groups” through “identifying a sustainable source of competent technical assistance which could be provided by strategic partners in the value chain (through embedded services), approved [accredited] business service providers, local government extension staff, and NGOs.”

The numeric target of this subtask was to enable at least 500 NRBEs to market products through use of business development services (BDS). COMPASS facilitated 612 sales agreements between processors & clubs/enterprises in the honey sector alone. Many of these beekeeping clubs utilized training services of the MGS service providers.

Sub-task 3.1.4: Implement Small Grants Program (This Subtask was combined with 3.3.2 in 2006)

This sub-task was combined with sub-task 3.3.2: “Explore and Promote Sustainable Financing Strategies” in 2006, to reflect both that sustainability guided the process of designing the financial risk-reduction

products provided through the Natural Resource-Based Products Enterprise Fund, and that existing and new products are equally encouraged. Please see Sub-task 3.3.2 below.

Sub-task 3.1.5: Build Capacity for Monitoring and Sustainable Harvesting

Resource sustainability is an important issue for any NRBP involving consumptive utilization of natural resource. Both from a conservation perspective and a business perspective, unsustainable resource utilization must be avoided. This sub-task contributes to the community-level monitoring undertaken during adaptive implementation of natural resource management agreements, with specific focus on the resource harvest rates where applicable under an Agreement.

Information on harvesting and production levels and their variation from season to season is essential for both producers and for agencies tasked with regulating harvest. Producers need to know their production levels as a pre-requisite for a successful business. They need to be able to monitor changes in production volume to adapt their management regime to optimize profitability. Likewise, regulatory authorities need to be able to monitor harvest levels to ensure that off-take remains sustainable.

A three-tiered “pyramid” of monitoring efforts was used throughout implementation, consisting of the following levels:

1. “Top of the pyramid” landscape-scale monitoring of ecosystem health or natural resource condition;
2. Middle- or Program-level monitoring of progress toward the various targets listed throughout this Annual Work Plan, and
3. “Bottom of the pyramid” community-level participatory monitoring as part of the adaptive management plans that are the basis for natural resource management agreements (see 1.1.3).

Over the life of the project, COMPASS invested in developing capacity among the sector agencies and district government to determine sustainable harvest rates, based on the reproductive capacity of a given resource. Progress continues to slow, given the extremely low base of knowledge among technical personnel, and absence of any incentive for regular monitoring of growth rates by government agencies. The monitoring burden therefore shifted to the groups of resource users and producers so they could verify to the government improved resource conditions.

As part of its efforts to encourage participatory monitoring and evaluation for adaptive management, COMPASS provided guidance to producer groups and associations on methodologies for monitoring production levels in relation to sustainable off-take levels and resource condition.

In October 2006, USAID/Malawi provided further impetus to fully implementing the tiered monitoring and evaluation structure. Beginning in 2007, the COMPASS II team was required to report on the changes in biophysical condition being experienced on hectares that are under improved natural resource management, and on hectares of biological significance which are under improved management.

Therefore, in 2008 and 2009, COMPASS continued to work with the fisheries, forestry, wildlife, and environment sectors to support improvements to their monitoring systems, including district-level databases of customary forestland management agreements, participatory fisheries management areas under agreements, collaborative management areas in and around national protected areas see sub-task 1.2.3). Activities that contributed to the sub-task included for example, facilitation of knowledge sharing, by engaging ENCAP to conduct training on environmentally-sound design of enterprises; training was also offered on utilization of a simple classification system for condition of miombo woodlands and forests, as identified in the Standards & Guidelines for Participatory Forest Management, followed by development of appropriate tools for field staff and community managers to estimate the reproductive capacity of the woodland, so that sustainable rates of harvest could be calculated. COMPASS also supported USAID/Malawi in building implementing partners’ capacity to understand and apply Regulation 216 guidelines on environmental review of development activities, and to gather data required for reporting on the environmental portions of the Foreign Assistance Act, especially FAA 118 and 119 (covering tropical forests and biodiversity, respectively). For COMPASS-sponsored enterprises, the Environmentally Sustainable Harvest and Use Review (ESHUR) procedure was updated and applied to enterprises receiving direct support through the Enterprise Fund. In addition to conducting an ESHUR review prior to making any natural resources-based enterprise Fund investments that involved

consumptive utilization of natural resources, COMPASS II worked with appropriate local institutions to compile and disseminate existing knowledge and test methods for developing systems for monitoring sustainable harvesting.

COMPASS also developed an integrated spatial planning framework built on the Development Pathways mapping conducted in September/October 2004, to include suitability classification of landscapes to guide enterprise development efforts toward those areas within the target districts where the critical factors for success showed the highest probability of resulting in profitable production systems (see *CBNRM Occasional Paper #1*).

In order to report on changes in biophysical condition at village and landscape scales, reliable baseline information is needed. Up until now, WESM has been conducting regular annual game counts of wildlife—including birds—in many of the national parks and reserves, but little reliable information is available about populations of wildlife outside of these areas. The Dept. of Forestry had little information on the quality of forests within its forest reserves and little was known about forests on customary land.

Water resource monitoring is expected to be one result of the Mulanje Mountain Community-Watershed Partnership Project co-financed by a USAID/Washington GDA with the Coca-Cola Company, USAID/Malawi (through COMPASS II), Southern Bottlers Ltd. (local Coca-Cola bottler), and a range of local organizations in Mulanje. Water is widely viewed as perhaps the most important environmental service and resource provided by the Mt. Mulanje eco-system and one of the reasons for the specific focus on TA Laston Njema for the MCWPP project.

In the COMPASS II Performance Monitoring Plan, the contract target for this sub-task was to “work with producer organizations to ensure that a strategy for building capacity for sustainable production and harvest techniques is incorporated into each organization’s business development plan,” which translated to making the revised ESHUR Guidelines available to producers in 15 districts.

Table 17: Summary of Targets and Achievements by Sub-Task – Task 3.1

Sub-task	Achievements	Target
3.1.1: Identify Clusters and Complete Subsector Analyses for Key Natural Products	<ul style="list-style-type: none"> • A total of 9 Subsector Analyses were completed for: <ul style="list-style-type: none"> - Honey - Mushrooms - Ncheni (capture fish) - Traditional-use plants - REDD Carbon Credits from Avoided Deforestation - Aquaculture - Guinea Fowl - Processed Foods - Baobab 	8 Subsector Analyses Conducted
3.1.2: Organize National and regional Natural Products Conferences	<ul style="list-style-type: none"> • 3 National and 1 Regional meeting were organized: <ul style="list-style-type: none"> - 1 National Meeting on Carbon Credit - 1 National Meeting on Honey Quality Management - 1 National Meeting on Coffee Roasting, Brewing, and Retailing - 1 Regional Roundtable/Conference on Safeguarding natural resources/biodiversity 	1 National Level Conference Organized
3.1.3: Promote Sustainable Business Development Services	<ul style="list-style-type: none"> • 152 Beekeeping Extension Service Providers Trained • 4 Trainer of Trainees trained in fingerling production and hatchery management • Established the NAC Hatchery to offer better services to fish-farmers by meeting their most critical need: single-sex, high quality fingerlings and technical support • 35 carbon credit technical assessment and monitoring specialists Trained; 27 local community members also trained to serve as field assistants. • More than 612 NRBEs (mainly clubs) enabled through use of BDS, particularly in the honey sector. 	500 NRBEs Enabled to Market Products through Use of BDS
3.1.4: Implement Small Grants Program (This Subtask was combined with 3.3.2 in 2006)	<ul style="list-style-type: none"> • [See Task 3.3.2 Below] 	[See Task 3.3.2 Below]
3.1.5: Build Capacity for Monitoring and Sustainable Harvesting	<ul style="list-style-type: none"> • Over 100 producer associations/clubs informed and trained on sustainable harvesting in 15 districts; a strategic monitoring plan elaborated. And ESHUR made a part of every enterprise using NRBE Funds. 	Make Revised ESHUR Guidelines Available to producers in 15 districts

TASK 3.2: IDENTIFY PRODUCTION AND HARVESTING OPPORTUNITIES FOR NEW NATURAL RESOURCE-BASED PRODUCTS AND ACTIVELY EXPLOIT ON A SUSTAINABLE BASIS

The purpose of this task was to encourage expansion of a range of natural resource-based products on the markets in Malawi and externally. Several tactics were used to accomplish the expansion of the natural resource-based product lines. While Malawi is blessed with unique natural resources and products therein, marketable product development, taking “potential” products to market, and successfully commercializing these “unique” products would have taken time and resources above the ceiling of the project, both in terms of time and funds. Instead, COMPASS evaluated those products that had the potential to meet market demand in terms of accessible volume, which meant one assessed the supply base, quality of products, and quality of actors within the many existing but fragmented value chains to determine where constraints could be unlocked and assistance could be provided to improve value chain efficiency and successfully exploit on a sustainable and commercial basis. Another tactic COMPASS utilized was the specific parts of the Enterprise Fund design that targeted new products for pre-commercial refinement of the product or better definition of its market (e.g., through a feasibility analysis) or pilot commercialization for a product that was ready to be tested in the marketplace. These co-financing windows were widely advertised throughout eastern and southern Africa, to solicit ideas and investments from within Malawi and neighboring countries. This is covered in more detail under sub-task 3.3.3 below.

Four sub-tasks contributed to accomplishing this task:

- a. Provide Technical Assistance in Performing Natural Products Inventories and Train Local Service Providers in Inventory Techniques.
- b. Provide Market Analysis and Other Information to Entrepreneurs and Associations
- c. Create and Support Producer Associations
- d. Establish Standards and Quality Control Procedures.

Sub-task 3.2.1: Provide Technical Assistance in Performing Natural Products Inventories and Train Local Service Providers on Inventory Techniques

The objective of this sub-task was to help identify products and their quantities within the targeted districts that could be exploited for commercial purposes on a sustainable basis, while building local capacity on the conduct of inventories. Because the focus on this task and related sub-tasks was on new natural resource-based products, well-established products such as fish, fruits, wild mushrooms, and most wood products were not inventoried under this sub-task. The expectation was that NRB enterprises already involved in producing these products had the capability to assess localized resource bases. However, COMPASS was asked over the years to strengthen and update their capacities in inventory methodologies or analytical monitoring techniques. The Department of Fisheries and Tree Crops Ltd (representing the private sector) are examples of entities that utilized the skills in inventory techniques learned through COMPASS. For example, Tree Crops limited utilized the technique to inventory other natural products they were pursuing.

The COMPASS approach was to first screen potential natural products with robust market demand, before initiating an inventory to determine if sufficient production base existed to contribute to growth of the subsector. In each case, the screening process was conducted early on so that COMPASS was not expending resources to carry out an inventory of products that had little or no defined end market potential. This procedure of working both downstream from the product to the market and upstream from the market to the product worked very well, for example, during 2005 for rapid screening of the more than 600 possible species of traditional-use plants. Another example was the special *Phunga* (*Aeschynomene origofera*) honey, which is available only in the Nyika Plateau and being produced by mainly communities living around the periphery of the Nyika National Park.

COMPASS was involved in assessment of the prevalence and distribution of *Phunga* (*Aeschynomene origofera*) in Nyika National Park when one of the major players (Mzuzu Coffee) in the honey processing industry showed interest in having a *monofloral* brand of honey that is associated with this bee pasture. *Phunga* is a plant that quickly establishes as the rains start and which is in flower when most other pastures in the vicinity are still in the pre-flowering stage. This feature was good for labeling purposes since it assured monofloral-ness of the *Phunga* honey. With COMPASS support, the processor was able to access the national park through local beekeeping clubs living around the park, and at the same time, COMPASS also assisted them to assess the potential of the area for production of honey in large enough volumes to

justify having a brand for the area's honey. Once the inventory was undertaken, it was determined that the area under Phunga bee pasture was about 100-150 Km². And, since many of these same beekeepers were also members of Mzuzu Coffee, it meant that the honey from the Nyika Plateau could also be Fair Trade certified. Mzuzu Coffee members who were also beekeepers successfully achieved their Fair Trade Status for honey in May 2009, as a result of COMPASS II support.

Also under the Mt. Mulanje CWPP or Coca-Cola-USAID GDA, technical assistance was provided in T/A Laston Njema in Mulanje district on conducting water inventories in conjunction with district water authorities and local leaders. The local partner, Mount Mulanje Conservation Trust (MMCT) staff were also trained in the inventory methodology. Another example that meets the sub-task requirement is COMPASS' carbon credit (REDD) work. As already elaborated under task 3.1 COMPASS in collaboration with the Department of Forestry and the communities carried out Carbon Stock estimation and inventory assessments in two pilot sites in Malawi: Mkuwazi Forest Reserve and Thazima region of the Nyika National Park. As part of this assessment, 35 professionals were trained in estimation and inventory assessment techniques; another 27 community members were trained to assist these professionals. For detail results in terms of carbon stock of forested and deforested land in Thazima and Mkuwazi, please see Table 15 above.

In the COMPASS II Performance Monitoring Plan, the performance indicator for this sub-task was that 7 natural products inventories are conducted in the 15 target districts, and that local service providers (private extensionists, local government personnel, or NGOs) trained through joint conduct of such inventories. By project close-down, 15 natural products inventories had been performed and many local collaborators and partners were trained in the application of the methodology.

Sub-task 3.2.2: Provide Market Analyses and Other Product Information to Entrepreneurs, Associations and Potential Investors

Market analysis and market information dissemination were cornerstones of the COMPASS II approach to increasing sales of natural products. Many new products were analyzed from the perspective of their potential to command their market segment or substitute other products in the marketplace. COMPASS market information/reports were being requested by many in the private sector on both existing, "known" products such as honey and fish, as well new natural products.

As previously stated COMPASS focused more on those products that had a strong market, rather than on those products where the focus would be first on production. This was driven by the belief that small-scale commercialization of natural products could only be successful if the products responded to the markets. As such, COMPASS provided its clients and partners with market information and knowledge about end-markets, prior to encouraging investments in product value chains. That said, production capacity and supply base information were also collected and provided to businesses, so that local businesses could extend their supply base for business growth. A case in point is the honey sector, where 11 formally registered large and small processors are now sourcing their honey supply from Malawi's rural beekeepers, as they look to expand their market within Malawi as well as regionally.

Under this sub-task, COMPASS helped identify markets for products (concurrent with the screening process described above under 3.1.1), and gathered information on important factors such as product specifications, quality, quantity, as well as information on the demand side, such as potential size of market, price points important to determine product position, among others. Once analyses were completed for a natural resource-based product, COMPASS disseminated the results to those that were interested in engaging in the sector. As part of the sub-task, COMPASS II funded the completion of the following 18 market analyses and assessments:

- | | | | |
|--------------------------|-----------------------|--------------------|---------------------|
| 1. Honey | 2. Fish | 3. Mushroom | 4. Baobab |
| 5. Guinea Fowl | 6. Processed Foods | 7. Uapaca Kirkiana | 8. Medicinal Plants |
| 9. Jatropha | 10. PET Jars | 11. Bamboo | 12. Game Ranching |
| 13. Artemisia | 14. Crocodile | 15. Moringa | 16. Curios |
| 17. Nature-Based Tourism | 18. Fuelwood/Charcoal | | |

By the end of the project, COMPASS had surpassed the project Performance Monitoring Plan target of seven (7). At the close of the project, COMPASS had completed 18 market analyses and assessments for dissemination to firm-level entities (businesses and potential investors for example).

Sub-task 3.2.3: Create and Support Producer Associations

The underlying goal of this subtask was to assist the development and/or strengthening of producer organizations to enable them to better operate and manage their organization whether they were community based organizations (CBOs) such as clubs, cooperatives, or associations. Better management entails applying sound business principles and operating along commercial lines. It also calls on the organizations to work with a clear vision and shared commitment to making the value chain they are part of robust and successful in order to help each player maximize profits.

Another condition for successful commercialization of smallholder production was that producers work together as groups to gain from economies of scale, to improve marketing, to facilitate access to finance and to add value to their products through processing or other activities. Working together also provided access to marketing muscle both for purchase of production inputs (e.g., feeds, fingerlings, hives, and dryers) and for sales of marketable volumes at better farm-gate prices. By working together, smallholders were better able to harness their commercial potential.

However, in Malawi smallholder organizations and associations had not done as well, and as a result had received mixed reviews. On the other hand, smallholders were not solely to be blamed primarily because these organizations and associations were formed in isolation; focused completely on production, paying little heed to markets and marketing; without a clear sense of direction or a business plan on how to cover costs of operating an association; and with very little thought paid to service provision. Taking all these into consideration, COMPASS began working directly with producers to assist them with either forming new groups/associations or with strengthening and rejuvenating their existing groups. In working with the producer groups, COMPASS focused on building capacity through provision of training in not only technical topics, but also in financial and business management, and successful group operation and management. In general, business training were offered along 3 lines: business organization development (how to form a business group), business management and market development (how to run a business group and market products), and business financing and management (how to finance a business group). These modules were designed and used in the field to strengthen new and existing producer associations and groups engaged in enterprise. At the end of the training, producers and their producer groups/clubs appreciated the importance of properly managing their enterprise/club/association and seemed to understand the importance of running a business whether individual or group-based profitably, efficiently and effectively. These communities are also trained in understanding the various roles and responsibilities of office bearers, as well as chiefs versus associations.

Trainings were targeted to the association management, boards of directors and general membership. Assistance in technical services and management enabled the nascent associations to deliver better support services required by their members, while training delivered to members encouraged them to be active participants in order to ensure the sustainability of the association and inculcate democratic values with a strengthened civil society.

In addition to producers groups, COMPASS was also called upon to assist in the formation of industry associations and trade organizations. In early October 2006, the major processors in the honey industry decided to form a group called the *Malawi Bee Products Association* based on business principles, and to avoid the project-driven mentality that led to dissolution of the former Beekeepers Association of Malawi (BAM). COMPASS assisted the processors, exporters, service providers and producers to formally and successfully register the honey industry association in 2008. Around the same time, COMPASS was also sought out by the industry players in the cultivated mushroom sector for assistance. Working with the industry leaders, COMPASS provided guidance in their effort to successfully register as the *National Mushroom Industry Association* (NMIA) in early 2009.

COMPASS also supported those industry or trade organizations that were already in existence to encourage further development and strengthening of the sector. Three trade associations, whose success had direct and positive ramifications to smallholders downstream, received support from COMPASS. The Coffee Association of Malawi (CAMAL) received support from COMPASS primarily because one of

their key members, Mzuzu Coffee, represented roughly 3,500 smallholder coffee, many of who lived around the periphery of Nyika National Park. The National Association of Small and Medium-sized Enterprises (NASME) also received some support from COMPASS given that many of their members were either beekeepers, mushroom-growers, or fish-farmers. A third organization, *the Innovative Fish Farmers Network* (IFFN) also received support from COMPASS, which helped them improve their production practices, increase their knowledge, improve efficiencies and helped them learn new skills and approaches to make fish-farming payoff.

COMPASS support to the various associations focused on technical and marketing assistance as well as sharing of knowledge of differentiated markets so that more export businesses are strengthened to enable Malawi to increase her exports of natural resource-based products. And one way to increase exports is by raising the visibility of Malawi products and meeting buyers and brokers face-to-face and visiting them in-person; this is central to expanding market share. COMPASS supported the participation of especially CAMAL at international trade shows and exhibitions to help them learn the intricacies of marketing in a highly competitive marketplace and increasing market share.

The performance target for this sub-task was to create and support at least 3 viable natural resources products association. COMPASS assisted in creating 18 producer groups, 3 industry associations and supported 259 clubs and 3 trade associations.

Sub-task 3.2.4: Establish Standards and Quality Control Procedures

Although placed under the task for new natural resource-based products, standards and quality control procedures were also required urgently for existing products such as honey, processed wild mushrooms, and fresh or processed fish products. The lack of standards and quality control procedures for natural resources-based products were a severe constraint to increased growth in a number of sectors, particularly those that were being targeted for exports such as honey.

Successful commercialization of any natural product industry requires that agreed standards are in place to assure consumers that their confidence in food quality and food safety is preserved. Grading products can likewise provide a basis for pricing the product and can lead to product improvement as producers strive to meet the standards required for the highest grades with the highest prices. The honey processors understanding this began developing a grading system in partnership with the Malawi Bureau of Standards (MBS); COMPASS supported the process through the very end. By early 2009, MBS and the Technical Committee had approved the established standards and grades for liquid honey (DMS: 366). The paperwork for the Standard is in the process of becoming official, after which it will become law.

COMPASS also worked with Mzuzu Coffee Planters and Cooperatives Union (MzCPCU) to complete the steps and comply with the standards required by FLO-CERT, the Fair Trade Umbrella organization who has the sole mandate of approving/certifying fair trade producers. Upon approval or certification issued by FLO-Cert, a business is then permitted to officially utilize the Fair Trade Logo on their Fair-Trade products. Fair Trade logo informs consumers that certain socially fair, environmentally sound, and technically good standards have been put in place. By May 2009, after a year of closely working with FLO to meet their requirements, MzCPCU was awarded a certificate for Fair Trade Honey and Fair Trade Coffee, the first ever for Malawi.

In the coffee sector, COMPASS also worked with the other members of the Coffee Association of Malawi. In addition to Mzuzu Coffee, the other members of CAMAL were also very keen on improving their coffee quality. The members were well aware of the changes that were taking shape in the coffee marketplace, as made evident by the rise of the Specialty Coffee segment of the industry in the global coffee marketplace. CAMAL members made every effort to learn new techniques and approaches to improve the quality of their coffee in order to shift to specialty coffee away from conventional, where the focus continues to be large volume and bean quality. In order to help the industry make this shift, COMPASS initiated the process by focusing on improving cup quality. COMPASS engaged the Coffee Corps program managed by the Coffee Quality Institute (CQI) to kick-off the process, where coffee experts volunteered to visit Malawi to train coffee producers and members of CAMAL on coffee quality improvement, cupping skills development and refinement, roasting, brewing and the like. COMPASS also worked with CQI to initiate the Q graders program in order to identify a cadre of high quality coffee cuppers, who could then eventually begin evaluating Q Coffee originating from Malawi. Q Coffee is coffee that has been evaluated to have met the green, roasted and cup quality as outlined by the Specialty

Coffee Association of America. The Q Grader program, which is a rigorous testing and certification program, helps to identify individuals with deep understanding and talent at work in the coffee industry, and requires a longer time to conclude. CAMAL is continuing the program, initiated by COMPASS, through partnership with EAFCA, a regional association representing fine coffees from Africa.

In addition to the above, COMPASS also conducted a capacity assessment of institutions responsible for inspections and certification for entry of imported animal products, primarily processed fish. The purpose of this assignment was to assess and map Malawi's various public and private institutions, agencies and facilities involved in and responsible for monitoring and controlling imports of food products of animal origin (specifically fish products) from a food safety and quality control perspective. The request for this assignment originated from the Department of Fisheries since Chinese/Thai frozen fish were beginning to arrive in Malawi's Supermarkets via Zambia. There were some concerns in the industry about these imports given the fears in the west about melamine-contaminated Chinese fish in the global marketplace.

With support from the Mission, COMPASS also helped facilitate the participation of Malawi in the "East Africa Regional workshop on U.S. FDA Import and Labelling Requirements for processed/ specialty food products" held in Tanzania. The Malawi Bureau of Standards (MBS) and Satemwa Tea and Coffee Estate (who is export ready for gourmet tea such as oolong and white teas) represented Malawi to learn as much as possible on US FDA requirements in preparation for potential exports into the US.

The COMPASS II Performance Monitoring Plan established target for this sub-task was two. By the end project, 5 standards (MBS honey, Fair Trade coffee and honey; and Malawi Gold Standard (MGS) systems for honey and aquaculture) had been set in place, and one (Q Grader program) was initiated, which is being continued by the industry participants.

Table 18: Summary of Targets and Achievements by Sub-Task – Task 3.2

Sub-task	Achievements	Target
3.2.1: Provide Technical Assistance in Performing Natural Products Inventories and Train Local Service Providers on Inventory Techniques	<ul style="list-style-type: none"> • 15 Natural Products Inventories Performed: • Inventory for Phunga bee pastures completed for 3 beekeeping associations in 3 areas within Nyika-Vwaza • Inventory of Colomboroot (traditional-use plant) completed; • Inventory for bee pastures completed for 7 GVHs in 7 areas within Nkhotakota Wildlife Reserve • Baobab inventory conducted, co-financed by Tree Crops Ltd. • Inventory for Carbon Credits conducted for 2 pilot sites: Mkuwazi Forest Reserve and Thazima in Nyika • Inventory for water conducted in TA Njema area of Mulanje as part of the Coca-Cola-USAID GDA program 	7 Natural Products Inventories Performed
3.2.2: Provide Market Analyses and Other Product Information to Entrepreneurs, Associations and Potential Investors	<ul style="list-style-type: none"> • 18 Market Assessments and Surveys Performed for Natural Products: - Honey - Guinea Fowl - Ranching - Processed Foods - Artemisia - Baobab - Crocodile - Bamboo - Jatropha - Moringa - Uapaca Kirkiana - Fish - Medicinal Plant - Mushroom - Curios - Eco-Tourism - PET Jars (for honey) - Fuelwood/charcoal 	7 Sub-Sector Market Analyses Conducted to Identify Partners
3.2.3: Create and Support Producer Associations	<ul style="list-style-type: none"> • Assisted in the Creation of the Malawi Bee Products Association (MBPA) • Assisted in the Creation of the National Mushroom Industry Association (NMIA) • Assisted in the Creation of the Mkuwazi Eco-Tourism Association • Supported CAMAL, Malawi's coffee producers association • Supported NASME, Malawi's Association of Small and Medium-sized Enterprises. • Supported the Innovative Fish Farmers' Network, an association of fish-farmers engaged in integrated fish-farming. • Supported creation of 18 producer associations and 259 producer group enterprises/clubs supported. 	At least 3 viable natural products associations Created & Supported
3.2.4: Establish Standards and Quality Control Procedures	<ul style="list-style-type: none"> • Established Standards and Grades for Honey with Malawi Bureau of Standards (MBS) DMS:366 • Fair Trade Certification for Coffee Achieved • Fair Trade Certification for Honey Achieved • Malawi Gold Standard (MGS) Honey Production System released • Malawi Gold Standard (MGS) Aquaculture Production System released • Initiated the Q-Grader Program (a rigorous testing and quality certification program) for CAMAL member-cuppers and graders so that the industry is able to meet coffee quality as outlined by the Specialty Coffee Association of America (SCAA). • Supported Malawi's participation in a US-FDA Import and Labelling requirements Workshop. 	Standards/Grades for 2 products Established

TASK 3.3: DEVELOP AND STRENGTHEN PARTNERSHIPS BETWEEN COMMUNITIES AND THE PRIVATE SECTOR

The purpose of this task was to facilitate linkages between producers and buyers of natural resource-based products, with emphasis on preparing Malawian small-scale entrepreneurs for entry into formal markets. There was recognition that smallholders and rural communities were not engaged in formal supply chains in any significant way. Some felt the rural communities were being marginalized while others were concerned about smallholder capability and reliability. A few frequently voiced reasons were that the resources they utilized were either declining or disappearing, or smallholders were unable to organize commercial volumes, or that they tended to be undependable, and that the quality produced by rural communities was consistently not good enough to meet market needs. To help bridge this chasm between rural communities and commercial buyers and stimulate economic activities, COMPASS frequently brought the two groups together for market promotion meetings, product-requirement discussions, market opportunity analysis, processing/value adding factory visits, study tours for businesses back to the source i.e. field for them understand producer constraints. Such face-to-face meetings where producers were free to ask questions and voice concerns to the buyers, awhile buyers were able to lay out requirements and supply/ quality concerns proved to be helpful in breaking down pre-conceived notions and lowering strongly held misinformation. COMPASS effort in building commercial partnerships and strengthening business relationships was successful in promoting integration of smallholders in formal value-chains, as exemplified by the success gained in the honey sector and the cultivated mushroom sector. A total of 694 sales agreements were signed between 694 participating clubs and roughly 18 commercial buyers, although a significant proportion of these were in the bee products sector.

Other sectors were also slowly but surely learning from COMPASS's success in linking communities with private businesses for the honey industry. For example, with some help from COMPASS, a group of 12 community members from around the Mkuwazi Forest Reserve formed the "Mkuwazi Eco-Tourism Association," after being trained by *Wilderness Safaris* (paid for by COMPASS) on Nature-based tour-guiding. While the start was slow for the tour-guides in entering the lakeshore tourism market, the lakeshore lodges and hotels are now seeing the value of adding Eco-tourism in their basket of activities for tourists and guests. For example, *Butterfly Lodge* and a few other lodges have linked up with the tour guides from the association to integrate them in their tourism activities. Mkuwazi Forest Reserve is home to many butterflies and unique birds. *Gunnings' Akalat* and *Bar-tailed cuckoo* are two rare bird species endemic to the reserve.

Examples of such relationships are many, so much so that COMPASS also began receiving requests from several large Malawian Agribusinesses for assistance in establishing similar linkages in the agriculture sector. However, since agriculture was outside the scope of COMPASS II, the project was unable to support these requests. In areas directly relevant to natural resources management and conservation, COMPASS took an active interest in facilitating the integration of communities into the supply chain or potential value chains, often brokering partnerships between communities, key traders and businesses. These linkages and integration activities were an integral part of COMPASS' smallholder commercialization approach, which also focused on enhancing the capacity of each value chain actor to participate more equitably, while creating value, improving efficiency, and contributing to industry competitiveness. This approach also served well as an exit strategy for COMPASS II, since many such business relationships have outlasted the project and continued their growth, with some even expanding their relationship with other communities on their own since project closure.

Four sub-tasks were specified toward accomplishing this Task:

1. Broker Partnerships
2. Explore and Promote Sustainable Financing Strategies
3. Increase Understanding of the Marketing Chain among Rural Households

A fourth sub-task "Encourage Innovative Partnerships among Stakeholders" was later (in FY2007) combined with sub-task "Broker Partnerships" under sub-task 3.3.1.

The sub-tasks under this Task are strategic interventions that contribute directly and indirectly to genuine mainstreaming of CBNRM in rural Malawi by focusing the core of CBNRM on the NRBE business

relationships that result in long-term economic and conservation benefits from improved natural resource stewardship.

Sub-task 3.3.1: Broker Partnerships

This sub-task emphasized the importance of facilitating partnerships and securing linkages between buyers and producers of natural resources-based products in rural areas as a way to foster demand and expand markets for smallholder production. Such linkages and partnerships opened up markets for rural communities and in the process also helped enhance smallholder capacity to participate more formally and equitably in the value chain of commercial companies. Almost in all cases, commercial companies provided technical information and support in quality improvement and advice on quantity consolidation.

Given that two of the greatest constraints in moving products up the supply chain into the markets were due poor quality and low volumes, the COMPASS team focused on assisting smallholder producers to improve quality of products and produce larger volumes at the household level and then engage as a club to consolidate production at a group level. All throughout the process, COMPASS worked with individuals through their clubs and associations to engender the value of working together. The key objective of the smallholder commercialization framework was to help smallholders increase their income at the individual household level first and then to collaborate with neighbors and members of their local club to consolidate their product to lower transaction costs and hold their market share. This approach has been working successfully in the honey sector as made evident by the continual flow of honey from the hinterlands of Malawi to serious processors, who are happy about their partnership. About 210 tons of raw honey had made its way to processors from rural communities over a two-year period because of COMPASS intervention; before COMPASS II, honey volume was estimated at roughly 50 tons.

One of the experiences was that commercial companies in reality were interested in partnerships but because communities often were unable to deliver commercial volumes reliably, businesses were reluctant to nurture such relationships. For products with high local demand, businesses (even though interested in forming partnerships) were unwilling to invest in strengthening any relationships because of side-selling practices rife among smallholders. The fisheries sector is a case in point. COMPASS facilitated and brokered a partnership between Maldeco Fisheries and fishing communities from Nkhokota in FY2008. Under the partnership, Maldeco agreed to serve as the guaranteed market for the smallholder-produced fish. Maldeco entered into this partnership driven by their desire to assist but also because of their own business interest. Maldeco Fisheries' annual target of 3,000 tons of fish production had yet to be met by the company's own operations.

Maldeco Fisheries, Malawi's largest fishing and processing company, supplies the 147 retail and wholesale outlets of People's Trading Center (PTC), the country's largest food retail chain. In addition, Maldeco also caters to the local urban and rural markets given its distribution network covering virtually the entire country. That said, in order to achieve its annual target of 3,000 tons and given the increasingly unfulfilled domestic demand for fish, Maldeco had indicated interest in collaborating with small-scale fish producers to serve as the ready market for both pond-raised and cage-reared fish, particularly popular varieties such as *Tilapia Shiranas and Chambo*. Maldeco's participation and collaboration in the effort was wholly dependent on the ability of the fishing communities to produce and consolidate the required volume at a central location for collection by Maldeco. However, Maldeco's minimum consolidated consignment requirement was 1 ton, a volume the smallholder communities were unable to meet.

A key constraint to meeting the demand from Maldeco was because smallholders were not growing fish on a commercial basis; a large percentage of fish-farmers in Malawi were semi-subsistent producers. After realizing this barrier, COMPASS quickly turned around its aquaculture growth strategy to address the problems head-on. While the Maldeco partnership remained intact, production needed a boost. COMPASS then began working with several private and public sector organizations to address the fundamental issues of making quality fingerlings available and designing a commercial approach to smallholder production. COMPASS intervention came in the form of a state-of-the-art hatchery establishment in Domasi. Domasi is now enabled to produce single-sex (male), high-quality fingerlings at a highly competitive price, which includes the cost of technical advice. In addition to making fingerlings accessible at a reasonable cost, COMPASS also introduced the concept of cage culture to encourage fish-farmers to produce the volume needed at the individual household level to motivate them to operate their activity (fish-farming) as a significant income-generating business. COMPASS also worked in partnership

with the Department of Fisheries extension staff to encourage fish-farmers to work together to consolidate their production for on-ward sale to Maldeco. Another key constraint, fish-feed, is now being developed by a private company in Blantyre but at the close of COMPASS, the feed had not become commercially available yet. That said, COMPASS also linked this company with the National Aquaculture Center (NAC) so that NAC could serve as the first of the nation's many "one-stop-shop" for all-things aquaculture, from fingerlings to feed to brood-stock to extension service. The Malawi Gold Standard (MGS) Production System for Aquaculture handbook and related extension materials were developed in partnership with NAC and at project closing the utilization-rights for the MGS for Aquaculture was transferred to them, after approval from USAID.

In addition to domestic market development, COMPASS also looked to export markets, realizing fully well that when domestic markets reached their saturation points, outside outlets would be required. Knowing well that export market development took time, COMPASS II worked with industry associations to begin the process early on in the project. COMPASS began this process by organizing inward buyer visits, inviting companies such as *Atlas Coffee*, *Market Systems International* and *Talier Trading Group* to visit Malawi to meet with Malawi companies and go over with them the needs of export markets. Atlas Coffee for example has now become a buyer of smallholder coffee and established a relationship with one of Mzuzu Coffee's production region.

COMPASS also helped with international trade show participation so that Malawi businesses would learn from direct exposure to the export markets. COMPASS for example played a key role in fostering business/trading relationships between buyers and the Malawi companies that participated in the 2008 Gulfood Show. At the show, COMPASS provided qualifying information on the participating companies to buyers who were interested in working with Malawi. As a result, several deals were concluded between the companies and the buyers at the show. The participating Malawian companies reported that approximately US\$1 million worth of sales (sauces, pigeon peas, *Toor dahl* etc) had occurred as a result of the participation. Products were exported to countries such as Saudi Arabia, Dubai, and India.

In the COMPASS II Performance Monitoring Plan, the target for this sub-task was to broker 500 producer buyer sales contract agreements by 2009. The contract target, however, states simply that "success will be measured by the value in US dollars of natural products marketed by Malawian producers and local communities through these linkages." By the end of the project, COMPASS had brokered 694 sales agreements between 694 clubs and 18 buyers. The value in US dollar value of natural products marketed by Malawian producers and local communities was \$1.87 Million. This figure excludes the US\$1 Million worth of sales resulting from the Dubai deals since they were agricultural products.

Sub-task 3.3.2: Explore and Promote Sustainable Financing Strategies

During 2005, COMPASS designed an innovative financing program to facilitate access to capital for natural resource-based enterprise start-ups without replicating the disadvantages of counter-productive grants. The Enterprise Fund was a combination of five financial products in two categories:

- A. Loan financing to producers, processors, or traders of natural products through two loan products, capitalized at reduced risk to commercial banks and microfinance institutions
 1. Microfinance loans of \$2,500 or less to community-based enterprises, and
 2. Investment loans of \$5,000 to \$50,000 to SME-scale natural products enterprises
- B. Support for prospective producers of new natural products through co-financing to facilitate entry into the market
 1. Pre-commercial feasibility analyses to finalize product specification, market analyses, etc., in amounts up to \$50,000 each with at least 35% applicant co-financing;
 2. Pilot commercialization of new products that are ready to be tested in the marketplace, in amounts up to \$100,000 each with at least 50% applicant co-financing; and
 3. Innovation window for introducing new technologies into Malawi that can increase capacity, efficiency, and profitability for processors of new or existing natural products; also includes provision of technical or business services to the natural products industry, as long as the service design is innovative and likely to be sustainable beyond the co-financing support.

The first category used risk-reduction through lowered cost of capital to commercial lending institutions as an encouragement to invest in previously under-represented parts of their portfolio, specifically natural resource-based production, processing and trade. The second category was implemented through an Annual Program Statement, by which COMPASS solicited investment ideas and business concepts from new or existing businesses. The NRBE co-financing (termed Enterprise Fund) is summarized below:

Table 19: Summary of Natural Resource Based Enterprise Fund Categories and Parameters

CO-FINANCING PRODUCT	PURPOSE OF PRODUCT	RANGE OF CO-FINANCING	INVESTOR CONTRIBUTION
PILOT COMMERCIALIZATION	Market testing of new products to demonstrate commercial viability	MK1.4 – MK14m	At least 50% of pilot operation financed by sources other than US govt. sources
PRE-COMMERCIAL SUPPORT	Business planning for new NRBPs; product/supply chain development; feasibility	MK350,000–MK7m	At least 35% of project costs financed by sources other than US govt. sources
NRBP INNOVATION SUPPORT	Introduction of new technology/process for NRBP production, trade or business services	MK350,000–MK7m	At least 35% of project costs financed by sources other than US govt. sources

The intent of this design effort was that the banks would continue making loans to rural NRBEs once the viability of those enterprises had been demonstrated—effectively subsidizing the cost of lowering risk levels to the point that investing in NRBEs became attractive for the banks, while also subsidizing investors' entry into production of new products that were not yet proven to be commercially viable.

The agreements between COMPASS II and the two commercial banks continued to be operational even though both had reached their ceiling amounting to a total of US\$330,000. As part of the agreement, one of the banks had already begun to revolve the grant returns to encourage more private sector engagements in the natural products sector. By project end, both banks had decided to continue operating the revolving funds. In fact, NBS Bank was considering the expansion of the window to increase its outreach to small and medium-sized enterprises. In early FY2009, Opportunity International Bank of Malawi (OIBM) was brought on board to assist COMPASS II in promoting the expansion of small-scale commercial cage-fish farming. OIBM enthusiastically matched the grant amount to establish a revolving fund to lend fish-farmers interested in engaging in cage-fish culture to improve their livelihood options. With a grant (of US\$21,000) from COMPASS, and combined with its match (of \$11,310), OIBM offered micro-finance loans valued at about \$200 per loan to a total of about 150 borrowers. By the end of the project, OIBM had disbursed 30 such loans, with the remainder earmarked for expansion of cage-based aquaculture.

As of May 31, 2009, a combined total of US\$517,440 for 118 borrowers had been disbursed through the three banks. While OIBM loans supported only cage culture expansion, National Bank and NBS bank financed all other natural resources-based enterprises. The following table provides some details on the progress achieved by the banks, where they contributed to about 33% of the total disbursement:

Table 20: Summary of Loan Account Status as of 31 May, 2009

NAME OF BANK	TOTAL NO. OF LOANS	TOTAL VALUE OF LOAN DISBURSED	COMPASS II GRANT TO BANK	NATURE OF BUSINESS
National Bank of Malawi	60	\$413,586	\$295,927	Natural Products: honey, Tree Seed oils, Juices-Jams etc.
NBS Bank	28	\$71,544	\$27,929	Natural Products: Honey, Tourism, Honey, Fish etc
OIBM Bank	30	\$32,310	\$21,000	Cage Aquaculture
Total Leverage = 33%		\$517,440	\$344,856	

In addition to the loans disbursed through the three banks, COMPASS II also supported the expansion of the natural resources products sector through co-financing grants awarded to a total of 9 grantees (including OIBM mentioned above) to assist in unlocking barriers preventing growth of a few key value chains. Disbursement of funds for all the awards was carried out on a reimbursement of expenses basis. COMPASS II co-financed a total of US\$322,268 with the following 9 grantees (see Table 21) under category two: NRBE Co-Financing window also termed as Enterprise Fund.

Table 21: Summary of Natural Resource Based Enterprise Fund Award Status as of 31, May 2009

CO-FINANCING GRANTEE	CO-FINANCING PRODUCT	PURPOSE OF PRODUCT	CO-FINANCED AMOUNT	INVESTOR CONTRIBUTION OF COST
NATIONAL AQUACULTURE CENTER (NAC)	Pilot Commercialization	To Establish a Modern Hatchery Producing Single-Sex Fingerlings	\$60,765	57%
MZUZU COFFEE PLANTERS COOPERATIVE UNION (MzCPCU)	NRBP Innovation Support	To Establish a Honey Processing Factory in the North	\$23,586	63%
TREE CROPS LTD.	Pilot Commercialization	To Establish Baobab Oil & Powder Production Factory	\$94,593	50%
OPPORTUNITY INTERNATIONAL BANK OF MALAWI (OIBM)	NRBP Innovation Support	To Establish a Revolving Fund to Promote Expansion of Cage-Culture-based Aquaculture	\$21,000	35%
MZUZU COFFEE PLANTERS COOPERATIVE UNION (MzCPCU)	NRBP Innovation Support	To Support Expansion of Smallholder Honey Production in the north	\$27,288	61%
NALI LTD.	NRBP Innovation Support	To Support Expansion of Smallholder Honey Production in the south	\$24,728	47%
ECO PRODUCTS LTD. (EPL)	NRBP Innovation Support	To Establish a Honey Sachet Production Factory	\$9,000	79%
NALI LTD	NRBP Innovation Support	To Establish a Honey Processing Factory in the South	\$21,252	45%
MIRALA INTEGRATED FARMING & AQUACULTURE CENTER	Pilot Commercialization	To Establish a Fingerling Production Center	\$40,056	56%
TOTAL CO-FINANCED AMOUNT =			\$322,268	

Over the life of the project, the COMPASS II Enterprise Fund (which is inclusive of both categories of financing windows) disbursed a total of approximately US\$ 646,124. Originally targeted at US\$1.5 Million, due to funding shortfalls experienced during project implementation, activities and disbursements related to co-financing or innovative financing strategies under this task, were significantly reduced.

In the COMPASS II Performance Monitoring Plan, the target for this sub-task was to implement 100 grants [or loans] by project closure. Despite the reduction in funding, COMPASS reached 127 grantees. OIBM is expected to reach an additional 120 loans through the window opened for cage culture expansion. Their goal was to reach a total of 150 borrowers; as of project close-out, they had disbursed loans to 30 borrowers targeting cage culture aquaculture production.

Sub-task 3.3.3: Increase Understanding of the Marketing Chain among Rural Households

The objective of this subtask was to provide rural communities opportunities to help them better understand the process and resources required to successfully transform raw materials into marketable products. Many rural producers continue to have limited understanding of how markets function, or of the roles and functions of other elements in a value chain. Not all were fully aware of the intense and increasingly globalized marketplace; as a result they did not have a clear sense of how competition could impact them. This led to misunderstanding of prices paid by processors/buyers to rural producers for raw materials or unprocessed products. Transport costs, packaging, marketing, losses from poor quality and spoilage, risks taken, and the need for each member of a value chain (including the retailer) to make a fair profit were not widely understood as being part of an overall value chain that required mid-level players to function efficiently. While many now understand better some of the dynamics of product pricing,

many are also know that some consolidators or processors do make disproportionately large margins for little value-added.

The focus of this sub-task was therefore to develop and offer those activities to rural entrepreneurs and community enterprises that helped increase their understanding of markets and marketing, increased transparency of pricing decisions, and delivered better information on products and processes so that knowledge about value chain functioning were more widespread. The goal underlying these activities was to help foster trust in the relationship between producers and buyers.

Establishing trust between producers and buyers was fundamental for the success of the innovative business partnerships facilitated by COMPASS. Part of establishing trust rested on sharing more information about the value chains and practicing more transparency in their dealings with one another. Many small-scale producers are unaware of the costs involved in transforming raw materials to marketable product on a supermarket shelf. With support from the processors, COMPASS organized activities that allowed small-scale producers to better understand the various components of the value chain to enable small-scale producers to assure that they were being paid a fair price for their product. Increased transparency in pricing, the key concern among smallholders, also supported this objective

COMPASS utilized a variety of media and materials to proactively increase the levels of understanding among rural households about market functions of all parts of a value chain. COMPASS' own highly popular *Chuma Chobisika* radio, TV and print materials were widely utilized to promote information on all aspects of markets, marketing, and production. *Chuma Chobisika* radio and TV programs delivered messages in an easy to understand format and through stations that had a wide reach even in rural areas making it one of Malawi's most popular programs. In addition to radio, TV and print, COMPASS also made use of drama groups to successfully impart information and knowledge on key topics or issues. The drama groups too were highly successful in reaching the masses and in getting the messages across.

In addition to public awareness campaigns, COMPASS held sensitization meetings, training and workshops, organized study tours and exchange visits, and took them on field-day events to help raise awareness and understanding of the importance of espousing a commercial approach. At these meetings and industry gatherings, the communities were sensitized on market information, quality improvement, volume expansion, importance of lowering transaction costs, product loss reduction, as well as on market dynamics and competition from neighboring countries as well as from overseas especially Asia for honey and fish. Trainings and workshops focused on improving their skills in improving production as well as quality management, improving their skills in business organization management, monitoring and record keeping. Training were also provided on such topics as cold chain management, mushroom production, beekeeping, fruit drying, spawn production, hatchery management, fish-cage construction, cage culture development and the like in order to expose them to innovative ideas and production possibilities.

Study tours targeted visits to factories and processing facilities so that they could better understand the factors that go into producing the final product, and to also learn from their exposure to other parts of the value chain. Exchange visits and field-day events were organized to provide them the opportunity to exchange experiences with each other and also learn from one another. All these activities were greatly appreciated by the communities since these did help them to increase their understanding and gain from the exposure to ideas and experiences of others. All in all, COMPASS organized exchange visits and study tours for 565 participants, and training focused on markets and marketing for well over 1,000 participants over 5 years. These study tours, exchange visits, and trainings have helped producers to better understand the requirements of the marketplace. Participation on these tours and visits to processors, markets, or exchanges with other successful producers significantly increased their understanding of their role and possibilities open to them.

In the COMPASS II Performance Monitoring Plan, no specific target for this sub-task was specified. The contract, however, stated that COMPASS must "help rural households and others in the marketing chain gain a greater understanding of the quality demand of the global marketplace and position them to better respond to profit opportunities in CBNRM products." Even though no numerical target was established, COMPASS II managed to support the participation of 565 participants from rural areas on study tours and exchange visits, and organized training events focusing on markets and marketing for

approximately 1,000 participants, of which about 28% were female. It was COMPASS II policy to encourage female participation in all these events, and as such required that at least 25% of the participants be female. Vulnerable households were also encouraged to participate in these activities.

Sub-task 3.3.4: Encourage Innovative Partnerships among Stakeholders

COMPASS concluded a design process in 2006 to identify the most viable and feasible ways to move forward in facilitating partnership formation, and additionally facilitating the establishment of conditions that might foster innovation and imagination in a public and private sector environment characterized more by dependency than inventiveness. The results of that work are detailed in *CBNRM Occasional Paper #16*, and provide the foundation for many of the actions presented in this Annual Work Plan, specifically the emphasis on small-scale commercialization of natural products through encouraging the formation and development of producer group enterprises.

In the COMPASS II Performance Monitoring Plan, no specific target for this sub-task was specified. The contract, however, states that COMPASS must “encourage innovative partnerships between communities, entrepreneurs, and one or more of the following potential partners: nongovernmental business development organizations, government entities, local academic institutions, micro-credit institutions, donor-funded small enterprise development programs, and regional production and marketing organizations.”

Because all of the actions by the COMPASS II field team undertaken to accomplish sub-task 3.3.1 above (“Broker partnerships”) while also meeting the innovation aspect of this sub-task, DAI recommended in the 2007 Annual Work Plan that this sub-task be combined with the Broker Partnerships sub-task, and be reported on against the same target. USAID agreed to this combination of sub-tasks. As a result, this sub-task was combined with sub-task 3.3.1. Please see 3.3.1 above.

Table 22: Summary of Targets and Achievements by Sub-Task – Task 3.3

Sub-task	Achievements	Target
3.3.1: Broker Partnerships	<ul style="list-style-type: none"> 694 Sales Agreements Signed between Buyers and Producers representing 694 clubs and 18 buyers for primarily: <ul style="list-style-type: none"> Honey - Beeswax - Mushrooms Dried Fruits - Spawn - Coffee Community-based tourism; Carbon Credits (REDD) sales paper prepared. 	500 Producer-Buyer Agreements Signed
3.3.2: Explore and Promote Sustainable Financing Strategies	<ul style="list-style-type: none"> 127 Grants Facilitated; US\$818,708 in grants disbursed, of which 67% was funded through the <i>Enterprise Fund</i> and 33% was matched by funds brought on board by the following Financial Institutions: <ul style="list-style-type: none"> National Bank of Malawi NBS Bank of Malawi - OIBM 	No Numerical Target Private Investment in NRBEs Increased being encouraged by the NRBE Fund
3.3.3: Increase Understanding of the Marketing Chain among Rural Households	<ul style="list-style-type: none"> Close to 1,000 participants from about 820 Producer Groups/clubs trained in Markets, Market Linkages, and Marketing. 	No Numerical Target Understanding of Marketing Chain Increased among Rural households
3.3.4: Encourage Innovative Partnerships among Stakeholders	<ul style="list-style-type: none"> See 3.3.1 	See 3.3.1 above

IV. COMPASS II CBNRM MODELS AND METHODS

Over the life of the project, COMPASS II developed many innovative CBNRM models and applied several creative methods to harness the commercial potential of smallholders, build on the promise of the private sector, and reward sustainable forest management, with the goal to safeguard the nation's natural resources and biodiversity within. These models and methods served as a framework to successfully mobilize communities, build partnerships and linkages to enhance the capacity of smallholders in rural communities to gain from enterprise and trade. These enabled the project management team to bring its business-oriented CBNRM approach to successfully merge smallholder commercialization with ecosystems conservation to contribute toward securing sustainability of some of Malawi's irreplaceable treasures whether they be the endangered evergreen forests within the Nyika National Park; the only remaining habitat for one of Malawi's rarest birds, the *Gunning's Akalat*, within the Mkuwazi Forest Reserve; the fast-receding cedar forests of Mt. Mulanje; or the wetlands of Lake Chilwa, a designated RAMSAR site, which used to support one of the most productive lake fisheries on earth.

For some of our partners, these models and methods served as alternative approaches and tools to effectively implement their strategies and break-down barriers with communities, while others utilized them to reenergize their strategy itself, as in the case of the Department of Forestry, who began supporting conservation through promotion of not only planting new trees but also through protection of standing forests. The applications of these models and methods have resulted in persuading communities to slowly shift away from subsistence-level extraction and unbridled exploitation of their natural resources to a more sustainable asset management of the same since they see tangible benefits accruing to them. While not completely stopped, it is improving. The total cumulative revenue received by households participating in COMPASS supported activities was US\$1.87 million. With the flow of revenue actually occurring, they now realize that such commercial approaches can become both: sources of income and drivers of conservation and sustainability. The over 213,000 hectares of community-managed apiaries demarcated for safeguarding across several protected areas and forest reserves, for example, serve as testimony of this shifting paradigm.

Our ultimate goal in CBNRM was to create an enduring legacy of stewardship and conservation through sustainable use. The models and methods presented below represent a select listing of some of the strategies and methods used to empower the communities, particularly those living around the periphery of national parks and forest reserves. These models are presented in story format and highlight key features of the COMPASS II technical approach, which, for example, emphasize that profitable and productive economic activities and conservation of natural resources can be complementary goals; and that collaboration and partnership work better than fences and fines. Some of these models have been presented elsewhere as success stories to bring to light some innovative approaches, strong community participation, and public-private collaboration. However, these only represent a select few. There are many more, whose stories remain untold, but their successes shine just as bright.

We also present some methods applied by COMPASS II during its implementation to help build community capacity, encourage community participation and strengthen their technical skills to enable them to become better stewards of their own natural resources. While there were many other methods and tools applied during project implementation to support the process of decentralization, capacity building, and enterprise development, we present only a select few. Important methods such as organizational development and community mobilization, participatory approaches to conservation, adaptive management, and communication and awareness building approaches among others were heavily utilized to move communities consciously toward sustainable resource use and conservation.

CBNRM MODELS

RESOURCE USE AGREEMENTS AND CONSERVATION: NYIKA

Nyika, meaning “where the water comes from” in the local language, is one of Malawi’s most important water catchment areas. It is also one of the most remarkable ecosystems in the country. Sitting at an elevation of about 2,500 meters above sea level, Nyika National Park is home to an amazing biodiversity of flora and fauna, including lions, leopards, elephants, buffaloes, zebras, large numbers of antelopes and over 435 species of birds and 200 types of orchids. The Park’s extensive savannah and marshes provide refuge to important migratory birds and endangered species, and protects such sacred places as *Mwanda hill* and *Kaulime Lake*, which have served as local spiritual sanctuaries for centuries. This unique, Afro- montane center of biodiversity, however, is under threat.



Figure 2: Roan Antelope, as seen in Nyika National Park

Widespread poverty combined with lack of access to productive alternatives have forced many of the area’s population to depend on direct use (usually uncontrolled and unsustainable) of its natural resources for their livelihoods. Poaching, deforestation, and uncontrolled forest and grassland fires exert pressure on the Park, increasing sharply when nearby communities experience a rise in economic hardship. About 40 percent of land surrounding Nyika is suitable for agriculture, leading many smallholder families, who struggle to make a living off of the land, to revert to the Park to make ends meet since many still feel the Park is theirs to begin with. The National park was gazetted in 1965 and expanded to a total area of 3,200Km² in 1978, at which time, centuries-old communities within park boundaries were resettled outside the protected area.

Although the National Park has been legally protected for a while now, lack of sufficient funds has prevented enforcement of the restrictions resulting in ineffective protection of biodiversity and habitat loss. The realization that social fences constructed in cooperation with surrounding communities are far more effective than the “fence and fine” approach, is quickly taking hold within the DNPW. COMPASS II/USAID support to combine conservation with small-scale commercialization of forest-based products has contributed to reinforcing this social fence, which is gaining in strength. In less than 2 years, 66.6 percent (213,044 Ha) of the Park has been demarcated as apiaries, areas within the National Park identified for productive economic activities and participatory management between DNPW and surrounding communities. Already, there are signs that this partnership is proving to be successful.

Central to the success of this partnership is the *Resource Use Agreement*, developed by COMPASS II/DAI. A Resource Use Agreement is a formal agreement, between the government and legally constituted community-group enterprises made up of producers of natural resources-based products. These agreements provide a legally binding mechanism for local people to enter the Park and harvest resources from within while sharing the responsibility for management and conservation of the area. The establishment of demarcated apiaries for community beekeeping enterprise now bolstered formally by resource use agreements has encouraged a behavioral shift.

Legislation to share responsibility for protection of these natural resources has been in place Malawi for more than a decade. Malawi’s legislation permits sharing of benefits from sustainable use between local communities and the government through co-management or collaborative management. In fact, in the early part of this decade, the DNPW with support from the GTZ-funded Border Zone Development Project (BZDP) established the Nyika Vwaza Association (NVA). The NVA was supposed to represent all the communities surrounding the Nyika National Park and the Vwaza Marsh Wildlife Reserve. As the community representative, the NVA entered into a collaborative management agreement with the DNPW. As legislated, the DNPW implemented its policy of revenue sharing with the NVA and permitted resource sharing of resources such as thatch grass and caterpillars.

However, the results the DNPW hoped to achieve through implementation of the collaborative-management had not materialized. A key reason was that whatever revenue that were being shared, was so little that it often failed to reach the very bottom of the revenue-sharing structure. When some revenue did trickle down to community levels, they were mainly spent on socially-oriented projects such as school desks and the like, which, while useful, did not contribute to people's livelihood at the household level. Secondly, the NVA over the years had also become generally unrepresentative of the wider community. Further, the NVA besides promoting messages of conservation seemed to be increasingly bogged down in bureaucracy to do little else. In short, with very little incentive to engage in collaborative management, communities had become disenchanted with the NVA-style of top-down collaborative-management. With alienation increasing, threat to wildlife and biodiversity in Nyika-Vwaza from poaching and burning was of little concern to local people. Rather, during lean times, poaching injected some cash into the local economy and provided a source of relatively cheap protein.

It is in this context, that the resource use agreements (RUA) came into play, providing a pragmatic approach to implementation of the overall collaborative-management strategy. The RUA became a bottom-up approach particularly since the birth of the concept was initiated by the request from the communities around Thazima Gate into Nyika National Park to reinvigorate their beekeeping. This request set off a series of meetings, facilitated by COMPASS II, between DNPW and the communities to formulate and implement a community-driven plan that resulted in the formalization of the Resource Use Agreement. Prior to its formalization, however, COMPASS assisted communities and their clubs to organize themselves into enterprises and to register their enterprises as legitimate small-businesses. Once they became legal entities, businesses such as processors were willing to partner with them. COMPASS helped broker formal, contractually binding business relationships between beekeeping enterprises and processors such as MzCPCU and EPL, where the processors agreed to purchase honey in large volumes from the beekeepers at market price. On the institutional side, the beekeeping enterprises signed affiliation agreements with NVA that created a formal tie between them, which endorsed and legitimized the beekeeping enterprises to formally and directly sign these RUAs with the DNPW. This was a big breakthrough since it gave communities authority to access the Park to engage in income-earning activities such as beekeeping in exchange for sustainably managing their defined area. Furthermore, an interesting feature of this model is that communities have agreed to share a percentage of the revenue earned from "bottom-level" activities like beekeeping with the NVA, perhaps to ensure that communities continue to receive what little they get from "top-level" activities such as tourism levies, concession fees, and Park gate-fees.

With the formal signing and implementation of the RUA, communities have successfully begun to exercise their access and are reportedly engaging, actively, in collaborative-management with the DNPW. Communities have now begun to view themselves as partners with the DNPW, and are enthusiastically and actively sharing conservation and management responsibilities. Park officials report that vandalism has reduced; poachers are more frequently being arrested and snares are confiscated by community members while monitoring their hives; and habitat management such as early burning is being carried out in concert with volunteers from surrounding communities. A total of 6,000 hives or so presently hang in the Park.

Further, with the demarcation of apiaries designated by enterprise, beekeeping members and their clubs, which comprise an enterprise, now feel a sense of ownership. The creation of such ownership has induced incentives to manage the apiary to optimize its suitability as bee pasture, which, at the same time, is also the management regime adopted to maintain biodiversity conservation.

A total of 1,688 households from 221 villages through 142 clubs are active members of the communities that take pride in the stewardship of their apiaries, especially given that they carry the potential to increase household income from sale of carbon credits and from honey production over the 40 tons they sold locally this year. These clubs belong to 8 formally registered Beekeeping Enterprises, through which they have finally earned the privilege as partners in the protection of the Park. Equally importantly, it has earned them freedom to be in places where their ancestral villages once stood and to visit old burial grounds and sacred sanctuaries. A part of the present-day Nyika National Park once held bustling villages.

REDD CREDITS BOOST COMMUNITY PARTNERSHIPS FOR BIODIVERSITY CONSERVATION

In tiny Malawi, two rural community groups are taking giant leaps toward conservation. These two groups, made up of 21 villages, are the first in the country to be successfully certified and registered, enabling them to sell forest carbon in the global voluntary markets. The two groups now have an estimated **1,510,729 tCO₂e** or tradable emissions reductions credits available for sale over 10 years.

Inspired by the promise of improved economic wellbeing from sequestering carbon, communities from around the *Mkuwazi Forest Reserve* in Nkhata Bay and Thazima, near the *Nyika National Park* in Rumphi have banded together in an effort to espouse better forest management practices and stewardship with support from **USAID's COMPASS II project**. These two community groups are actively implementing their *Plan Vivos* (community formulated participatory forest management plans) to stall the march of deforestation and forest degradation. These initiatives in *Mkuwazi Forest Reserve* and the *Nyika National Park* will not only protect the carbon sinks, but also contribute to safeguarding the ecosystems and biodiversity within.

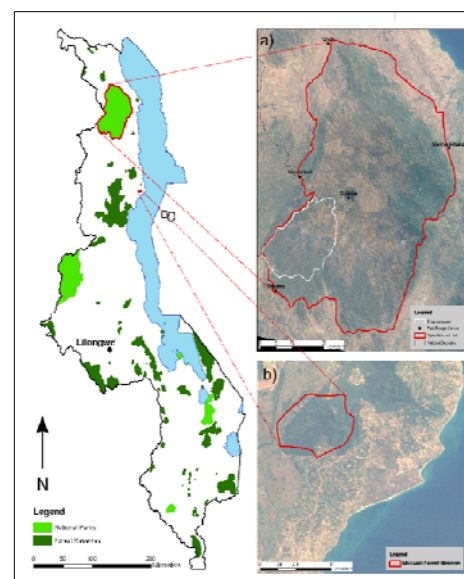


Figure 3: Pilot Sites in Malawi

Participation in a carbon sequestration project is a bold and challenging step for rural communities since their dependence on forests for fuelwood, charcoal production, and livelihood sustenance is a daily reality given the absence of affordable alternatives. But their commitment to veer away from uncontrolled subsistence-level extraction and move toward a more sustainable, “asset-management” of the Reserve and Park is real and strong. Selling carbon credits on its own provides inadequate incentives, particularly in a highly populous country like Malawi, to completely prevent the persistent acts of destruction rampant across Malawi’s Forest Reserves and Parks. However, it does offer the opportunity to add value to other livelihood options currently being pursued by community members. The possibility of a conservation premium makes economically productive activities such as beekeeping, ecotourism, wild mushroom harvesting, among others, more financially attractive. Conservation premiums funded through carbon credit sales are more likely to encourage innovative forest conservation and biodiversity protection because they help increase the benefits generated from conservation efforts to sufficient levels to make it more meaningful. The monetary benefits from carbon finance, whether shared directly with participating households and/or through local development projects (such as schools, clinics, bridges, tree seedling nurseries etc) that benefit the community at large, are encouraging behavioral change. Communities are now eager to collaborate in conservation strategies. Both the Mkuwazi and Thazima communities have now forged formal partnerships with the Department of Forestry and the Department of National Parks and Wildlife to jointly co-manage the two pilot sites, which are Government owned protected areas.

This public-private partnership between government and community has been formalized through legally binding *Resource Use Agreements* and *Co-management Plans*. These “agreements” bestow on the communities the authority needed to meet the shared responsibility of protecting resources from which they benefit. For the communities, the formalization of these agreements translates into changing attitudes and embracing conservation practices such as stopping uncontrolled deforestation, charcoal burning, agricultural encroachment, and general overexploitation of forests, which are perceived to be free for all.

Already, the communities are taking action and implementing sustainable practices using the *Plan Vivo System*, a community-based methodology pioneered by the UK-based **Plan Vivo Foundation**. The *Plan Vivo System* protocol applied by the Mkuwazi and Thazima communities enables them to access payments for carbon sequestration through the protection and restoration of standing forests within the Park and Reserve.

To ensure that these carbon benefits remain intact and all risks to permanence are managed properly, the two community groups are guided and assisted by a locally based project coordinator, the **Malawi Environmental Endowment Trust (MEET)**. MEET's role in the Plan Vivo System framework is that of an evaluator, verifying management and monitoring practices, assessing leakages, ensuring governance/revenue sharing plans are being adhered to, and providing training and technical guidance on adaptation and mitigation strategies with the support of local technical service providers such as the **Forest Research Institute of Malawi (FRIM)** and the Chancellor College based **Leadership for Environment and Development (LEAD)**. As the local monitor and project coordinator, MEET serves as the interface (on behalf of the communities) between the buyers of carbon credits and Plan Vivo Foundation, and reports directly and annually on the effectiveness of community-based conservation activities and their impact on the state of forest cover and carbon stocks.

A technical team inventoried the volume of forest carbon stock in Mkuwazi Forest Reserve (1,767 Ha) and the Thazima portion of the Nyika National Park (35,910 Ha) in late 2008. A verification team evaluated the data and set a baseline in early 2009. The team surveyed a total of 203 plots and measured a total of 3,733 trees and 908 pieces of woody debris. The forest cover in Mkuwazi is mostly miombo woodland (35%) and evergreen forests (34%), while the Thazima part of Nyika National Park is largely open grassland (58%) with 35% of cover with miombo woodland; the rest are evergreen forest and savannah (Berry et al., COMPASS II/USAID, Nov. 2008). However, with Malawi's deforestation tendencies, these forests may not be sustained for long. Malawi's deforestation rate ranges from 0.9% to 2.8% annually. In terms of total forest cover, various sources report that Malawi lost roughly 33,000 ha per year between 2000 and 2005, equivalent to 0.9% rate annually. The deforestation rate of the nation's primary forests is even more severe. If left unchecked, the county's forests could be degraded and deforested by 2040. The table below summarizes the carbon stocks, possible emissions reductions, and potential (ex-post & ex-ante) benefits for the two pilot sites. The emissions reductions arise due to avoided deforestation and degradation of standing forests motivated by the conservation activities and funded by sale of REDD credits promoted in the two sites.

	Mkuwazi	Thazima
Carbon stock of forested land (tC) ^a	188,195	875,061
Carbon stock of deforested land (tC) ^b	63,939	427,589
Potential carbon benefits of forest conservation (tC) ^c	99,404	357,977
Tradeable emissions reductions credits (tCO ₂ e) ^d	328,331	1,182,398
Annual ex-post payments for emissions reductions (USD) ^e	\$39,400	\$141,888
Annual ex-ante payments for emissions reductions (USD) ^f	\$197,000	\$709,438

^a Lower 95% confidence limit of estimated carbon stock

^b Assuming a carbon stock of deforested land equal to the upper 95% confidence limit of customary land in Thazima (18.46 tC), and a loss of 75% of forest area as even in the most severely threatened forest areas 100% deforestation is unlikely to occur

^c Assuming that project activities prevent 80% of deforestation

^d After converting tC to tonnes of carbon dioxide equivalent (tCO₂e), and removing 10% of credits as a risk buffer to insure against the permanence of emissions reductions

^e Assuming annual payments over a 50 year period at a carbon price of \$6 per tCO₂e

^f Assuming annual payments over a 10 year period at a carbon price of \$6 per tCO₂e

Source: COMPASS II Technical Report; November 2008

The stock estimates presented in the table are adjusted for possible leakage and also allows for a reasonable buffer stock. It further takes a conservative interpretation of available information to estimate the pilot sites' Voluntary Emissions Reductions (VER) potential. At present, several efforts are ongoing to conduct pilot sales, with most interest focusing on purchase emanating from the UK's voluntary markets. DAI, in collaboration with its UK partners as well as MEET, are continuing to support the sale of carbon credits now available from Mkuwazi and Thazima. By expanding income to participating villages through sustainable utilization of forest products, we can help reverse the trend of degradation, preserve biodiversity, maintain important watersheds and provide opportunities for livelihood in these two model districts of Malawi.

LAKE CHILWA: WHERE PUBLIC-PRIVATE PARTNERSHIP LED TO CONSERVATION OF LOCAL FISHERY.

On May 16th 2009, a small ceremony at Kachulu fish landing, a non-descript location in Zomba district, marked an historical event. The small-scale fishermen of Lake Chilwa signed the first-ever participatory fisheries management agreement with the Government of Malawi, represented by the Department of Fisheries. Lake Chilwa fishing communities take great pride, since this historical signing ceremony, officiated by the Director of the Department of Fisheries, recognizes their many years of effort in the practice of fisheries management in a complex environment.

Lake Chilwa, which is approximately 60 km long and 40 km wide, is not only surrounded by extensive wetlands, but also by three districts of Malawi and on the western side by Mozambique. With about 335 villages with close to 100,000 inhabitants, who are mostly poor, living around it, ensuring sustainable use of the Lake is a difficult responsibility.

Lake Chilwa used to be one of the most productive lakes in Malawi. But an increasing number of fishermen and poor practices applied in the lake environment have led to depletion of the fish stocks. As the larger fish disappeared, fishermen began to catch juveniles. When young fish or juveniles become the regular catch, fish are denied the opportunity to breed. This has resulted in fish stocks to plummet.

The decline in fish stocks and the commensurate decrease in income for fishermen did not go unnoticed by the fishermen themselves. In 2004, the fishermen asked the Department of Fisheries for a meeting to discuss the situation and to request help to form participatory fisheries management organizations in order to address the situation. The Department, in turn, requested assistance from USAID/Malawi's Community Partnerships for Sustainable Resource Management in Malawi (COMPASS II) for technical assistance. During the next four years, COMPASS II worked with the District Fisheries Offices in partnership with the fishermen themselves, to help establish the institutions necessary for participatory fisheries management to take hold so that sustainable fisheries could be rejuvenated in Lake Chilwa.

The participatory fisheries agreement officially transfers rights and responsibilities to the fishermen. The fishermen, fish traders and fish processors in Lake Chilwa organized themselves into Beach Village Committees (BVCs) and River Village Committees (RVCs) for those living near rivers. These in turn have formed fishermen's associations around the lake, two in Machinga District, three in Zomba and one in Phalombe. BVCs and RVCs elected their association executive committees through a process of secret ballots. The association then developed their constitutions and management plans, and were finally registered under the *Trusts and Trustees Incorporation Act*, which gives them legal identity and the right to sign agreements on behalf of the members. The participatory fisheries management plan for Lake Chilwa prepared through a consultative process involved fishermen of Lake Chilwa and district fisheries staff.

The associations are the forum through which fishermen can now discuss issues with the Department of Fisheries. The BVCs have the right to control fishing on their beach. They can issue permits to fishermen to fish on their beach and they can refuse fishermen from other areas access to their beach and stop them using illegal fishing gear, which does much damage to fishery. Illegal gears and such malpractices kill young fish before they can breed; they also disturb and destroy key vegetations in and around the lake, which are essential for the restoration of fishery, particularly Chambo, Malawi's most favored fish. By working with the Department of Fisheries to ensure good fisheries management on the lake, the fishermen have the opportunity to re-establish their fishery to its former productivity and prosperity.

It is well known that people take more care of something they own than of something that belongs to others. PFM agreements transfer the ownership of fisheries to the fishermen who use them. They give the right and responsibility to manage their fisheries sustainably to fishermen. It is to be hoped that as participatory fisheries management spreads throughout Malawi, it will signal a revival of the once thriving fishing industry so essential to the economy of the nation and to the livelihoods of rural households.

This is the first such agreement to be officially signed in Malawi. Fishermen around Lake Chiuta, in Machinga District and along the lakeshore in Nkhotakota District are waiting to sign similar agreements.

SMALLHOLDER FISH CAGE CULTURE PROGRAM

The fisheries sector is one of the most important sectors in Malawi. The sector supports thousands of people and contributes to the livelihood, employment, and household food security of, especially, Malawi's lakeshore communities. Fish, being part of Malawi's national identity and diet, is in very high demand as it is consumed regularly by all segments of the population as a source of food and protein. The country's per capita consumption (in 2001) is estimated by FAO at 3.6 Kg. per person per year, which continues to be far below the WHO recommended minimum requirement of about 13 to 15 Kg. This apparent decline in consumption is directly related to the decline in fish availability. It is said that Malawi's overall annual fish catch has dropped by over 45% since the late '80s, due to various factors including over-fishing, poor fishing practices and weak resources management. Fishermen who rely on capture fisheries throughout Malawi have seen a drastic decline in their catch of especially Chambo and related species in recent years. It is most likely that too many fishermen and the unregulated use of illegal gear (itself a reaction by fishermen to declining incomes as fish stocks are depleted) are the main culprits. The fishermen themselves point out that they are aware of this but see no other choice if they are to earn a living, knowing that stocks will continue to be depleted. To help address this challenge, COMPASS introduced the concept of cage culture, the first ever at the smallholder level in Malawi.

Cage culture or cage fish farming in Malawi was a relatively novel concept, first pioneered by Maldeco Fisheries, a parastatal private company based in the southern-east end of Lake Malawi. Maldeco's successful application of the technology for rearing tilapias commercially in offshore net cages on an industrial scale however remained within the company. The concept was not transferred to community levels, and in fact, while many marveled at the technology, many more perceived cage culture to be possible only at industrial scales and suitable mainly for big businesses.

The first attempt to demystify the concept of cage culture and help break the barrier to entry for small-scale participation was initiated in FY2007 in order to provide a solution for declining fish catch and livelihood options. In partnership with the Department of Fisheries, COMPASS II initiated pilot projects in areas including Lake Chilingali (Chikukutu), Kariba beach on Lake Malawi, and Unaka Lagoons in Nkhosha district with the aim of assessing the potential of commercial small-scale cage culture. COMPASS decided to proceed with the pilot demonstration because it recognized that smallscale fishermen would not spend money on a technology they had no direct experience of and which still required adaptation. COMPASS therefore absorbed the costs of the technology adaptation and transfer. Once successfully producing, the cages would act as a very convincing demonstration to others.

The pilot introduction of cage culture promoted the use of technology suitable for the local environment, and relied on locally available resources. Fish Cages are floating impoundments, where fish are reared in nets until ready for sale. COMPASS introduced two types of cages. The first was a medium-scale cage imported from Zambia, which was launched on the open waters of Lake Malawi. However, the Zambian cage proved to be unsuccessful since it was unable to withstand the consistent high winds and frequent violent storms prevalent in Lake Malawi.

The second type of cage was designed for inland water bodies and made from locally available materials such as wood, bamboo and drums (required to keep the cage afloat). While the wood and nets were sourced locally, the drums were donated by Illovo Sugar Company (Dwangwa and Nchalo) as part of a community partnership program struck between Illovo and local fishing communities. This community partnership is continuing even after project closure.

The wooden cage has begun to slowly catch on with local fishing communities since they now know how to construct it, and also understand the technology of cage



Figure 4: Pilot Fish Cages in Lake Chikukutu

fish-farming since it is not so drastically different from what they are already used to doing. Instead of paddling out to fishing grounds or beach seining to capture wild fish, they raise fish in nets in the lake or rivers for harvest when they reach marketable size. They control fish size and improve quality. Harvest time can be predicted, which is attractive to buyers. The income derived from sale of cage-raised fish will eventually allow fishermen to reduce their wild catch effort, which in turn should, allow fish stocks to recover in Malawi's water bodies.

However, while a more productive and therefore profitable option (cage culture) was made available to smallholders, the shortage of good quality, mono-sex fingerlings was continuing to drag down aquaculture growth in Malawi. The shortage of high quality, reliable and accessible fingerlings, despite several fingerlings producers in the country, remained the most critical challenge for fish farmers keen on making a living from it. In fact, almost all small-scale aquaculture programs and small-scale fish farmers' effort experienced the same struggle: unavailability of quality fingerlings at reasonable prices. The extremely high pricing strategy (Mk20-30 per fingerling of disputable quality) enforced by the handful of fingerling producers was choking the sector's growth potential.

The few hatcheries in place in Malawi are not able to offer good quality fingerlings, nor do they have a system of ascertaining parentage or sex of fingerlings to assure fish-grow-out business success.

To help unblock this severe constraint, COMPASS worked with the National Aquaculture center (NAC) to establish a modern commercial hatchery to produce 100% quality, mono-sex fingerlings with strong parentage. Assuring availability of quality, single-sex fingerlings from quality brood-stock can better assure fish-growth and therefore business success because male fingerlings have a higher growth rate. Fast growth rate is important for a fish grow-out business since profits can be registered with increased turnover. Malawi currently has approximately 7,000 ponds languishing with dismal production record, while cage culture is only now gaining in speed. With the operationalization of the hatchery, aquaculture in general, and cage culture in particular, will be able to benefit multiple folds since each cage, on average, will require at least 1000 fingerlings to be attractive and profitable, helping fish-farmers earn close to \$600 in gross margin per annum.



Figure 5: Modern Hatchery at NAC, Domasi

The modern hatchery at NAC in Domasi, utilizing state-of-the-art technology is designed to produce at least 1 million male tilapia fingerlings on a monthly basis. The hatchery is now complete. While trial runs have been conducted, the hatchery is scheduled to produce its first commercial batch of fingerlings at the end of the winter months, which begins in October/November in Malawi. Single-sex (male) fries (up to 3 grams) should be available approximately 21 days after hatching and a little longer for fingerlings that are larger than fries. Those fish-farmers interested in engaging in fish nurseries as a business can procure sex-changed fries at 2~3 gms, while those who want to engage in grow-out should be able to purchase larger-sized fingerlings from Domasi.

To ensure that the hatchery in Domasi is managed properly, three NAC technical staff members were sent to Thailand to learn, hands-on, all about fingerling production and commercial hatchery management. While in Thailand, the participants also visited small-scale Thai cage fish-farmers so that their understanding of cage culture was further enhanced. These three trained staff are now managing the hatchery, and are given the responsibility by the Department of Fisheries for its commercial operation.

With quality fingerlings now available and more productive technology accessible, commercial cage culture at the small-scale level is emerging as a promising area for mitigating the negative impacts of poverty. To make the option available to more fishermen, a cage culture expansion revolving loan scheme was further established by the Opportunity International Bank of Malawi (OIBM) in partnership with COMPASS II. Under this loan scheme, a total of 150 small-scale fish-farmers will be able to kick-start their cage culture business. To date, 30 such loans have been issued to fishermen in Nkhotakota District.

MKUWAZI ECO-TOURISM

In late 2008, fourteen members from four communities surrounding Mkuwazi Forest Reserve came together to form the Mkuwazi Eco-tourism association. This was yet another positive step taken by local communities toward conservation of the Mkuwazi Forest Reserve, while also benefiting financially from its preservation.

Mkuwazi Forest Reserve is located in Nkhata Bay District, bordering Vizara Rubber Estate to the south, and 20km north of Chinteche. About one thousand seven hundred Hectares (1,700 Ha) in extent, it is a rare remnant in Malawi of a once, more extensive lowland evergreen forest. Mkuwazi includes a combination of miombo, tropical and riverine forest, and is an important watershed for area rivers. It is also an important repository of biodiversity: it is home to at least two rare bird species – Gunning's Akalat and the bar tailed cuckoo, found in very few other areas in Malawi. A species of butterfly and one species of damselfly live only here and nowhere else on earth. In addition, colonies of blue monkeys call this their home, where on good days they freely perform amazing aerobatics through the treetops.

Unfortunately, as with many forests in Malawi, Mkuwazi Forest is coming under increasing pressure for the age-old hardwood timber it holds, for planks and curio-making, and for charcoal. In addition, the Vizara Rubber Estate is petitioning for all the land under the 600m contour of Mkuwazi hill to be converted to rubber plantation on the basis that the forest is under attack by loggers, charcoal-makers, and encroachment anyway. While logging, encroachment, and charcoal burning are very evident, it is precisely for this reason the Mkuwazi Eco Tourism Association was born for: To counteract the pressure and slow down damaging activities to help keep the forest intact.

Eco tourism was one of the economic alternatives promoted by COMPASS II/USAID in the area for conserving the forest. Honey production was another. However, COMPASS understood well that not all community members could or would want to be involved in bee-keeping. Eco-tourism was another option for increasing income, since the forest is located half-way between two tourist centers of Nkhata Bay and Chinteche. Chinteche is home to at least eight lakeshore lodges catering to relatively more up-market tourists from within Malawi and overseas. Chinteche Inn, managed by Wilderness Safaris, already manages birding tours into the Reserve, but feels that additional support could be needed to lead more tours in the Reserve. Nkhata Bay lodges on the other hand, caters to a younger and therefore less affluent crowd, mainly backpackers, some of whom stay for several days or weeks. None of the Nkhata Bay lodges offer birding tours or guided tours to the Reserve, but would be interested in offering the service to their guests. COMPASS II worked with the Eco-Tourism Association to link them to this untapped market.

With support from COMPASS II and backed by many Nkhata Bay and Chinteche Lodges, 14 community-members were trained by *Wilderness Safaris* on how to lead guided tours in the Mkuwazi forest reserve. These guides were trained to lead parties of one to ten tourists on half-day and one-day walks and possibly overnight camping within the reserve. Besides guided walks, other ideas were also explored, for example, combining excursions to select villages to witness traditional village life. The eco-tourism association was further trained to operate on a commercial basis, and encouraged to establish contractual links through service contracts with lodges, with agreed rates, a functional booking system and the like.

Promotion of this livelihood option was possible primarily because of agreements with the Department of Forestry since the Reserve is legally government property. Being state land, official access is prohibited without permission. That said, COMPASS working in partnership with the four GVHs, helped facilitate the establishment of co-management of the reserve between local communities and the Department of Forestry. The co-management agreement was based on resource use agreements with key resource users.

The Resource Use Agreement model, successfully used to formally link beekeepers and the Department of National Parks and Wildlife in Nyika National Park, was used in Mkuwazi to provide recognition of

the association, permission to carry out eco-tourism activities in the reserve and also to define the responsibilities of the association with regard to management of the reserve.

Once formalized, the Eco-tourism Association will have to answer to the Local Forest Management Board (LFMB) and the Block Committees, which are mandated, through the co-management agreement, to monitor and control all activities within the reserve. With formalization, and record of revenue generation, the association will be required to share some agreed amount with the LFMB.

In April 2009, the co-management plan for Mkuwazi Forest Reserve was officially signed by the Director of the Department of Forestry. With the signing of the co-management plan, local people now have a stake in the continued conservation of the forest. With such kind of empowerment, they are less likely to engage in damaging activities and more likely to prevent others from doing so. To some extent, the sense of ‘ownership’ instilled through co-management hopefully will encourage conservation.

However, given the levels of poverty affecting local people, the returns from co-management must financially benefit a majority of the population more than the continued overexploitation of the reserve. Despite the income-earning capacity of activities such as rotational logging, charcoal burning, and pole harvesting, the communities have agreed to preclude these from consideration. Other economic activities, such as honey production (on a small-scale commercial basis), eco-tourism, and carbon credit (REDD) sale, all are encouraged since all have the potential to provide significant revenue to those who practice engage in these activities. Moreover, all these activities are both non-destructive and rely on the continued health of the forest for their continued success.

Big Blue Lodge, Butterfly space lodge, Flame Tree Cottages, Makuzi Beach Lodge, and Chinteché Inn all supported the establishment of the Mkuwazi Eco Tourism Association. It is their way to not only contribute positively to income generation of local community members, but also to support the conservation of a very important lowland evergreen forest, Mkuwazi Forest Reserve.

AGRO-FORESTRY HOME GARDEN DRIP IRRIGATION PROGRAM

Starting in August, 2005, COMPASS II, in collaboration with five NGO partners, initiated a trial of drip irrigation technology for improving household food security and income for rural households in 13 districts. The activity has an HIV/AIDS cross-cutting theme, which required finding profitable enterprise options appropriate for those affected by the pandemic. It was this theme that led to the design of agro-forestry home garden field trials using drip irrigation in order to test the viability of introducing drip irrigation technology into chronically food insecure households of Malawi. The technology requires low levels of labor inputs and seemed suitable for HIV/AIDS affected families. The Agro-Forestry Home Garden drip irrigation program was introduced to help increase household income and improve food security of vulnerable or HIV/AIDS affected households through engagement in production of horticultural crops and green maize.

Drawing on DAI's successful experience with similar kinds of gardens using drip irrigation technology elsewhere in Africa, a program was initiated to test the applicability of the technology to rural communities in Malawi. DAI's success with drip irrigation especially in Zimbabwe and Ethiopia targeting HIV/AIDS-affected households to engage in urban home gardens became successful primarily because it was accessible and appropriate for nearly all segments of society due to: low capital requirements, low labor requirements, and high value production. In Malawi, the program was designed in such way that COMPASS supported procurement of 1000 drip irrigation kits for introduction in 13 districts to 1,000 vulnerable households through collaborating partners. The five collaborating NGO partners (NASFAM, SCF (USA), FHI, TLC and GOAL Malawi) were selected because of their existing reach and experience in providing social, health or economic services to the targeted population in Malawi. Furthermore, all five organizations had the necessary skills and resources to implement the program, ranging from selection of the beneficiaries to their training. The organizations were also fully on board with regards to carrying out on-going extension technical support, and providing first-line monitoring and evaluations of the trials that needed to be conducted.

In addition to implementing partners, COMPASS also engaged two local drip irrigation equipment suppliers (Variety Irrigation Center and Pipeco) and manufacturer (Pipeco) in the promotion of the technology since early impact assessment revealed that there were high potential for adoption and commercialization of the irrigation kits within the smallholder sector, especially for the production of green maize and horticultural crops. Requests and enquires on drip irrigation technology to the COMPASS office by interested partners were channeled to these two suppliers so that they could pick up on the demand for kits and services arising from the 13 districts.

Trials were implemented in the 13 districts of Mzimba, Dowa, Lilongwe, Mchinji, Balaka, Mangochi, Machinga, Blantyre, Mulanje, Thyolo, Phalombe, Chikwawa and Nsanje. The field trials were carried out with the support of USAID-funded Livelihood Enhancement for Agricultural Development (LEAD) Zimbabwe program where the program proved successful. Since the program was designed to comprise 15% woody component in order to promote use of low cost soil fertility improvement, COMPASS worked with Total Land Care (TLC) to support this component.

During project implementation, COMPASS with the help of collaborative partners carried out an assessment of the impact of the trial of agro-forestry home garden with use of drip irrigation technology with the intention of disseminating the results to interested parties, service providers and stakeholders. The assessment revealed that overall enthusiasm amongst the 1,000 households was high given that the participants were able to understand the positive income impact, the technology could have on their individual households. The impact assessment also showed that subsistence farmers were indeed able to increase income when utilizing this technology as they were able to grow vegetables with high local demand. Furthermore, many of the farmers who traditionally produced maize and vegetables under bucket, flood, or treadle pumps were most enthusiastic about the drip irrigation technology given that it was easy and simple to use. The most common crops that were grown during drip irrigation system trial were maize, tomatoes, onion, cabbages, mustard, Chinese cabbage, pumpkin leaves, beans and to a lesser extent amaranths and Irish potatoes. The trials showed that a 100 square meter drip kit with access to

reliable water source and some gardening experience had the possibility of making money for smallholders engaged in this activity.

Other approaches to transferring knowledge and technology were also supported by COMPASS. Appropriate extension training materials such as a manual, and information sheets were also produced to support expansion of the program. Suppliers and manufacturers were further encouraged to support the growth of the sector by attempting to keep cost of the kits as low as possible for the sake of affordability. Micro drip irrigation, despite its effectiveness in producing higher yields and high value crops of good quality, has until recently been inaccessible to poor, rural smallholder farmers, primarily because of the high initial investment required. In Malawi, availability had also been an issue. It is COMPASS' hope that with the successful introduction of this "new" technology in small-scale horticultural production, smallholders will be able to take advantage of the increasing demand for horticultural crops and off-season vegetables to improve their livelihood options.

Commercialized micro drip technology at smallholder level has real potential of evolving into a full-fledged livelihood activity through growing of high value horticulture crops, especially if the smallholders continue to focus on producing high value quick turnaround cash crops to achieve more than one cycle per year, and meet market quality, quantity and variety in a timely manner.

Overall, the project carried out the trials to achieve specific objectives. The immediate objective of the trial was to introduce and put to use a low cost, low-labor, intensive gardening system with use of appropriate drip irrigation technology to improve food security and household income to vulnerable or HIV/AIDS affected households in Malawi. To achieve the above objective, the program set a number of outputs to help attain the immediate objective:

- To increase production of food by participating households;
- To increase income for participating households by an average of US\$ 64;
- To assess the degree of economic, technical and social acceptance of the technology by small-scale subsistence farmers and other users and its affordability as this was a new technology;
- To assess technical feasibility of the type of drip kits distributed and used for the trial and make recommendations for commercial introduction;
- To build up a network of stakeholders and drip makers/importers involved to promote the drip irrigation technology in Malawi.

More details of this program and its results can be found in the following publications:

1. *Baseline Survey: Agro-forestry Home Garden Drip Irrigation Trial,*
2. *Drip Irrigation Trainers' Manual: March 2006*
3. *Impact Assessment Survey Report: Agro-forestry Home Garden Drip Irrigation Trial: April 2007*

THE MULANJE COMMUNITY WATERSHED PARTNERSHIP PROGRAM

In 2006, the Water and Development Alliance (WADA) of the Coca-Cola Company and the United States Agency for International Development (USAID) awarded a sub-grant of US\$ 261,000 for a one-year improved drinking water program in Mulanje District. The award was part of a world-wide commitment of the Coca-Cola Company and USAID to improve the water and sanitation situation of the world's poor, through enhancing access to improved water supplies, promoting sustainable management of watersheds and introducing appropriate sanitation technologies. USAID's alliance with Coca-Cola is a positive example of how public-private partnerships can provide localized support to those with the greatest needs for water and sanitation services while ensuring water resources are managed to serve future generations.

Launched in May 2006 by the Minister of Irrigation and Water Development, the Mulanje Community Watershed Partnership Program (CWPP), a Global Development Alliance project, was managed by Development Alternatives, Incorporated (DAI) on behalf of USAID/Malawi. Located in Traditional Authority Laston Njema in the south-east of Mulanje District, the CWPP simultaneously improved drinking water supplies for the people of 27 villages while encouraging improved management of the Chisongoli Watershed of Mulanje Mountain.

Mulanje Mountain — often called Malawi's "Island in the Sky" — is of national economic importance and considered to be of global environmental significance for its rich biodiversity. Mt. Mulanje produces abundant water resources that are of the utmost importance to surrounding populations and businesses, including extensive tea estates that have high economic value to the country. These water resources are now seriously threatened. Encroachment into both natural and plantation forest areas, uncontrolled burning, illegal logging, and unsuitable smallholder farming practices on the steep lower slopes of the mountain have adversely affected local water quantity and quality.

The Mt. Mulanje CWPP was based on three components:

- Improved water supply for the people of TA Laston Njema, utilizing perennial water resources originating from the Chisongoli watershed of Mulanje Mountain,
- Improved management of the forest within the watershed, through co-management and sustainable resource use, and
- Improved land management on the steep farmland outside the forest reserve, to increase incomes and reduce land degradation.

Working with a number of partners, notably including the Mulanje Mountain Conservation Trust (MMCT), Lujeri Tea Estates Ltd., Eastern Produce Malawi's Limbuli Estate, and Mulanje Peak Food, as well as with the Mulanje District Assembly Agriculture, Forestry and Water Development offices, the program achieved the following:

- The Pwera gravity-fed water supply scheme has been rehabilitated and now serves 17 villages comprising over 11,000 households with clean drinking;
- Three spring boxes serving Safari and Gladstone villages and Tengani and Sambani villages respectively now provide safe drinking water to over 1,000 households;
- Fifty nine drip-irrigation kits were procured to boost irrigated vegetable production in the eastern part of the area;
- Over 2,000 improved fruit tree seedlings have been distributed to 70 farmers, to initiate a planned major increase in fruit production in the area to encourage improved land use including conservation farming;
- Over 200,000 subsidized clonal tea seedlings have been provided to about 2,000 poorer farmers to expand the existing program of smallholder tea production to encourage improved land use;
- 60,000 rainforest species were planted in cleared areas during the 2007 wet season;

- Establishment of co-management (local communities and Forestry Department) of forest reserve in water catchment area in Mulanje Mountain, which will serve as the basis for long-term conservation efforts.
- Improved water governance through establishing water governance institutions in the form of 27 village water-users committee/group.
- Establishment of co-management (local communities and Forestry Department) of forest reserve in water catchment area;

Overall, as a result of this project, it is estimated that approximately 27,000 people have benefited from access to improved drinking water supply in an area where access was difficult. Women and children are the happiest since it is their role to carry water to meet a household's entire water needs.

The Mulanje Water and Development Alliance project demonstrated what can be achieved through forging partnerships between several organizations – government, non-government and private sector. The partnerships developed during this program not only broadened the scope of achievements feasible during a short implementation period, but also helped to ensure long-term sustainability of the activities and results.

Full details of this program can be found in *Mulanje Community Watershed Partnership Program: Final Report. August 2008.*

METHODS:

DEVELOPMENT PATHWAYS

In order to engage in resource management of any kind it is essential first to know what resources are available. COMPASS II needed to know the location of resources within its target districts that could provide the best return on investment, both USAID's investment and local communities'. To achieve this goal, DAI applied a concept, **Development Pathways**, as an organizing tool to guide CBNRM investments toward those areas that presented the greatest opportunities for natural resource-based enterprises relying on either consumptive or non-consumptive use of resources by present and future generations of Malawians. The tool provided a way to identify the most viable enterprise options for a given area to demonstrate the financial and economic incentives to maintain biodiversity.

Much of the information required to develop the tool and establish pathways for Malawi were obtained through analysis of satellite imagery, biodiversity data and market accessibility. The process, summarized below, is detailed in *COMPASS Occasional Paper No. 1: Development Pathways. Andrew Watson, 2004.*

In brief, the most recent (2002) hard-copy satellite imagery was analyzed to identify areas of remaining forest and extensive wetlands in the country, and determine land use patterns and land cover in the 15 districts that were being targeted. This land-use baseline identified natural ecosystems that represent the highest conservation priorities and the best opportunities for promoting sound natural resource management. The baseline also showed areas where human pressures on the resource base were highest and areas where intensive agriculture had resulted in the conversion of natural ecosystems into farmland. These patterns of land use were all key factors that aided COMPASS II to prioritize and tailor the types of interventions that would best support conservation objectives and promote sustainable increases in rural livelihoods through sound natural resource management.

Having established this baseline, the land use and land cover units were ascribed specific "development pathway" classifications and supplementary criteria such as protection status (as National Parks, Wildlife Reserves and Forest Reserves), environmental fragility, ecosystem health, and access to markets (using information on road networks) were used to refine the maps to meet COMPASS II's needs. All this information was mapped into a single layer. Data related to biodiversity, in particular boundaries of protected areas, were added to differentiate between areas with potential for natural resources-based enterprises from those with important biodiversity, which needed a high degree (priority) of conservation. Additional layers of data were obtained from sources such as the poverty baseline prepared by the National Statistical Office and IFPRI and from field assessments undertaken by the COMPASS II team in conjunction with partner organizations in the districts.

Finally, as COMPASS' focus was on establishing small-scale business based on natural resource products as the driver for conservation, and since successful enterprises needed access to good markets, a layer quantifying access to markets was prepared. Using the criteria elaborated above, each target district was characterized into four main development pathways:

- Conservation enterprise
- Natural resources-based enterprise
- Agriculture
- Agro-industry

Where:

Conservation enterprises (C) are non-extractive and minimally disruptive. They include ecotourism, low-impact harvesting of arboreal species (for seeds, medicine, or honey), environmental services (such as water quality control), and scientific or educational functions that depend largely on conservation.

Natural resource-based enterprises (N) include sustainable fishing and extraction of timber, non-timber forest products, essential oils, and grasses. NRBEs also encompass certain agro-forestry activities and can include household and local processing to add value, such as making hardwood curios.

Agriculture (F) includes cultivation of food crops, horticulture, fruits, spices, fish, seeds, specialty tea, coffee, medicinal species, and nurseries.

Agro-industries (B) comprise value-added processing of any of the above products, including but not limited to drying, juicing, fermenting, packaging, and machining.

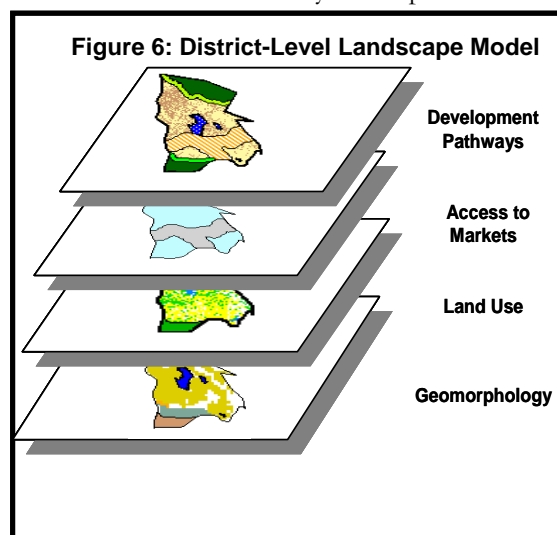
The first two pathways (conservation and natural resource-based enterprises) were further separated into two each to identify high priority conservation and high potential NRBEs, thereby bringing the total pathways to six. These six development pathways guided COMPASS' selection of sites for intervention throughout the life of the project (See table 23 below).

Table 23: COMPASS II Target Areas

District	Location	Development Pathway	Sector	Comments
Chikwawa	Shire escarpment	Natural Resource Based Enterprise	Forestry	Completed
Chikwawa	Majete WR	Conservation enterprise	Wildlife	In collaboration with Africa Parks
Mulanje	Mulanje Mountain	Conservation enterprise	Water	Part of the WADA ²¹ MCWPP ²²
Mulanje	Mulanje Mountain	Conservation enterprise	Forestry	In collaboration with MMCT ²³
Phalombe	Mulanje Mountain	Conservation enterprise	Forestry	In collaboration with MMCT
Phalombe	Lake Chilwa	Natural Resource Based Enterprise	Fisheries	Management agreement signed
Zomba	Lake Chilwa	Natural Resource Based Enterprise	Fisheries	Management agreement signed
Machinga	Lake Chilwa	Natural Resource Based Enterprise	Fisheries	Management agreement signed
Machinga	Lake Chiuta	Natural Resource Based Enterprise	Fisheries	Management plans completed
Ntcheu	Escarpment	Natural Resource Based Enterprise	Forestry	In collaboration with BERDO ²⁴
Lilongwe	Sendwe	Natural Resource Based Enterprise	Forestry	Management agreements signed
Nkhotakota	Nkhotakota WR	Conservation enterprise	Wildlife	Management plans completed
Nkhotakota	L. Malawi, L. Chikukutu, Bua River	Conservation enterprise	Fisheries	Management plans completed
Kasungu	Kasungu NP	Conservation enterprise	Wildlife	Resource Use Agreement signed
Nkhata Bay	Mkuwazi FR	Conservation enterprise	Forestry	Co-management agreement signed
Nkhata Bay	Escarpment	Natural Resource Based Enterprise	Forestry	No management plans produced
Nkhata Bay	Kandoli Mountain	Natural Resource Based Enterprise	Forestry	Strategic Forest Area Plan prepared
Mzimba	Hora Mountain	Natural Resource Based Enterprise	Forestry	No management plans produced
Mzimba	Kabunduli	Natural Resource Based Enterprise	Forestry	No management plans produced
Rumphi	Nyika NP	Conservation enterprise	Wildlife	RUAs signed
Karonga	Nyika NP	Conservation enterprise	Wildlife	RUAs signed
Chitipa	Nyika NP	Conservation enterprise	Wildlife	RUAs signed

COMPASS' initial approach involved identifying the broad areas of focus in each target district. We used the Development Pathway approach to identify areas with potential. Within the development pathways, COMPASS II identified promising examples of attempts to implement CBNRM by communities. Many of these, though not all, had been initiated or supported under COMPASS.

The following Figure (6) provides a graphic representation of this concept. In the example, COMPASS II's approach employed the technical tools of GIS that allow users to visualize and analyze complex landscape scenarios. The landscape approach is a powerful tool for understanding, designing, introducing, and monitoring appropriate interventions. The methodology integrates the key variables of traditional landscape analysis: geomorphology (the structure of the landscape), prevailing land-use patterns (the current function of that landscape), and, critically, market access (the potential for increasing the landscape's value). Combining these elements yielded a sharp delineation of the types of enterprise or intervention that made the most sense and offered the greatest potential: the



²¹ Water and Development Alliance
²² Mulanje Community Watershed Partnership program (see Section 4)
²³ Mulanje Mountain Conservation Trust
²⁴ Bwanje Environmental and Rural Development Organization

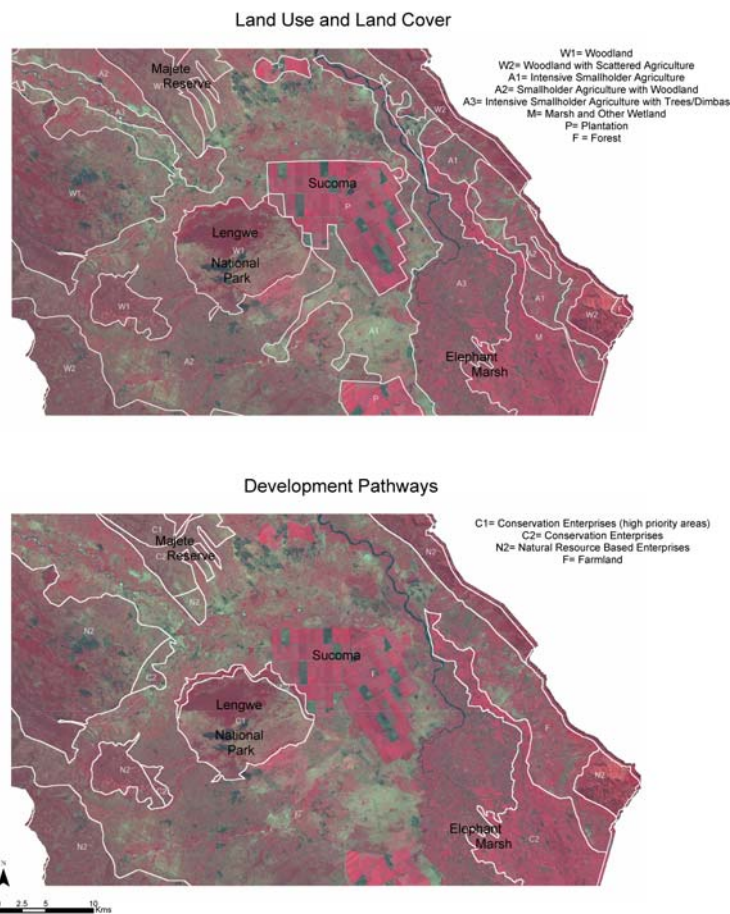
“development pathway.” The landscape approach also meshed perfectly with the GIS support provided by COMPASS II, using the same techniques of data acquisition and mapping. These GIS techniques facilitated the orderly and visual management of data that have a spatial character, thereby helping the COMPASS II team plan, implement, and monitor the changes that are being promoted. Most importantly, it enabled the visual presentation of complex data, which greatly facilitated local decision making.

Figure 7 shows a satellite image of part of the Lower Shire valley south of Kapichira Falls, extending to near the southern end of the Elephant Marsh. It captures the rich complexity of the landscapes covering parts of Chikwawa District that include the Elephant Marsh, Lengwe National Park and the Majete Wildlife Reserve, and several small forest reserves. Evidence of human transformation of the landscape includes smallholder agriculture, sugar cane estates, and the severely deforested escarpment below Thyolo Mountain Forest Reserve. Within this complex mosaic, there are multiple opportunities for developing the rural economy, but many intricate variables must be understood. This is where the landscape approach offers a powerful tool to assist in the analysis and planning of natural resource management and environmental issues at the district level. As shown schematically in Figures 2 and 3, COMPASS II mapped different components of the physical and socio-economic landscape. These maps were then used to target development interventions according to the “development pathways.”

Development pathway mapping assisted COMPASS II target its activities and customize its interventions in order to maximize results and impact. This approach to spatial planning can be readily adopted by local jurisdictions and can help them move toward an “asset-based” approach to development that treats natural resources as economic opportunities rather than “problems” that need to be mitigated. Most importantly, the pathway maps are an important baseline for community mapping, which enables rural communities work with local authorities to identify natural resources to which they have access and develop appropriate management plans that enables wealth creation from the sustainable utilization of the resources.

This approach to spatial planning within the context of natural resource management and agriculture development will help channel scarce resources to activities and locations where they are most likely to succeed and achieve sustainable impact. The approach can be used as a springboard for applying "appreciative" techniques when working with local jurisdictions and rural communities. Community mapping then follows as a natural next step for identifying local assets in a fully inclusive and participatory manner. These approaches help build consensus for tailoring interventions that will improve natural resource management in an environmentally, economically and socially sustainable manner.

Figure 7: Illustrative Landscape Approach
Chikwawa District around Lengwe National Park



COMMUNITY RESOURCE MAPPING

Community Resource Mapping helps communities visualize the resources they have access to, the location and extent and the condition of those resources. Such information are important since communities also need to know what resources are available to them, what needs managing and what and how much can be harvested, and where these resources are located. COMPASS adopted *Community resource mapping* combined with *Participatory forest resource assessment* as two community resource appraisal tools to help rural people establish this information.

Community Resource Mapping is a powerful tool for communities to use in identifying their resources and to guide their decisions about CBNRM investments that add value to the resources they have at their disposal. To achieve the Government's stated goal for increased devolution of natural resource management, each community must have a solid understanding of its customary land resources.

Community mapping is a highly participatory process and when the stakeholders combine this with the participatory forest resource Assessment approach, they find it much easier to identify the borders or 'edges' of known land holdings, conduct inventories, and assesses customary land resources. *Participatory Forest resource Assessment* is a process that assists communities, in collaboration with technical experts from Forestry Department, to quantify forest resources and work out management needs and sustainable levels of extraction.

The result is a detailed and spatially correct map of a village (or other unit) community area with all salient features, i.e. those related to natural resources and those of importance to the villages, clearly illustrated. A community map is a transparent tool that all community members, including those with limited literacy can use to inform discussion regarding sustainable utilization of village assets that better ensures adequate resources for future generations. Community-generated maps provide an empowering way to obtain genuine participation by all community members, regardless of literacy levels or scientific understanding. This technique proved to be received very well by communities and helped them gain a real understanding of the spatial distribution and extent of their resources, information that was crucial for effective resource management planning.

Participatory forest resource assessment is a form of forest inventory adjusted to the capacity and needs of the people living in and around woodlands and forest. In brief, the process requires communities to initially identify their priorities in relation to the woodlands they will manage – what resources they need, how much, when, and what was their relative importance. Then, within sample plots in their forest, they identify the species available, count and measure. The data is displayed as a matrix that provides the basis for establishing a rough but adequate estimate of the state of the forest and the relative abundance of the species that are useful.

Community mapping together with traditional participation tools promotes a common understanding of customary resources. Community members work together in small focus groups to create a sketch map of their land holdings on a flip chart, blackboard or in the soil. These sketch maps are discussed in the larger group setting where land resources are identified and valued. Community maps are enhanced using modern GIS, satellite imaging methods and global positioning systems (GPS) technology, allowing for greater precision in identifying and quantifying land resources and other important features. A village transect provides a basis for discussion regarding community resources and also serves as an approach to overall map validation. The community map is the physical and visual representation of collective community knowledge that is used to manage shared resources.

A validated community map will help to rationalize shared resource investments including natural resource management agreements with district governments. As communities improve understanding of the new land laws for example, stakeholders can work together to develop management plans aimed at increased marketing efforts of natural resource-based products consistent with government objectives for sustained natural resource conservation.

APPRECIATIVE INQUIRY

Appreciative Inquiry is a development process that encourages the deliberate discovery of collectively combined capacities. It guides organizations and groups in discovering “best experiences” in order to align strengths to build even greater future capacity.

It focuses on strengths and resources, rather than deficits and problems. It encourages focusing on healthy working parts rather than the malfunctioning, ailing broken parts. It is a strategy for purposeful change that identifies the best of “what is” to pursue dreams and possibilities of “what could be.”

Appreciative inquiry engages people in a cooperative search for strengths, passions, and life-giving forces that are found within every system – those factors that hold the potential for inspired, positive change.

Appreciative inquiry can be used anytime a group seeks to “lead with the positive” to explore some aspect of itself in order to positively influence its future

Appreciative Inquiry:

- Is the deliberate discovery of collectively combined capacities
- Seeks to create an alignment of strengths that make weaknesses irrelevant
- Is about the liberation of capacity
- Is more comfortable in settings that are comfortable with risk than with regulation
- Is based on reverence for life
- Is an inquiry process that tries to understand the factors that give life to a living system and seeks to articulate those possibilities that can lead to a better future.
- Is more than a technique or method. It is a way of living with, being with, and directly participating in the life of human systems – inquiring into the deeper life-generating essentials and potential. It is NOT another organization development (OD) intervention, but is a new approach to existing OD interventions such as team building, strategic planning, organizational restructuring, evaluation, coaching, etc.
- Invites us to choose the positive as the focus of inquiry. Most of us have been educated in deficit-oriented, problem-based approaches that emphasize looking for the obstacles or gaps – the dysfunctions in a situation. Therefore, we may meet disbelief, and even resistance, to the suggestion that we can more effectively “solve problems” by focusing on the positive as a core value.
- Is a strategy for purposeful change that identifies the best of “what is” to pursue dreams and possibilities of “what could be.”
- Is a cooperative search for strengths, passions, and life-giving forces that are found within every system – those factors that hold the potential for inspired, positive change.

Appreciative Inquiry can be used in a “big way,” with a whole community or region, or in many small everyday ways. It is also used with many sectors, such as health, business, agriculture, social services, and community-based natural resource management. For example, projects and programs in health, community development, agriculture, education, community-based natural resource management, and others have utilized participatory evaluations that have an “appreciative lens or framework” to enable stakeholders to focus on project or program strengths. Through analyzing strengths and successes, stakeholders develop an understanding of those forces or qualities that give life to the program (or project or organization). When utilized as a process for evaluations, appreciative inquiry leads to learning and invites future application of qualities and conditions that fostered success in the past.

Other organizations in the above sectors have also utilized appreciative inquiry in strategic planning and managing organizational change. The process has helped projects in transition to identify “the best” of the past that they want to carry forward into the future. Thus AI has been useful in managing change as well as for planning for the future.

Through the introduction of assets-based approaches to development, as opposed to deficit- and problem-focused approaches, Government and NGO partners can help to break the cycle of dependence on outside assistance, and strengthen community self-reliance and sustainability.

Appreciative inquiry focuses on the life-giving, working, constructive aspects, while problem-focused approaches focus on pathology or broken parts. AI is also more holistic. It is not a one-time intervention, but encourages a shift in attitudes toward renewal and change.

Problem-focused approaches and assets-focused approaches also spring from fundamentally different paradigms and different worldviews. Problem-focused approaches assume progress comes from fixing the broken parts, while assets-based approaches focus on the healthy and whole to constructively move the group forward to the future. Other differences include:

Problem-focused Approaches

Focus on what is wrong or broken; build on needs; is problem or deficit-focused; look more to outsiders for assistance; look backward to what went wrong in order to fix it; attempt to find “solutions” to problems, which may be little more than guesses; view a community as an endless list of problems and needs can lead to the fragmentation of efforts needed to provide solutions; rely on needs to get resources, can encourage making problems seem worse – worse than last year, worse than someone else’s, etc. in order to get the attention of resource-bringing resources.

Assets-based Approaches

Focus on what is strong and working; build upon strengths; look more to internal resources; look for what is going right in order to move forward toward a more positive future; see future direction growing out of past success -- grounded in reality, experience, and history – thus people can repeat successes; encourage connecting and reinforcing assets, leading to sustainable actions

Appreciative Inquiry has five principles and five generic processes. These together form the essential parts of the approach. The five principles are:

1. **Constructionist Principle:** We create the future through our ideas and imagination. Language is the tool with which we create and make things meaningful, and reveal possibilities. We create what we can imagine.
2. **Poetic Principle:** An organization’s past or present or future is an endless source of learning, inspiration, interpretation, and possibility. An organization is not a “problem to be solved” but a “mystery to be embraced.” Story telling is a valuable way of gathering holistic data that captures not only facts, but also feelings and affect.
3. **Simultaneity Principle:** Inquiry **is** change. They cannot be separated. In asking a question, we are at the same time creating change. By our inquiry, we plant the seeds for co-creation, collaboration.
4. **Anticipatory Principle:** Organizations exist in the collective imagination of the members. Human beings move in the direction of inquiry, as plants move toward the light. The most important resource we have for generating constructive organizational change is our collective imagination and our discourse about the future.
5. **Positive Principle:** The more positive the question asked, the more positive the storytelling and data; the more positive the storytelling, the larger the numbers of people willing to come together to co-create the future, to find common ground.

The five generic processes are:

1. Choose the positive as the focus of inquiry
2. Inquire into stories of life-giving focus
3. Locate themes that appear in the stories and select topics for further inquiry
4. Create shared images for a preferred future; and
5. Find innovative ways to create that future.

COMPASS II encouraged the use of the *Appreciative Inquiry* where it fit, to bring about change. The approach is detailed in COMPASS II Occasional paper No. 5: *Communities Building upon What They Do Best: An Appreciative Inquiry Approach To Community-Based Natural Resource Management*. Dian Svenson and Nobel Moyo, 2005.

PARTICIPATORY RESOURCE MANAGEMENT

One of COMPASS II's primary tasks was to support implementation of government's policies related to community involvement in the management of natural resources within three sectors: forestry, fisheries and wildlife. Each sector uses its own terminology: in the forestry sector Community-based Forest Management (CBFM) is used when discussing community management of trees on customary land but Co-management is the term applied to community participation in management of state forest reserves; in the fisheries sector the term Participatory Fisheries Management (PFM) is used; while in the DNPW terms the local people's involvement in management of protected areas Collaborative Management. Participatory Resource Management (PRM) is used here as a generic term to describe all forms of community management of natural resources.

There are also significant differences in the way the different departments put participatory resources management into practice. CBFM, for example, effectively hands full management responsibility and utilization rights (for domestic purposes) for customary land forest to the communities on whose land the trees are growing. Co-management of forest reserves and collaborative management of protected areas on the other hand provide people legal access to defined resources, requiring a level of cooperation in management activities in return but government retains full ownership of the resources and control of management activities.

The three key sectoral agencies have all established policies that are very supportive of participatory resources management. All have robust legislation that translates these policies into law. The necessity in Malawi of encouraging and legislating for community involvement in natural resources management cannot be doubted. Unlike other countries in the region, Malawi's protected areas and forest reserves are not surrounded by buffer zones. In Malawi, intensively cultivated farmland supporting tens of thousands of people usually abut these areas. Local communities continue to illegally access resources from within these areas, be it dead wood for cooking and mushrooms for relish, to wild animals for bush meat and hardwood trees for timber. Capacity for enforcement is very limited and general poverty, even amongst those supposed to police the reserves and parks, means bribery is an effective means of avoiding arrest even when illegal activities are discovered. And since protected areas are owned by the state, they are fair game for local people (whose families may have been evicted from them at the time of gazetteing).

Customary land forest has all but disappeared from many areas in the south and central parts of the country, and even in the north and those areas in the south and center where woodlands still remain, the area and quality of these woodlands is rapidly declining. While local people may be partly to blame (and in some areas remaining customary land forest is being converted to farming for migrants from other areas), it is the demand for charcoal and firewood in the urban centers that is driving deforestation. Without rights for management and control of access, local people have no way, nor incentive to stop the degradation, even though it might concern them as availability of firewood and building poles decline.

Malawi's fisheries reflect the same problems, except that the situation is worse and perhaps irreversible in some areas. The Lake Malombe Chambo fishery collapsed some years ago, and most other water bodies in Malawi are in danger of following suit. There are too many fishermen, using increasingly damaging and illegal gear (as the legal gear catches fewer and fewer fish, because fish sizes are declining as a result of over-fishing). Once again Department of Fisheries' capacity to enforce regulations is severely constrained and, without PFM, fishermen have no way of controlling access to their fishery or taking part in enforcement, even if they wanted to. When communities practice PFM, the situation is different as demonstrated by Lake Chiuta, which will be discussed in detail in subsequent sections below.

Detailed analysis of participatory resources management can be found in a number of COMPASS and COMPASS II publications including:

- COMPASS Occasional Paper No. 3: *Decentralization and CBNRM: Framework for a review of progress, challenges and opportunities*. Tony Seymour, 2004;
- COMPASS Occasional Paper No. 4: *Decentralization and Fisheries: A review of progress, challenges and opportunities for CBNRM in the fisheries sector*. Tony Seymour, 2005;

- The Nkhotakota Lake Fishery: *A strategy for PFM, institutional development and development of an offshore fishery*. Tony Seymour, 2006;
- COMPASS Document 78: *Participatory Fisheries Management*. John Wilson, 2004;
- COMPASS Document 14: *Grassroots Advocacy for CBNRM Policy Reform*. Janet Lowore and John Wilson, 2000
- COMPASS Occasional Paper No. 8: *Forest Policy and Decentralization*. Alastair Anton, 2005.

Successful PFM in Lake Chiuta

One of the most successful examples of participatory resources management in Malawi is the Lake Chiuta fishery. This small lake in the south-east of Malawi, shared with Mozambique, has been the setting for grass-roots implementation of community resource management. COMPASS Document 78 describes the history of how PFM began there. By the end of COMPASS II in 2009, the fishermen on Lake Chiuta were continuing to manage their fishery for their own benefit – and that is the key to their success. When their livelihoods, based almost solely on harvesting fish from the lake, were threatened by immigrant fishermen from Mangochi and elsewhere, using damaging gear, the Lake Chiuta fishermen made their own regulations, enforced them and restricted access to the fishery for non-Chiuta fishermen. They controlled who were allowed to fish on the lake and what gear and fishing methods were permitted; they exercised complete influence over management of the fishery in the lake.

Three factors contributed to the success of PFM on Lake Chiuta: a felt threat to the livelihoods and income of the local fishermen; the ability to restrict access, and in effect, take ownership of the resource; and the absence of third party interference in how the fishermen developed and established their fisheries management system.

CBFM on the other hand, hasn't had as much success. In principle, CBFM is easy to establish. With the correct institutions in place – and these institutions are relatively straightforward to establish – the Department of Forestry transfers most management and access rights for forest on customary land to local communities, the owners of the land (with a CBFM agreement), the trees belong to government unless someone or group has planted or cared for the trees. They can then extract resources, based on an agreed management plan, for their own use. However, there is a struggle in enforcement between community and district level government, primarily because management plans that determine resource use, in the case of forestry, are mostly driven by VNRMC in conjunction with the forestry department personnel at the districts.

There are, of course, a number of successful examples of CBFM. Some of these are listed under COMPASS Best Practice Sites (see Annex A-1). The Kam'mwamba Community in Mwanza, Makalani Village in Dowa, Mangweru Hill, Lirangwe in Blantyre District, Sendwe Hill in Lilongwe District, and the Mkuwazi Forest Reserve in Nkhata Bay are all successful examples of CBFM. Although they differ in the details, all have broadly similar set of characteristics: they were initiated by the local people as a response to a threat to their livelihoods or an interest in increasing their income earning options; the whole community was involved from the beginning; committees only being formed *after* agreement was reached on the broad outline of what needed to be done; they all provided improved livelihoods and, in some cases, income for the people involved, immediate return or in a short time; and in most places, external agencies became involved only *after* the projects were initiated, at the request of the communities.

The example of beekeeping around Nyika National Park is another example of successful PFM and highlights the key factors that have led to its success. In the early part of this decade the DNPW with support from the GTZ-funded Border Zone Development Project (BZDP) established the NVA. The NVA entered into a collaborative management agreement with DNPW for Nyika National Park and Vwaza Marsh Wildlife Reserve. Village and Zonal Natural Resource Committees were set up at group village and TA level. The DNPW implemented its policy of revenue sharing with the NVA (the only protected area in Malawi where this is being done) and permitted sharing of resources such as thatch grass and caterpillars. Beekeeping clubs were established but apparently without business orientation, organizational capacity or robust markets for their honey.

The NVA and its associated committees suffer from the same shortcomings as many VNRMCs in the forestry sector. They are generally unrepresentative of the wider community. They promote the message

of conservation yet few if any benefits flow to the communities around Nyika and Vwaza as a result of this. While revenue sharing is in place, the total amount accrued to each individual is either too small to be meaningful or what income is earned is on socially-oriented projects such as school desks, which, while useful, do not meet immediate household needs.

In short, the incentives were not sufficiently attractive for people to engage in collaborative management, the institutions had been imposed from outside and since the government exercised the “fence and fine” approach to demarcate “their” ownership, the threat to the wildlife and biodiversity of the two areas from poaching and burning was of little concern to local people. Rather, poaching injected some cash into the local economy and provided a cheap source of protein.

At first, this situation seemed unpromising for establishing PFM in Nyika. But the rising interest of Thazima beekeepers to reinvigorate their beekeeping reinvigorated the PFM process. They submitted a request to COMPASS II by way of DNPW for assistance. Secondly, given COMPASS assistance to Mzuzu Coffee (MzCPCU) in the honey sector, the honey “market pull” was beginning to work. Mzuzu Coffee was beginning to purchase honey from beekeepers in the area.

COMPASS assisted the clubs to organize themselves into enterprises and to register their enterprises as businesses. COMPASS also brokered formal, contractual relationships between the beekeeping enterprises and MzCPCU. On the institutional side, the beekeeping enterprises signed affiliation agreements with NVA that created a formal relationship between them and also signed Resource Use Agreements (RUAs) with DNPW that committed the beekeepers to engage in collaborative management activities while giving them the right to access their apiaries. Although there is no question of ownership of the land itself being handed over under collaborative management, RUAs do require that the apiary area of each beekeeping enterprise is defined. Only beekeepers from that enterprise were allowed to hang hives in their apiary, which created a *sense* of ownership and an incentive to manage the apiary to optimize its suitability as bee pasture, which, at the same time, was also the management regime adopted to safeguard biodiversity.

MALAWI GOLD STANDARD (MGS) PRODUCTION SYSTEM

COMPASS initiated the Malawi Gold Standard (MGS) Production System as both a model for profitable small-scale commercial production and a set of extension training materials for disseminating the model to small-scale producers in suitable areas of Malawi. The objective of developing these tools and methodologies was to help enlarge the natural resource-based products sector through increased decentralized provision of business services to rural enterprises. The aim was to increase the availability of private extension service providers, who could offer technical skills, for a fee, to small-scale producers interested in entering into commercial production or expanding their production using improved technology to ultimately create income from natural resources.

The Malawi Gold Standard production system model was designed to kick-off a number of series of titles/systems to encourage widespread replication of successful production models applicable for rural as well as urban areas targeting small-scale producers. For example, under COMAPSS II, the project initiated two successful production systems under the MGS imprint; one for **Beekeeping** and the second for Pond-based **Aquaculture**. Each title in the series consisted of three pieces:

1. A Training Manual
2. A Practitioner's Handbook
3. A Business Management Planning manual

The first piece, the training manual covered all steps in the production system, pictorially to make it easily understandable to even the illiterate, to demonstrate the management practices that distinguish successful producers. The training manual was made available in print and DVD. The second piece, the practitioner's handbook was developed to serve as a reference book for those undergoing training. It included well-illustrated details on each step required in the successful production system. The third piece, the business management plan was developed to demonstrate the financial viability of the MGS production model. It was also used to guide producer groups through loan servicing, bookkeeping, production records systems and other aspects of handling the business side of their production system. The extension material also helped in the training of loan officers and branch managers from two major financial institutions, since the simple steps required in production contributed to their better understanding the potential borrowers' constraints and business model, so they could make better informed risk assessments of loan applications.

The MGS production systems can be replicated easily by small-scale commercial beekeepers for optimal profitability. The MGS systems were designed to move subsistence producers to becoming profitable small-scale commercial producers, using technology appropriate to conditions in the rural areas of Malawi. Both MGS production systems for Honey/Beekeeping and Aquaculture have proven to be successful with demand increasing every year. At the close of COMPASS II, the title for the Aquaculture MGS production system was transferred to the *National Aquaculture Center* to augment their "learning center," and the rights for MGS production system for beekeeping was transferred to the *Malawi Bee Products Association*, an industry association representing Malawi's honey processors, the MGS service providers in beekeeping, support business providers such as bee-suit makers, smoker manufacturers, hive producers, as well as banks and beekeepers themselves.

The **Malawi Gold Standard (MGS) Aquaculture Production System**, for example, was developed from a comprehensive survey of dozens of successful fish-farmers from throughout Malawi. The System was developed in partnership with the Department of Fisheries, COMPASS II/USAID, and the World Fish Center. The MGS Aquaculture production system was designed for small-scale commercial aquaculture and developed to facilitate a rapid growth of aquaculture, so that small-scale fish-farmers are enabled to fulfill market demand and benefit financially from the existing supply deficit in the market. Fish farming is an important sector for Malawi, and the economic potential to gain from the growth of the sector is significant. However, the roughly 4,000 fish



Figure 10: Malawi Gold Standard (MGS) Aquaculture Production System Package.

farmers with close to 7,000 ponds were unable to neither meet nor benefit from this demand. Factors such as low yields and outdated practices were constraining growth of the sector. The availability of the MGS production package, combined with a commercialization approach, should now be able to boost small-scale fish production in this country since the small-scale fish farmers can now learn, through MGS production package, to produce higher volumes of market-size fish and move out of subsistence production into small-scale production as a business.

The MGS package of extension materials for aquaculture has become all the more important because of the 2006 call by the President of Malawi, His Excellency, Bingu Wa Mutharika, to increase the country's capacity to produce 5,000 tons of fish per year by 2010. The ambitious target set by the *Presidential Initiative for Aquaculture Development* (PIAD) requires proper training, a commercial approach and the availability of inputs (fingerlings and feed) central to farmed fish production. The Department of Fisheries recognizing the value embodied in the MGS Aquaculture Production package, believes that it could be an important instrument to help the country move closer to meeting the PIAD goals.

As such, on July 1, 2008, The **MGS Aquaculture Production system** was formally endorsed by the Department of Fisheries as the country's standard practice for small-scale aquaculture development. The Department mandated all 27 district Fisheries officers to utilize the MGS aquaculture system package as the guiding document in their effort to support small-scale fish farmers all over Malawi. Furthermore, the Department, recognizing the role and reach of non-governmental organizations and their service providers engaged in aquaculture, also required all those engaged in facilitating and promoting small-scale aquaculture development in Malawi to familiarize themselves with the **MGS Aquaculture Production system** and the commercialization framework. The Department of Fisheries believes that by sharing the MGS system as widely as possible, Malawi could well achieve the target set for 2010

The Malawi Gold Standard Honey Production System, on the other hand, was also developed from a comprehensive survey of dozens of successful beekeepers from throughout Malawi. The beekeepers interviewed (in different ecological zones of Malawi) follow best practices on beekeeping and honey production. Secondary information on beekeeping standards in terms of best-practice in apiary management, harvesting and processing regimes were used to complement the findings from this survey.

The Malawi Gold Standard Honey Production System roll-out started with technical service providers' training in Bolero, Rumphi in July, 2006. Subsequent courses were conducted in Misuku Hills, Lunzu, and Mponela. Unlike the Aquaculture production system, for honey, a total of 152 service providers were trained, and the trainees were drawn from twenty districts in Malawi. Since the 2006 training, the MGS beekeeping service providers have been offered refresher courses every year in beekeeping as well as processing in order to increase and improve their understanding of the honey value chain. The aim is that with additional information and training, the service providers become increasingly better and valuable for beekeepers, who gain from their training since they generally turn around and share their understanding and knowledge with their fee-paying clients: smallscale beekeepers. As of project closing, of the 152 service providers, 25 were making some money, while 5 were doing financially well.

The training courses were run on a fee payment basis, a major deviation from the approach used by most organizations in the country, where such activities would normally be on an "all-paid-for" basis. The participants met their costs including facilitators' fee, classroom charges, accommodation, transport and food. On average, participants spent around MK20,000 (without allowances) to attend a ten days beekeeping training course. However, the majority of the participants were sponsored by their employers: NGOs, and Government Projects. But 43 were self-sponsored individuals who felt the cost to be worth the potential rewards.

As the demand for honey keeps increasing in Malawi, the interest in beekeeping as an enterprise will continue to be widespread. However, with a majority of beekeepers lacking in technical knowledge, the demand for MGS service providers who train well is poised to grow too. The flows of honey money in beekeeping areas have encouraged many to enter into beekeeping and demand for these service providers have been overwhelming. Even in areas which are traditionally not known to be beekeeping areas, communities have shown willingness to invest in the sector. A recent letter mailed from Mzimba, Malawi all the way to Washington DC, USA asking about how they should engage in beekeeping serves as a good example of seriously growing interest in the sector.

V. LESSONS LEARNED AND END-OF-PROJECT CONCLUSIONS

In the course of implementing COMPASS II, several lessons were learned. This section of the report briefly presents some key lessons and insights drawn from project experience that may be applicable to the next phase of NRM and Biodiversity Conservation Program work in Malawi.

Lessons Learned:

1. Direct financial benefit(s) accruing at the household level is the strongest incentive for communities to manage and safeguard their resource base sustainably. Without tangible benefits first accruing to households through direct engagement in CBNRM, there would be lukewarm interest in being involved. While socially oriented, community-based benefits such as schools or bridges are perceived to be important, the greatest spur in CBNRM is provided by benefits going directly to individual households first. COMPASS therefore focused on NBREs that supported this model, such as honey, where hives (and therefore income from it) are owned individually, but monitoring, marketing and risk management activities are conducted jointly through their clubs for a fee which the clubs collected after sale is concluded.
2. Rural households prefer to engage in production and sale of products that provide a stable income than those that promise high returns but have erratic markets. Charcoal and firewood is a good example of the stability of market providing a stable income, even though charcoal producers receive comparatively little given the “back-breaking” work it requires. Honey is slowly being perceived as having “stable market,” given that beekeepers have now begun to receive steady payment for large volumes of honey almost three years in a row. This is one of the reasons why COMPASS worked heavily in the sector to support the “market pull” and to ensure the market pull remains steady, COMPASS helped processors to expand their markets outside of Malawi.
3. Sourcing commercial volumes from rural communities is a challenging and expensive task in Malawi given that smallholder production remains highly unorganized. At first, COMPASS focused on increasing “market pull” by attracting more buyers of honey to rural communities. However, COMPASS had to quickly change its approach to focus on increasing volume at the individual household level as well as at the clubs level in order to scale up supply to make business sense for processors. For example, COMPASS worked with the beekeeping clubs in Thazima near Nyika National Park to help form the Thazima Beekeeping Enterprise, which is an association of 14 beekeeping clubs. The Thazima Beekeeping Enterprise is now directly linked with Mzuzu Coffee to engage in honey exchange. Mzuzu Coffee, as the buyer with a sales agreement in force with the beekeepers, only collects honey when the Enterprise consolidates a sizable volume it thinks makes business sense to collect. Rural beekeepers have now understood the meaning of commercial volume and are working together in groups to keep this value chain strong and stable. They are less neglectful of their NRB business.
4. Having practical, implementable framework and approaches to CBNRM that have community buy-in is the most effective approach to registering success. The Resource Use Agreements (RUA) proved to be such an instrument, which has helped open a floodgate for active participation in CBNRM. Malawi has robust policies and legislations in place vis-à-vis forestry, fisheries and wildlife. For example, the Department of National Parks and Wildlife even had a theoretically sound strategy, complete with the institutional structures on hand, represented by the Nyika Vwaza Association and its associated committees at the lower levels. But the strategy and structure failed to achieve the impact they hoped for; however, with RUAs now actively utilized, progress is being felt by both the communities and the Department.
5. Awareness raising about NRM, biodiversity conservation, and CBNRM and their institutions through re-education and continual refresher courses made available to local partners is important for achieving progress. COMPASS supported this effort by preparing guidelines and publications of

materials for front-line staff and literate community members on procedures of implementing CBNRM, PFM and collaborative management of protected areas. Publications of several guidelines covering all three sectors proved helpful since COMPASS was expected to work through local NGOs and District-level government staff, who had little knowledge or understanding of CBNRM. Because of high turnover within these institutions, the capacity at the local level to carry forward the process of developing community-based management of natural resources was lacking. Further, at the local level, including government and at the community level itself, there was widespread and deeply-engrained misunderstanding of CBNRM institutional issues, which stifled progress. For example, VNRMC, the 10-member committee elected to represent the community in CBNRM activities, transformed themselves into unyielding management authority, effectively divorcing issues of forest management from daily activities of communities, thereby stalling CBNRM.

6. Building district level capacity to deliver natural resources management services is difficult when institutions are weak and resources are unavailable. Decentralization, particularly within Forestry and Fisheries, was slow to start in Malawi. While administratively, Departments had passed on the management role to the field, devolution of authority and funding had not. Until June 30 of this year, district offices were still *de facto* under the direct authority and budgetary control of the headquarters office. Since COMPASS did not provide budgetary support, and Department funding for district offices were meager at best, encouraging district level officers to demonstrate leadership for development efforts was difficult at best.
7. Private sector is thin in Malawi. Industry support such as trade show participation and firm-level assistance proved very helpful in increasing awareness and capacity to take advantage of external market opportunities. The few large businesses that work with smallholders lack transparency, and the large number of small and medium sized businesses being short of resources, behave like traders with a short-term horizon. Because the private sector is thin and transaction costs high, there is a reluctance to invest in rural areas and in products that do not have a strong market demand such as natural-resources based products. To address this, COMPASS launched an Enterprise fund to encourage investments in NRBE from Malawi's private sector. A total of US\$818,708 was disbursed over the life of the project to help the NRBP sector expand. Because of this instrument, combined with firm-level assistance, baobab, honey, mushroom, as well as oilseeds industries have picked up considerably. However, because small and medium sized companies face cash flow problems during harvest season, they are generally unable to pick up available volumes, thereby restraining growth at both ends. Provision of access to working capital for businesses engaged in purchasing directly from communities engaged in NRBPs would have further strengthened the value of the Enterprise fund.
8. Income sources must be diversified to relieve pressure on the natural resource base. Since one source of income alone tends to be insufficient, it is important to assist communities to seek out additional sources to overlay so that the gross income is high enough to discourage natural resources mismanagement.
9. Community to Community exchanges proved quite effective in getting messages across quickly. COMPASS organized several of these community to community as well as community to business to community exchange visits and study tours to increase awareness, exchange experiences, and demonstrate how activities directly related to CBNRM are carried out. Over the life the project, 525 participants benefited from such visits and exchanges, which were popular since it not only gave them opportunity to "see to believe" but such visits also helped foster relationships between different communities, service providers and businesses.
10. One of the strongest drivers of deforestation in Malawi is the sturdy peri-urban and urban demand for charcoal and firewood. Despite a Government ban on production and trade of charcoal, the demand remains steady providing a highly stable source of livelihood for communities living around forests and reserves. The bans haven't worked and enforcement remains weak. Furthermore, given the silence on the part of the Government on household energy policy, production of charcoal remains strong given that there are few other affordable alternatives offering stable income in the midst of dire poverty.

End of Project Conclusions:

In May 2009, the last month on the project, COMPASS II joined its partners to celebrate the achievement of some major milestones: Small-scale fishermen of Lake Chilwa signed a participatory fisheries management agreement with the Department of Fisheries, the first ever in Malawi. This historical event officially transferred the rights and responsibilities of managing Lake Chilwa, Malawi's only Ramsar Site, to small-scale fishermen.

The same month, Mzuzu Coffee received its official Fair Trade certificates for smallholder coffee and Nyika Forest Honey. Again, the first, for smallholders in coffee and honey in Malawi. With two certifications under its belt, Mzuzu Coffee on behalf of its members, will be able to trade in a higher-priced market segment. This was especially good news for the smallholders living around Nyika National Park, who stand to gain significantly since many of them produce both honey and coffee.

In the forestry sector, benefiting from REDD carbon credits came closer to reality for Malawi's first two REDD pilot sites: Mkuwazi Forest Reserve and Thazima in Nyika National Park. In May, the validation of the two sites for tradable Carbon credits by an independent validator was successfully concluded, taking the process to the final step before official registration. Once registered, Malawi's two pilot sites become eligible to place their tradable carbon credits on sale in the voluntary markets and gain financially from the sales. For Mkuwazi, this was made possible through a co-management agreement signed with the Department of Forestry; for Thazima, DNPW officially endorsed their resource use agreement which spells out the revenue sharing mechanism with the communities. Understanding clearly the possibility of gaining financially while conserving their natural resources, communities from Mkuwazi and Thazima actively worked with the local Plan Vivo coordinator, MEET and their technical partners FRIM and LEAD, with guidance from the UK based *Plan Vivo Foundation*, to finalize the paperwork for submission to the *United Bank of Carbon*. United Bank of Carbon is a carbon credit broker based in the UK, interested in helping place Malawi's REDD Carbon credits on their web-based marketplace.

In all the above examples, COMPASS played a facilitative role, enabling local communities, businesses, and organizations to take charge of resource management by directly engaging them in the development process. For enterprises, COMPASS's business-to-business (or business-to-community) linkage strategy was placed front and center from the very beginning in order to help foster an "interest-based" partnership between the supplier and buyer to ensure the relationship would continue long after COMPASS' departure. These business relationships are continuing to perform well after project closure. Some are already showing signs of growth indicating that integration of rural communities within promising value chains through market-based linkage/partnership is beginning to pay off. This was COMPASS' exit strategy, to set up a framework for promising enterprises and market-led value chains to serve as drivers of conservation and sustainability.

All the above three examples also highlight COMPASS' key contribution in setting the direction and enabling partners and participants to successfully move toward CBNRM as a rural economic development strategy to achieve long term natural resources management and biodiversity conservation. For example, the Nyika National Park officials report that with the signing of RUAs, communities are now actively sharing conservation and management responsibilities. Park officials report, vandalism has gone down, and poachers are more frequently arrested by community members. For the communities, sales of forest honey, specialty coffee, baobab, mushroom, ecotourism and similar forest-based products have begun to increase, pumping revenue back into rural areas and households. In short, COMPASS II work across Malawi has demonstrated that business-focused CBNRM can be an effective approach to natural resources management and biodiversity conservation. The comment "*we are now dreaming in color*" made by one of the officers of DNPW based in Nyika National Park, combined with the success in signing 463 co-management and resource use agreements and 694 sales agreements, succinctly captures the essence of COMPASS contribution to the paradigm shift taking shape in natural resources management and biodiversity conservation in Malawi.

"We are now dreaming in color.

Thanks to COMPASS for all your support, which has helped us expand our knowledge, deepen our capabilities, and strengthen our skills enabling us to work more effectively with local communities toward biodiversity conservation. The possibilities for improvement are immensely promising." DNPW officer, Nyika National Park.

As is evident, benefits are beginning to emerge as a result of COMPASS work. The full extent of benefit realization, however, will take time since conservation is a long term endeavor, and systems and strategies require a longer timeframe to mature in a manner that endure. In the meantime, however, there is need to continue with technical assistance that support the business-oriented CBNRM framework since it is clear that communities will not have the incentive to invest in improved natural resources management if they do not continue to directly benefit from such investments.

There is also need for continued support and collaboration among stakeholders to explore additional avenues for revenue generation that depend on natural resources management, so that conservation and sustainability have an even stronger chance of success. Since one source of income alone is generally insufficient to generate the desired level of revenue, income sources must be diversified so that the gross income per household is large enough to dissuade them from succumbing to other unsustainable practices such as charcoal production.

Charcoal and fuelwood production continue to be two of the biggest threats for NRM and conservation in Malawi. The demand for the products is strong, emanating from peri-urban and urban centers due to lack of healthier and affordable alternatives for cooking and heating. Strong demand for Malawi's hardwoods also continue, primarily from the far east, even though a ban (on export of roundwoods) was recently instituted through the Department of Forestry. Additionally, the urgency to compensate for unproductive agricultural land through expansion and encroachment of forests also contribute to exerting pressure on conservation and sustainability.

In an environment with few alternative opportunities to augment household income, the presence of such strong demand for charcoal and fuelwood, for example, continues to be tempting for communities. While many in the areas where COMPASS worked have slowly diversified away from such destructive practices, the threat however remains. Given this scenario, there is need for continued targeted support to assist these communities to move out of their subsistence existence into a more stable and remunerative reality that banks on the success of natural resources management and conservation.

ANNEXES

Annex 1: Summary of Best Practices

	NAME OF BEST PRACTICE	District	Activity	Justification
1	Kammwamba Community Integrated Natural Resources Management & Use	Mwanza	Natural products production and processing	
2	Rural Community Afforestation Programme at Makalani v/ge in Dowa District	Dowa	Afforestation	
3	The Last of the Commons: Mangweru Hill Community Forest Restoration: Lirangwe	Blantyre	Afforestation	Strong traditional leadership helps in restoring degraded hill
4	Community Wildlife Conservation & Utilization around L. Malawi National Park	Monkay-Bay in Mangochi	Collaborative management and small-scale business	Community-based NR based economic activities: beekeeping, small livestock rearing and fruit juice processing
5	Local Communities in Malawi manage their own fishstocks – the Beach village committees	Mbenji Island – Salima	Participatory fisheries management	Traditional leadership regulating fisheries activities in the lake using indigenous knowledge and culture
6	Generating biogas from livestock dung	Dowa	Biogas	Alternative source of energy for heating and lighting
7	Community based fish resources management at Lake Chiuta	Machinga	Participatory fisheries management	Locally self-driven fisheries regulatory activities in response to external shocks.
8	Bwanje Environmental Rural Development Organization (BERDO)	Ntcheu	Reforestation and community forest management	Example of bottom-up (local participation) in all processes of the project cycle
9	The aftermath of Participatory Rural Appraisal in Chiling'oma	Rumphi		The advantage of starting with participatory approach in community mobilization
10	Mbowe Sustainable Ecofarming Project (MSEP)	Mzuzu	Permaculture	Application of permaculture for sustainable production
11	Kapukwa village manages its own indigenous forest	Lilongwe	Community forest management	Conservation & Management of indigenous village forest area under traditional leadership regulatory mechanism.
12	Traditional herbalists in Malawi take steps to protect indigenous medicinal trees	Mwanza	Forest management	Traditional herbalists are managing and benefiting from indigenous forest area
13	The felt need is a precursor to self mobilization – the case of Chankondo Women Group	Lilongwe	Afforestation	A group of women actively spearheading afforestation activities in the area
14	Njobvu Cultural Village lodge	Balaka	Nature and cultural tourism	Example of nature-based tourism
15	Tales of success in fruit processing – the Magomero Women Food Processing Project	Chiradzulu	Fruit processing	Putting value and minimizing spoilage of fruits which are seasonal in nature
16	Mbayani Urban Greening amidst a landscape deforestation	Blantyre	Reforestation	Example of restoring vegetation in urban areas
17	Village Trusts negotiate co-management agreements with government to gain access to natural resources in protected areas of the lower shire valley	Chikwawa	Collaborative management	Example of a process of Collaborative Management
18	Community Chilli pepper fence on the eastern boarder of Liwonde National Park	Machinga	Collaborative management	Nature by nature conservation in addition to economic benefits
19	Government/Private Sector partnership in managing Thuma Forest Reserve	Salima	Forest co-management	Example of government/private partnership in NRM

	NAME OF BEST PRACTICE	District	Activity	Justification
20	The participatory fisheries management process around L. Chilwa	Zomba	Participatory fisheries management	The contribution of BVCs in regulating fisheries activities around L. Chilwa
21	Community based conservation of fishstocks around Nkhono in Nkhotakota district	Nkhotakota	Participatory fisheries management	An example of the operations of an active BVCs in regulating fisheries activities
22	The Nyika-Vwaza protected areas co-mgt initiative – “resource mgt for the people, by the people and with the people.”	Rumphi/Mzimba	Collaborative wildlife management	The role of community based organizations in natural resource management
23	LOMADEF: Lipangwe Organic Demonstration Farm	Ntcheu	Permaculture	Organic farming – without use of conventional inputs
24	Community-based herbal gardens for home based care	Chiradzulu		Domestication of indigenous plants for supply of medication
25	Village in Chikwawa formulates & implements own forest rules	Chikwawa	Community forest management	Implementation of forest management plans even before signing by the Director
26	Integrated fish farming turns Osman Muhammed into successful local fish farmer	Zomba	Fish farming	Benefits from enterprises integration
27	Malawi rural community improve their planning for management of natural resources.	Chabiza in Nkhata Bay	Community forest management	Local community mapping and complementation with GIS
28	New drip irrigation technology saves water, labour & improve nutrition	Namwera – Mangochi	Irrigation	Low irrigation technology suitable for HIV infected and AIDs patients
29	Sendwe VNRMC sign management agreement with forest department over management VFA	Lilongwe	Community forest management	Example of management of forest area under signed management agreement with the dept. of forestry.
30	Resource Use Programme with communities around Kuti Wildlife Ranch	Salima	Community wildlife management	Private/community partnership and benefits
31	Chigwere Cultura Lodge outside Vwaza Wildlife Reserve	Rumphi	Nature and cultural tourism	Example of nature based tourism
32	Secret balloting approach vital in choosing members in natural resource management	Zomba/Nkhotakota		Example of fairness in conducting elections for office bearers in NRM institutions
33	Secret behind Kabunduli beekeepers success	Nkhata Bay	Beekeeping	Advantages of working as a business enterprise - association
34	Public awareness stimulates honey business in Malawi	nationwide		Role of mass media in stimulating natural resource based enterprises
35	Fulirwa Beekeeping Enterprise	Rumphi	Beekeeping	Active involvement of ex-poachers in beekeeping and collaborative management
36	Mkuwazi Eco-tourism Association	Nkhata Bay	Eco-tourism	Community-based tourism in Mkuwazi Forest Reserve including active co-management
37	HOMERO	Mzimba	Cultural and eco-tourism	Ngoni community efforts to preserve local culture and preserve woodland on and around Hora Mountain
38	Tongole dried fruit and mushroom businesses	Nkhotakota	Fruit processing and mushroom production	Successful commercial businesses generating income for families near protected area
39	Resource Use Agreements	Rumphi, Karonga, Chitipa	User rights agreement between beekeeping businesses and DNPW	RUAs provide legal rights of access for and define responsibilities of natural resources-based enterprises

	NAME OF BEST PRACTICE	District	Activity	Justification
40	Nyamvuu Wildlife Sanctuary	Nkhotakota	Community wildlife management and eco-tourism	This is a genuine grassroots initiative, created to generate income for the Kambingu Fisheries Association
41	Lake Chilwa Bird Hunters' Association	Zomba, Machinga, Phalombe	Community wildlife management	Lake Chilwa bird hunters have formed an association and developed a management plan to conserve water fowl on L. Chilwa for sustainable use
42	Lake Chilwa eco-tourism	Zomba	Community eco-tourism	Members of the L. Chilwa bird hunters association created a business taking visitors for bird-watching trips on L. Chilwa

COMPASS II NON-EXPENDABLE PROPERTY DISPOSITION PLAN

MAY 31, 2009

SUBSECTION H23: GOVERNMENT FURNISHED PROPERTY

No	Type	Description	Serial or ID #	Location	Acquisition Date	Qty.	Acquisition Unit Cost	Acquisition Total Cost	Condition	Currently Property Being Used By	Proposed Beneficiaries
I GOVERNMENT FURNISHED PROPERTY UNDER SUBSECTION H.23											
A VEHICLES:											
1	Vehicle	TOYOTA LANDCRUISER Prado	VIN# LJ1200001935	Blantyre	8/13/2003	1	\$26,000	\$26,000	Disposed ³	Land O' Lakes	Land O' Lakes
2	Vehicle	TOYOTA LANDCRUISER Prado	VIN #: LJ1200002154	Blantyre	8/13/2003	1	\$26,000	\$26,000	Working	COMPASS II	Department of Fisheries
3	Vehicle	TOYOTA LANDCRUISER Prado	VIN#: LJ1200002180	Blantyre	8/13/2003	1	\$26,000	\$26,000	Working	COMPASS II	Department of Forestry
4	Vehicle	NISSAN PATROL	JNITCSY6120530363	Mzuzu	8/13/2003	1	\$27,900	\$27,900	Working	COMPASS II	WALA/USAID
5	Vehicle	NISSAN PATROL	JNITCS6120530358	Blantyre	8/12/2003	1	\$27,900	\$27,900	Working	COMPASS II	National Aquaculture Center
6	Vehicle	NISSAN PATROL	JNITCS6120530364	Blantyre	5/6/2003	1	\$27,900	\$27,900	Working	COMPASS II	Department of Parks & Wildlife
7	Vehicle	Toyota Hilux (Provided used from Malawi SALES)	IKZ11244744	Blantyre	6/19/2006	1	\$26,839	\$26,839	Not Working	garaged	Discard
B MOTOR CYCLES:											
1	Equipment	HONDA MOTORCYCLE, 125CC, PETROL, 4 STROKE ENGINE, 2 SEATER, 7LITRE TANK CAPACITY	XL125; VIN# L125S5729138; Reg# BN2812	Domasi - C-FISH	5/6/2004	1	\$2,500	\$2,500	Disposed ²	C-FISH	C-FISH
2	Equipment	HONDA MOTORCYCLE, 125CC, PETROL, 4 STROKE ENGINE, 2 SEATER, 7LITRE TANK CAPACITY	XL125; VIN# L125S5729153; Reg# BN2813	Domasi - C-FISH	5/6/2004	1	\$2,500	\$2,500	Disposed ²	C-FISH	C-FISH
3	Equipment	HONDA MOTORCYCLE, 125CC, PETROL, 4 STROKE ENGINE, 2 SEATER, 7LITRE TANK CAPACITY	XL125; VIN# L125S5729060; Reg# BN2814	Domasi - C-FISH	5/6/2004	1	\$2,500	\$2,500	Disposed ²	C-FISH	C-FISH
4	Equipment	HONDA MOTORCYCLE, 125CC, PETROL, 4 STROKE ENGINE, 2 SEATER, 7LITRE TANK CAPACITY	XL125; VIN# L125S5729137; Reg# BN2804	Nyika National Park	5/6/2004	1	\$2,500	\$2,500	Working	Nyika National Park	Department of Parks & Wildlife
5	Equipment	HONDA MOTORCYCLE, 125CC, PETROL, 4 STROKE ENGINE, 2 SEATER, 7LITRE TANK CAPACITY	XL125; VIN# L125S5729028; Reg # BN2803	Nyika National Park	5/6/2004	1	\$2,500	\$2,500	Working	Nyika National Park	Department of Parks & Wildlife
6	Equipment	HONDA MOTORCYCLE, 125CC, PETROL, 4 STROKE ENGINE, 2 SEATER, 7LITRE TANK CAPACITY	XL125; VIN# L125S5729086; Reg# BN2811	Mzuzu Coffee Planters Cooperative Union	5/6/2004	1	\$2,500	\$2,500	Working	Mzuzu Coffee Planters Cooperative Union	Mzuzu Coffee Planters
7	Equipment	HONDA MOTORCYCLE, 125CC, PETROL, 4 STROKE ENGINE, 2 SEATER, 7LITRE TANK CAPACITY	XL125; VIN# L125S5729058; Reg# BN2810	Mzuzu Coffee Planters Cooperative Union	5/6/2004	1	\$2,500	\$2,500	Working	Mzuzu Coffee Planters Cooperative Union	Mzuzu Coffee Planters
8	Equipment	HONDA MOTORCYCLE, 125CC, PETROL, 4 STROKE ENGINE, 2 SEATER, 7LITRE TANK CAPACITY	XL125; VIN# L125S5729099; Reg# BN2808	Nkhotakota Fisheries Office	5/6/2004	1	\$2,500	\$2,500	Working	Nkhotakota Fisheries Office	Department of Fisheries
9	Equipment	HONDA MOTORCYCLE, 125CC, PETROL, 4 STROKE ENGINE, 2 SEATER, 7LITRE TANK CAPACITY	XL125; VIN# L125S5729128; Reg# BN2806	Nkhotakota Fisheries Office	5/6/2004	1	\$2,500	\$2,500	Working	Nkhotakota Fisheries Office	Department of Fisheries
10	Equipment	HONDA MOTORCYCLE, 125CC, PETROL, 4 STROKE ENGINE, 2 SEATER, 7LITRE TANK CAPACITY	XL125; VIN# L125S5729127; Reg# BN2805	Machinga District Fisheries Office	5/6/2004	1	\$2,500	\$2,500	Working	Machinga District Fisheries Office	Department of Fisheries
11	Equipment	HONDA MOTORCYCLE, 125CC, PETROL, 4 STROKE ENGINE, 2 SEATER, 7LITRE TANK CAPACITY	XL125; VIN# L125S5729132; Reg BN2802	Zomba District Fisheries Office	5/6/2004	1	\$2,500	\$2,500	Working	Zomba District Fisheries Office	Department of Fisheries
12	Equipment	HONDA MOTORCYCLE, 125CC, PETROL, 4 STROKE ENGINE, 2 SEATER, 7LITRE TANK CAPACITY	XL125; VIN# L125S5729150; Reg# BN2735	BERDO - Ntcheu	5/6/2004	1	\$2,500	\$2,500	Working	BERDO - Ntcheu	BERDO

13	Equipment	HONDA MOTORCYCLE, 125CC, PETROL, 4 STROKE ENGINE, 2 SEATER, 7LITRE TANK CAPACITY	XL125, VIN# L125S5728931; Reg# BN2809	WESM Dwangwa	5/6/2004	1	\$2,500	\$2,500	Working	WESM Dwangwa	WESM Dwangwa
14	Equipment	HONDA MOTORCYCLE, 125CC, PETROL, 4 STROKE ENGINE, 2 SEATER, 7LITRE TANK CAPACITY	XL125; VIN# L125S5729; Reg# BN2816	Blantyre	5/6/2004	1	\$2,500	\$2,500	Working	COMPASS II	Malawi Bee Products Association (MBPA)
15	Equipment	HONDA MOTORCYCLE, 125CC, PETROL, 4 STROKE ENGINE, 2 SEATER, 7LITRE TANK CAPACITY	XL125; VIN# L125S5729023; Reg# BN2815	Blantyre	5/6/2004	1	\$2,500	\$2,500	Working	COMPASS II	Coffee Association of Malawi (CAMAL)
C		OTHER EQUIPMENT:									
C1		GENERATOR SETS:									
1	Equipment	STANDB-GENERATOR (20 DKAF DIESEL GENERATOR SET)		Blantyre	5/6/2004	1	\$13,145	\$13,145	Working	COMPASS II	WALA/USAID
C2a		COMPUTER SETS (CPU, MONITOR, KEYBOARD, MOUSE)									
1	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	5MKG 831	Blantyre	5/6/2004	1	\$1,288	\$1,288	Working	COMPASS II	Malawi Bee Products Association
2	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	GMKG 831	Blantyre	5/6/2004	1	\$1,288	\$1,288	Working	COMPASS II	Malawi Bee Products Association
3	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	7LKG831	Blantyre	5/6/2004	1	\$1,288	\$1,288	Working	COMPASS II	Coffee Association of Malawi
4	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	2KKG 831	Blantyre	5/6/2004	1	\$1,288	\$1,288	Working	COMPASS II	Coffee Association of Malawi
5	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	9KKG 831	MMCT Office	5/6/2004	1	\$1,288	\$1,288	Working	MMCT Office	MMCT
6	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	GLKG 831	Blantyre	5/6/2004	1	\$1,288	\$1,288	Not Working/ Not Repairable	COMPASS II	Discard
7	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	BJKG 831	Machinga	5/6/2004	1	\$1,288	\$1,288	Working	Machinga District Fisheries Office	Department of Fisheries
8	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	GKKG 831	Zomba	5/6/2004	1	\$1,288	\$1,288	Working	Zomba District Fisheries Office	Department of Fisheries
9	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	HKKG831	Phalombe	5/6/2004	1	\$1,288	\$1,288	Working	Phalombe District Fisheries office	Department of Fisheries
10	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	6MKG 831	Blantyre	5/6/2004	1	\$1,288	\$1,288	Working	COMPASS II	Department of Fisheries
11	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	CKKG831	Blantyre	5/6/2004	1	\$1,288	\$1,288	Working	COMPASS II	Department of Fisheries
12	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	JJKG831	Blantyre	5/6/2004	1	\$1,288	\$1,288	Working	COMPASS II	Department of Fisheries
13	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	3MKG 831	Blantyre	5/6/2004	1	\$1,288	\$1,288	Working	COMPASS II	Department of Fisheries
14	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	3KKG 831	Blantyre	5/6/2004	1	\$1,288	\$1,288	Working	COMPASS II	Department of Fisheries
15	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	DJJKG 831	Blantyre	5/6/2004	1	\$1,288	\$1,288	Working	COMPASS II	Department of Fisheries
16	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	JKKG 831	Nyika National Park	5/6/2004	1	\$1,288	\$1,288	Working	Nyika National Park	Department of Parks & Wildlife
17	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	8KKG 831	Blantyre	5/6/2004	1	\$1,288	\$1,288	Working	COMPASS II	Department of Parks & Wildlife
18	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	ILKG 831	Blantyre	5/6/2004	1	\$1,288	\$1,288	Working	COMPASS II	Department of Parks & Wildlife
19	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	CJJKG 831	Blantyre	5/6/2004	1	\$1,288	\$1,288	Working	COMPASS II	Department of Parks & Wildlife
20	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	9LKG 831	Blantyre	5/6/2004	1	\$1,288	\$1,288	Working	COMPASS II	Department of Parks & Wildlife
21	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	FLKG 831	Blantyre	5/6/2004	1	\$1,288	\$1,288	Working	COMPASS II	Department of Parks & Wildlife
22	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	3LKG 831	Blantyre	5/6/2004	1	\$1,288	\$1,288	Working	COMPASS II	Department of Parks & Wildlife

23	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	5LKG 831	Blantyre	5/6/2004	1	\$1,288	\$1,288	Working	COMPASS II	Department of Parks & Wildlife
24	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	3NKG 831	Blantyre	5/6/2004	1	\$1,288	\$1,288	Working	COMPASS II	Department of Parks & Wildlife
25	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	HJKG 831	Blantyre	5/6/2004	1	\$1,288	\$1,288	Working	COMPASS II	Department of Parks & Wildlife
26	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	5KKG 831	Chikwawa	5/6/2004	1	\$1,288	\$1,288	Working	Chikwawa District Forestry Office	Department of Forestry
27	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	HMKG 831	Nkhata Bay	5/6/2004	1	\$1,288	\$1,288	Working	Nkhata Bay District Forestry Office	Department of Forestry
28	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	CMKG 831	Mzimba	5/6/2004	1	\$1,288	\$1,288	Working	Mzimba District Forest Office	Department of Forestry
29	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	9JKG 831	Nkhatakota	5/6/2004	1	\$1,288	\$1,288	Working	Nkhatakota District Forestry Office	Department of Forestry
30	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	GJKG 831	Ntcheu	5/6/2004	1	\$1,288	\$1,288	Working	Ntcheu District Forestry Office	Department of Forestry
31	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	DLKG 831	Blantyre	5/6/2004	1	\$1,288	\$1,288	Working	COMPASS II	Department of Forestry
32	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	JMKG 831	Mzuzu	5/6/2004	1	\$1,288	\$1,288	Working	COMPASS II	Department of Forestry
33	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	FJKG 831	Mzuzu	5/6/2004	1	\$1,288	\$1,288	Working	COMPASS II	Department of Forestry
34	Computer Equipment	DELL OPTIPLEX GX260T 2.4GHZ P4 CPU (including Dell Keyboard , DELL Mouse & Monitor)	9MKG 831	Mzuzu	5/6/2004	1	\$1,288	\$1,288	Working	COMPASS II	Department of Forestry
35	Computer Equipment	DELL XEON POWEREDGE 2600 SERVER (CPU)	19FF831	Blantyre	5/6/2004	1	\$4,521	\$4,521	Not Working/ Not Repairable	COMPASS II	Discard
	C2b	FLAT MONITORS :									
1	Computer Equipment	DELL 14" FLAT MONITOR	MX-0J0947-47605-385-C30T	Blantyre	5/6/2004	1			Working	COMPASS II	Malawi Bee Products Association
2	Computer Equipment	DELL 14" FLAT MONITOR	MX0J09476053855C4C0	Blantyre	5/6/2004	1			Working	COMPASS II	Malawi Bee Products Association
3	Computer Equipment	DELL 14" FLAT MONITOR	MX-0J094747605385C4BU	Blantyre	5/6/2004	1			Working	COMPASS II	Coffee Association of Malawi
4	Computer Equipment	DELL 14" FLAT MONITOR	MX-0J0947-476-0537-MCT06	Blantyre	5/6/2004	1			Working	COMPASS II	Coffee Association of Malawi
5	Computer Equipment	DELL 14" FLAT MONITOR	MX-0J0947-47605-385-C3OR	MMCT	5/6/2004	1			Working	MMCT OFFICE	MMCT OFFICE
6	Computer Equipment	DELL 14" FLAT MONITOR	MX-0J0947-4760-385-C30J	Blantyre					Not Working	COMPASS II	Discard
7	Computer Equipment	DELL 14" FLAT MONITOR	MX-0J0947-47605-37M-C2R	Machinga	5/6/2004	1			Working	Machinga District Fisheries Office	Department of Fisheries
8	Computer Equipment	DELL 14" FLAT MONITOR	MX-0J0947-47605-385-C4BM	Zomba	5/6/2004	1			Working	Zomba District Fisheries Office	Department of Fisheries
9	Computer Equipment	DELL 14" FLAT MONITOR	MX-0J0947-47605-37M-CRYA	Phalombe	5/6/2004	1			Working	Phalombe District Fisheries office	Department of Fisheries
10	Computer Equipment	DELL 14" FLAT MONITOR	MX 0J094747605385C4BT	Blantyre	5/6/2004	1			Working	COMPASS II	Department of Fisheries
11	Computer Equipment	DELL14" FLAT MONITOR	MX-0J0947-47605-385-C0Q	Blantyre	5/6/2004	1			Working	COMPASS II	Department of Fisheries
12	Computer Equipment	DELL 14" FLAT MONITOR	MX-0J094747605385C4BY	Blantyre	5/6/2004	1			Working	COMPASS II	Department of Fisheries
13	Computer Equipment	DELL 14" FLAT MONITOR	MX-0J0947-4760-538-5C4BR	Blantyre	5/6/2004	1			Working	COMPASS II	Department of Fisheries
14	Computer Equipment	DELL 14" FLAT MONITOR	MX 0J09474760537MCRYD	Blantyre	5/6/2004	1			Working	COMPASS II	Department of Fisheries
15	Computer Equipment	DELL 14" FLAT MONITOR	MX- 0J09474-7605-385-C30C	Blantyre	5/4/2004	1			Working	COMPASS II	Department of Fisheries
16	Computer Equipment	DELL 14" FLAT MONITOR	MX-0J0947-47605-385-C4C4	Nyika National Park	5/6/2004	1			Working	Nyika National Park	Department of Parks & Wildlife
17	Computer Equipment	DELL 14" FLAT MONITOR	MX-0J0947-47605- 385-C4BX	Blantyre	5/6/2004	1			Working	COMPASS II	Department of Parks & Wildlife

18	Computer Equipment	DELL 14" FLAT MONITOR	MX-0J0947-47605-385-C4BQ	Blantyre	5/6/2004	1			Working	COMPASS II	Department of Parks & Wildlife
19	Computer Equipment	DELL 14" FLAT MONITOR	MX-0J0947-47605-385-C309	Blantyre	5/6/2004	1			Working	COMPASS II	Department of Parks & Wildlife
20	Computer Equipment	DELL 14" FLAT MONITOR	MX-0J0947-47605-37M-CSZM	Blantyre	5/6/2004	1			Working	COMPASS II	Department of Parks & Wildlife
21	Computer Equipment	DELL 14" FLAT MONITOR	MX-0J0947-47605-37M-CRYF	Blantyre	5/6/2004	1			Working	COMPASS II	Department of Parks & Wildlife
22	Computer Equipment	DELL 14" FLAT MONITOR	MX-0J0947-47605-385-C47J	Blantyre	5/6/2004	1			Working	COMPASS II	Department of Parks & Wildlife
23	Computer Equipment	DELL 14" FLAT MONITOR	MX-0J0947-47605-385-C30S	Blantyre	5/6/2004	1			Working	COMPASS II	Department of Parks & Wildlife
24	Computer Equipment	DELL 14" FLAT MONITOR	MX-0J0947-47605-385-C30K	Blantyre	5/6/2004	1			Working	COMPASS II	Department of Parks & Wildlife
25	Computer Equipment	DELL 14" FLAT MONITOR	MX-0J0947-47605-385-C4BZ	Blantyre	5/6/2004	1			Working	COMPASS II	Department of Parks & Wildlife
26	Computer Equipment	DELL 14" FLAT MONITOR	MX-0J0947-47605-385-C2XR	Chikwawa	5/6/2004	1			Working	Chikwawa District Forestry Office	Department of Forestry
27	Computer Equipment	DELL 14" FLAT MONITOR	MX-0J0947-47605-385-C4BP	Nkhata Bay	5/6/2004	1			Working	Nkhata Bay District Forestry Office	Department of Forestry
28	Computer Equipment	DELL 14" FLAT MONITOR	MX-0J0947-47605-385-C4BL	Mzimba	5/6/2004	1			Working	Mzimba District Forest Office	Department of Forestry
29	Computer Equipment	DELL 14" FLAT MONITOR	MX-0J0947-47605-385-C470	Nkotakota	5/6/2004	1			Working	Nkhotakota District Forestry Office	Department of Forestry
30	Computer Equipment	DELL 14" FLAT MONITOR	MX-0J0947-47605-385-C4BN	Ntcheu	5/6/2004	1			Working	Ntcheu District Forestry Office	Department of Forestry
31	Computer Equipment	DELL 14" FLAT MONITOR	MX-0J0947-47605-385-C308	Blantyre	5/6/2004	1			Working	COMPASS II	Department of Forestry
32	Computer Equipment	DELL 14" FLAT MONITOR	MX-0J0947-47605-385-C2WB	Mzuzu	5/6/2004	1			Working	COMPASS II	Department of Forestry
33	Computer Equipment	DELL 14" FLAT MONITOR	MX-0J0947-47605-385-C30M	Mzuzu	5/6/2004	1			Working	COMPASS II	Department of Forestry
34	Computer Equipment	DELL 14" FLAT MONITOR	MX-0J0947-47605-385-C4C1	Mzuzu	5/6/2004	1			Working	COMPASS II	Department of Forestry
35	Computer Equipment	HP L1502 15" LCD (FLAT) MONITOR- p9617d#aba (SERVER MONITOR)	CNC-4200-W4J	Blantyre	5/6/2004	1	\$625	\$625	Working	COMPASS II	WALA/USAID
	C3	PHOTOCOPIER:									
1	Equipment	XEROX PHOTOCOPIER	WorkCenterPro 428	Blantyre	11/4/2004				Working	COMPASS II	WALA/USAID
2	Equipment	XEROX PHOTOCOPIER	WorkCenterPro 428	Mzuzu	11/4/2004				Working	COMPASS II	Department of Forestry
	C4	PRINTERS									
1	Computer Equipment	LASERJET 2300DNT PRINTER	CNBDC77544	Blantyre	5/6/2004	1	\$1,230	\$1,230	Working	COMPASS II	EDC Tikwere Project
2	Computer Equipment	LASERJET 2300DNT PRINTER	CNBDB74845	Blantyre	5/6/2004	1	\$1,230	\$1,230	Working	COMPASS II	WALA/USAID
3	Computer Equipment	LASERJET 2300DTN PRINTER	CNBDB76002	Blantyre	5/6/2004	1	\$1,230	\$1,230	Not Working/ not Repairable	COMPASS II	Discard
4	Computer Equipment	LASERJET 2300DTN PRINTER	CNBDB76003	Blantyre	5/6/2004	1	\$1,230	\$1,230	Not Working/ not Repairable	COMPASS II	Discard
5	Computer Equipment	LASERJET 2300DTN PRINTER	CNBDB76004	Blantyre	5/6/2004	1	\$1,230	\$1,230	Not Working/ not Repairable	COMPASS II	Discard
	C5	AIR CONDITIONERS - WINDOW UNIT									
1	Equipment	LG AIR CONDITIONER,WINDOW UNIT,12,000	304-KA-00022	Mzuzu	5/6/2004	1	\$206.00	\$206	Working	COMPASS II	Department of Forestry
2	Equipment	LG AIR CONDITIONER,WINDOW UNIT,12,000	304-KA-00045	Mzuzu	5/6/2004	1	\$206.00	\$206	Working	COMPASS II	Department of Forestry
3	Equipment	LG AIR CONDITIONER,WINDOW UNIT,12,000	304-KA-00075	Mzuzu	5/7/2004	1	\$206.00	\$206	Working	COMPASS II	Department of Forestry
4	Equipment	LG AIR CONDITIONER,WINDOW UNIT,12,000	304-KA-00110	Mzuzu	5/6/2004	1	\$206.00	\$206	Working	COMPASS II	Department of Forestry
5	Equipment	LG AIR CONDITIONER,WINDOW UNIT,12,000	304-KA-00018	Mzuzu	5/6/2004	1	\$286.00	\$286	Working	COMPASS II	Department of Forestry
6	Equipment	LG AIR CONDITIONER, WINDOW UNIT,12,000 BTU HEATING & COOLING	304-KA-00113	Blantyre	5/6/2004	1	\$206.00	\$206	Working	COMPASS II	WALA/USAID

7	Equipment	LG AIR CONDITIONER, WINDOW UNIT, 12,000 BTU HEATING & COOLING	209-KA-00150	Blantyre	5/6/2004	1	\$206.00	\$206	Working	COMPASS II	WALA/USAID
8	Equipment	LG AIR CONDITIONER, WINDOW UNIT, 12,000 BTU HEATING & COOLING	304-KA-00120	Blantyre	5/6/2004	1	\$206.00	\$206	Working	COMPASS II	WALA/USAID
9	Equipment	LG AIR CONDITIONER, WINDOW UNIT, 12,000 BTU HEATING & COOLING		Blantyre	5/6/2004	1	\$206.00	\$206	Working	COMPASS II	WALA/USAID
10	Equipment	LG AIR CONDITIONER, WINDOW UNIT, 12,000 BTU HEATING & COOLING	304-KA-00073	Blantyre	5/6/2004	1	\$206.00	\$206	Working	COMPASS II	WALA/USAID
	C6	AIR CONDITIONERS - REMOTE CONTROL									
1	Equipment	LG AIR CONDITIONER, HEATING & COOLING, CC/CS-C12, 12000 BTU, FULLY REMOTE CONTROL	407-KAWQ-00193	Blantyre	11/4/2004	1	\$993	\$993	Working	COMPASS II	WALA/USAID
2	Equipment	LG AIR CONDITIONER, HEATING & COOLING, CC/CS-C12, 12000 BTU, FULLY REMOTE CONTROL	402KARW00206	Blantyre	11/4/2004	1	\$993	\$993	Working	COMPASS II	WALA/USAID
3	Equipment	LG AIR CONDITIONER, HEATING & COOLING, CC/CS-C12, 12000 BTU, FULLY REMOTE CONTROL	402-KAJP-00060	Blantyre	11/4/2004	1	\$993	\$993	Not Working/ Repairable	COMPASS II	WALA/USAID
4	Equipment	LG AIR CONDITIONER, HEATING & COOLING, CC/CS-C12, 12000 BTU, FULLY REMOTE CONTROL	407-KAGS-00207	Blantyre	11/4/2004	1	\$993	\$993	Working	COMPASS II	WALA/USAID
5	Equipment	LG AIR CONDITIONER, HEATING & COOLING, CC/CS-C12, 12000 BTU, FULLY REMOTE CONTROL	KA-00176	Blantyre	11/4/2004	1	\$993	\$993	Working	COMPASS II	WALA/USAID
6	Equipment	LG AIR CONDITIONER, HEATING & COOLING, CC/CS-C12, 12000 BTU, FULLY REMOTE CONTROL	305-KA-00100/ 305-KA-00423	Blantyre	4/6/2004	1	\$286	\$286	Working	COMPASS II	WALA/USAID
7	Equipment	LG AIR CONDITIONER, HEATING & COOLING, CC/CS-C12, 12000 BTU, FULLY REMOTE CONTROL	407-KALC-00232/ 407-KAXV-00194	Blantyre	11/4/2004	1	\$993	\$993	Working	COMPASS II	WALA/USAID
	C7	MEDIA EQUIPMENT - VCR									
1	Equipment	IVC VIDEO CASSETTE RECORDER (VCR)	177-Q-03633	Blantyre		1	\$263	\$263	Disposed ¹	EDC Tikwere Project	EDC Tikwere Project
	C8	MEDIA EQUIPMENT - VIDEO PROJECTOR									
1	Computer Equipment	SONY VPL-CS5, VIDEO LCD PROJECTOR	4029333	Mzuzu	5/4/2004	1	\$2,337	\$2,337	Working	COMPASS II	Department of Forestry
	C9	LAPTOP COMPUTER									
1	Computer Equipment	FUJITSU SIEMENS AMILO LAPTOP	3675720003	Blantyre	5/6/2004	1	\$2,908	\$2,908	Not Working/ Not Repairable	COMPASS II	Discard
	C10	BIG SCREEN TELEVISION									
1	Equipment	HITACHI C50-FD2000, 50" PROJECTION TV AB110-220 VOLT, 50/60 HZ	M3-E000245	Blantyre	5/6/2004	1	\$2,332	\$2,332	Working	COMPASS II	Department of Fisheries
	C11	TRIPOD SCREEN									
1	Equipment	BOGEN 3046 TRIPOD LEGS & PRO VIDEO FLUID HEAD 516	028/OE18	Blantyre	1/14/2005	1	\$690	\$690	Disposed ¹	COMPASS II	EDC Tikwere Project
	C12	INVERTER SYSTEM									
1	Equipment	Inverter system (used from Malawi SALES) (DC to AC)	DR242K	Blantyre	6/29/2006	1	\$5,500	\$5,500	Working	COMPASS II	WALA/USAID
	C13	MOISTURE ANALYZER									
1	Equipment	Moisture Analyzer, Sinar AgriPro 6095 (used from Malawi SALES)	Sinar AgriPro 6095	Blantyre	6/29/2006	1	\$1,585	\$1,585	Working	Coffee Association of Malawi	Coffee Association of Malawi
	C14	COFFEE GRINDER									
1	Equipment	Gaggia Coffee Grinder (used from Malawi SALES)	- NA -	Blantyre	6/29/2006	1	\$215	\$215	Working	Coffee Association of Malawi	Coffee Association of Malawi
	C15	COFFEE ROASTER									
1	Equipment	Swissnar Alpenrost Coffee Roaster (used from Malawi SALES)	- NA -	Blantyre	6/29/2006	1	\$332	\$332	Working	Coffee Association of Malawi	Coffee Association of Malawi

	C16	REFRIGERATOR									
1	Equipment	DEFY D455 Refrigerator (used from Malawi SALES)	- NA -	Mzuzu	6/29/2006	1	\$786	\$786	Working	COMPASS II	Department of Forestry
	D	OFFICE FURNITURE:									
	D1	EXECUTIVE DESKS:									
1	Furniture	Executive C-Shape Desks		Blantyre	6/29/2006	2	\$242	\$484	Disposed ²	C-FISH	C-FISH
2	Furniture	Executive C-Shape Desks		Blantyre	6/29/2006	2	\$242	\$484	Working	COMPASS II	EDC Tikwere Project
3	Furniture	Executive C-Shape Desks		Blantyre	6/29/2006	13	\$242	\$3,146	Working	COMPASS II	WALA/USAID
	D2	EXECUTIVE CHAIRS:									
1	Furniture	Executive Chairs		Blantyre		3	\$203	\$609	Disposed ²	C-FISH	C-FISH
2	Furniture	Executive Chairs		Mzuzu		1	\$203	\$203	Working	COMPASS II	Department of Forestry
3	Furniture	Executive Chairs		Blantyre		13	\$203	\$2,639	Working	COMPASS II	WALA/USAID
	D3	VISITORS CHAIRS:									
1	Furniture	Visitors Chairs		Blantyre		4	\$135	\$539	Disposed ²	C-FISH	C-FISH
2	Furniture	Visitors Chairs		Blantyre		16	\$135	\$2,156	Working	COMPASS II	WALA/USAID
	D4	BOOKSHELVES:									
1	Furniture	Bookshelves (4 tier)		Mzuzu		3	\$144	\$431	Working	COMPASS II	Department of Forestry
2	Furniture	Bookshelves (4 tier)		Blantyre		2	\$144	\$287	Working	COMPASS II	CAMAL
3	Furniture	Bookshelves (4 tier)		Blantyre		2	\$144	\$287	Working	COMPASS II	MBPA
4	Furniture	Bookshelves (4 tier)		Blantyre		4	\$144	\$575	Working	COMPASS II	EDC Tikwere Project
5	Furniture	Bookshelves (4 tier)		Blantyre		4	\$144	\$575	Working	COMPASS II	WALA/USAID
	D5	FILING CABINETS:									
1	Furniture	Filing Cabinets		Blantyre	11/1/2004	1	\$139	\$139	Disposed ²	C-FISH	C-FISH
2	Furniture	Filing Cabinets		Mzuzu	11/1/2004	3	\$139	\$416	Working	COMPASS II	Department of Forestry
3	Furniture	Filing Cabinets		Blantyre	11/1/2004	16	\$139	\$2,219	Working	COMPASS II	WALA/USAID
	D6	COMPUTER STANDS:									
1	Furniture	Computer Stands		Mzuzu	10/18/2004	3	\$198	\$594	Working	COMPASS II	Department of Forestry
2	Furniture	Computer Stands		Blantyre	10/18/2004	7	\$198	\$1,387	Working	COMPASS II	WALA/USAID
	D7	WALL UNIT CUPBOARD:									
1	Furniture	Wall unit cupboard with adjoining piece(provided used from Malawi SALES)		Blantyre	6/29/2006	1	\$75	\$75	Working	COMPASS II	WALA/USAID
	D8	GUEST WAITING CHAIRS:									
1	Furniture	Guest waiting chairs (provided used from Malawi SALES)		Blantyre	6/29/2006	2	\$523	\$1,045	Working	COMPASS II	WALA/USAID
	D9	OFFICE DESK EXTENSION:									
1	Furniture	Office desk extension to wall units (provided from Malawi SALES). ³ Reception Desk		Blantyre	6/29/2006	1	\$861	\$861	Working	COMPASS II	WALA/USAID

NOTES:

¹ Inventory already disposed to EDC Tikwere Project with approval from the CTO

² Inventory already disposed to C-FISH Project with approval from CTO and CO

³ Inventory already disposed to Land O' Lakes with approval from CTO and CO

Annex 3: Grant Disbursement list

Types of Grantees	Grant Award Amount	Total Disbursed Amount	investor contribution of Cost
Co-Financing Grantees	\$322,268	\$322,268	122%
Enterprise Fund Grantees	\$323,856	\$496,440	50%
Total Grant Disbursement	\$646,124	\$818,708	

Name of Bank	Total No. of Loans	Total Value of Loan Disbursed	COMPASS II Grant to Bank	Bank Contribution
National Bank of Malawi	60	\$413,586	\$295,927	28%
NBS Bank	28	\$71,544	\$27,929	61%
OIBM Bank	30	\$32,310	\$21,000	35%
Total Leverage = 33%		\$517,440	\$344,856	

Co-financing Grantee	Co-Financing product	Purpose of Product	CO-financed Amount	investor contribution of Cost
National Aquaculture Center (NAC)	Pilot Commercialization	To Establish a Modern Hatchery Producing Single-Sex Fingerlings	\$60,765	57%
Mzuzu Coffee Planters Cooperative Union (MzCPCU)	NRBP Innovation Support	To Establish a Honey Processing Factory in the North	\$23,586	63%
Tree Crops Ltd.	Pilot Commercialization	To Establish Baobab Oil & Powder Production Factory	\$94,593	50%
Opportunity International Bank of Malawi (OIBM)	NRBP Innovation Support	To Establish a Revolving Fund to Promote Expansion of Cage-Culture-based Aquaculture	\$21,000	35%
Mzuzu Coffee Planters Cooperative Union (MzCPCU)	NRBP Innovation Support	To Support Expansion of Smallholder Honey Production in the north	\$27,288	61%
Nali Ltd.	NRBP Innovation Support	To Support Expansion of Smallholder Honey Production in the south	\$24,728	47%
Eco Products Ltd. (EPL)	NRBP Innovation Support	To Establish a Honey Sachet Production Factory	\$9,000	79%
Nali Ltd	NRBP Innovation Support	To Establish a Honey Processing Factory in the South	\$21,252	45%
Mirala Integrated Farming & Aquaculture Center	Pilot Commercialization	To Establish a Fingerling Production Center	\$40,056	56%
TOTAL CO-FINANCED AMOUNT =			\$322,268	

Annex 4: COMPASS II Publications

SERIES / No.	TITLE	AUTHOR(S)	NO. PAGES	PUBLICATION DATE
CBNRM Occasional Paper series				
#16	Enhancing Economic Opportunities: promoting business linkages, partnerships, and multiplier effects for communities in the honey, mushroom and aquaculture sectors in Malawi	Sherchand, B.	61	May 2006
#15	Biodiversity Assessment for Malawi: analysis of threat and opportunities	Millington, S.J. and Kaferawanthu, M.	67	April 2006
#14	Valuing the Resources of Mulanje Mountain: current and projected use under alternate management scenarios	Hecht, J.	43	April 2006
#13	Analysis of Biodiversity Threats and Opportunities in Malawi: phase 1 – assessment of current status	Millington, S.J. and Kaferawanthu, M.	58	November 2005
#12	Preliminary Assessment of the Resource Base of <i>Jateorhiza</i> species (Calumba root) in Malawi	Kambewankako, Y.E.	65	October 2005
#11	Directory of CBNRM and NRBE Service Providers: first edition	Namale, B.	49	August 2005
#10	Addressing the Business Service Needs for Rural Natural Resources-Based Enterprises in Malawi	Foan, L.; Kahatano, D.; Mohane, H. and Grant, W.	86	July 2005
#9	Valuing the Resources of Mulanje Mountain: study design	Hecht, J.	41	July 2005
#8	Decentralisation and Forestry: a review of progress, challenges and opportunities for CBNRM in the forestry sector	Anton, A. and Chimzukila, N.	50	May 2005
#7	Report on the 2006 Natural and Organic Products Expo-East, Baltimore	Sherchand, B	13	April 2005
#6	Introduction to Appreciative Inquiry: a manual for training community development facilitators	Svensden, D.; Msukwa, C, and Moyo, N.	137	June 2005
#5	Communities Building Upon What They Do Best: an appreciative inquiry approach to community-based natural resources management	Svensden, D. and Moyo, N.	51	April 2005
#4	Decentralisation and Fisheries: a review of progress, challenges and opportunities for CBNRM in the fisheries sector	Seymour, T.	41	March 2005
#3	Decentralisation and CBNRM: framework for a review of progress, challenges and opportunities	Seymour, T.	44	November 2004
#2	Community Resources Mapping: land-use mapping for the people, by the people	Bouvier, R.; Bouvier, I. and Kafakalawa, W.	37	October 2004
#1	COMPASS Development Pathways	Watson, A. (with R. Godwin)	35	September 2004

SERIES / No.	TITLE	AUTHOR(S)	NO. PAGES	PUBLICATION DATE
Technical Reports				
	Monitoring the Impact of COMPASS II on Biodiversity and Natural Resources: End-of-Project Report	Andrew Watson	48	May 2009
	Plan Vivo Validation Report	Philippa Lincoln	19	May 2009
	Avoiding Unplanned Mosaic Deforestation and Degradation in Malawi: Plan Vivo Technical Specification	Nicholas Berry, Henry Utila, Catriona Clunas, Karen Viergever, and Richard Tipper	46	May 2009
	Kandoli Mountain Forest Rapid Change Analysis: Preliminary Results	Ioana Bouvier	6	April 2009
	Report on the Review of the Fisheries Conservation and Management Legislation With Amendments of the Bill (2003), Regulations (2000), and Rules (2000)	Gertrude Lynn Hiwa, Fiona Kalemba, Nations Msowoya and Annabel Mtalimanja	175	April 2009
	Malawi Fisheries Policy Review	Dr. James Muir	16	April 2009
	Plan Vivo Project Idea Note (PIN): Forest Conservation in Thazima Region of Nyika National Park and Mkuwazi Forest Reserve in Malawi	Malawi Environmental Endowment Trust (MEET)	29	February 2009
	Lake Chilwa and Mpotto Lagoon Management Plan	Dr. John Wilson with 6 Fisheries Associations and 3 District Fisheries Offices	32	February 2009
	Institutional Mapping: A Review of Malawi's Laws and Regulations Governing Importation of Food Products, with Primary Focus on Fish and Food Safety	Dr. Matthew P.K.J. Theu	17	February 2009
	Hatchery Design and Installation Technical Report and Recommendation	Angus MacNiven	18	February 2009
	Estimating Carbon Stocks: Toward Forest Conservation in Mkuwazi Forest Reserve and Thazima Region of Nyika National Park in Malawi	Nicholas J. Berry, Catriona J. Clunas, and Richard Tipper	36	November 2008
	Nkhotakota Wildlife Reserve 2008 Ground Census: Preliminary Report	John Dickinson, Trent Bunderson, Roy Bhima, and Chris Dohse	10	November 2008
	Report on Accreditation Request for Exporting Honey to the EU	Peter Martin	13	October 2008
	Lake Chilingali and Unaka Lagoon Water Quality Assessment	Department of Fisheries, Fisheries Research Unit, Monkey Bay	27	September 2008
	Plan Vivo Preliminary Assessment of Potential for REDD in Malawi	Willie Mcghee and Alexa Morrison	18	August 2008
	Aquaculture Environmental Impact Management Recommendation	Marshall L. Shnider	15	August 2008
	Coffee Roasting, Blending and Packaging Improvement Support and Recommendations	Jeremy Rath	5	July 2008
	Coffee Production and Wet Processing Improvement Support and Recommendations	Julio Martinez	18	July 2008

SERIES / No.	TITLE	AUTHOR(S)	No. PAGES	PUBLICATION DATE
	Agroforestry Home Garden: Impact Assessment Final Report on Drip Irrigation Field Trials	James Lwanda	43	November 2007
	Charcoal – The Reality: A study of charcoal consumption, trade and production in Malawi	Kambewa, P.S., Mataya, B.F., Sichinga, W.K. and Johnson, T.R.	72	July 2007
	<i>Chuma Chobisika</i> (Hidden Treasure) Natural Resource Enterprise Broadcasts – Report of a National Survey on Listenership and Effectiveness	Sichinga, K.; Manda, L.; Sosola, B. and Johnson, T.	30	April 2007
	Impact Assessment Survey Report – Agroforestry Home Garden: Drip Irrigation Trial	James Lwanda, Levi Manda, Killy Sichinga, Judith Santhe and Alex Nganga	20	April 2007
	Malawi Gold Standard Fish Farming Trainer's Guide – <i>Pond Aquaculture</i> (includes set of 6 DVDs in Chichewa)	Jamu, D.; Kambewa, P.; Kaluwa, B.; Nagoli, J.; Unyolo, S.; Nkhonjera, W.; Chirwa, B.; Nikoloma, F. and Hunga, H. (illustrated by R. Mwale; edited by L. Simon & T. Johnson; video by P. Mphaka)	55	March 2007
	Malawi Gold Standard Fish Farmer's Handbook – <i>Pond Aquaculture</i> (English or Chichewa)	Simon, L.; Nagoli, J. and Unyolo, S. (illustrated by R. Mwale)	60	March 2007
	Malawi Gold Standard Fish Farming Business Management Plan – <i>Pond Aquaculture</i>	Namale, B.; Simon, L. and Johnson, T. (illustrated by R. Mwale)	31	March 2007
	Measuring Your Own Progress: participatory monitoring and evaluation for adaptive management – revised 2 nd edition manual for facilitators	Mpezeni, M.	59	September 2006
	Malawi Gold Standard Beekeeping Business Management Plan	Johnson, T.; Neudel, E.; Simon, L.; Simon, J. and Namale, B. (illustrated by R. Mwale)	29	August 2006
	Malawi Gold Standard Beekeeping Trainer's Guide (includes set of 7 DVDs in Chichewa)	Chadza, W.; Banda, A. and Mweso, J. (illustrated by R. Mwale; video by P. Mphaka and E. Neudel)	61	July 2006
	Malawi Gold Standard Beekeeper's Handbook (English or Chichewa)	Simon, L.; Banda, A. and Mweso, J. (illustrated by R. Mwale)	91	July 2006
	Nyika-Vwaza Preliminary Situation Analysis Report	Sichinga, K.	60	March 2006
	The Nkhotakota Lake Fishery: a strategy for participatory fisheries management, institutional development and development of the offshore fishery	Seymour, T.	51	January 2006
	Communications Strategy for Malawi Department of Fisheries	Simon, J.	29	May 2005
	Northern Capture Fishery Subsector Analysis: line fishery for <i>ncheni</i> at Nkhata Bay	Seymour, T.; Munthali, S.; Saiti, D. and Agar, J.	47	May 2005

SERIES / No.	TITLE	AUTHOR(S)	No. PAGES	PUBLICATION DATE
	Doing Well by Doing Good – Promoting Increased Income for Men and Women Through conservation of Malawi's Natural Resources: analysis and proposed actions concerning gender mainstreaming and enterprise development in COMPASS II	Blumberg, R.L.	76	March 2005
	Honey Subsector: initial report	Pratt, J.; Munthali, S. and Agar, J.	50	February 2005
	CBNRM Situational Analysis at District and Community Level: Part 2 – the districts	Mauambeta, D. and Chadza, W.	78	October 2004
	CBNRM Situational Analysis at District and Community Level: Part 1 – results, analysis, discussion and recommendations	Mauambeta, D. and Chadza, W.	36	September 2004
	Situation Analysis and Gender Mainstreaming Action Plan: module II enhanced community capacity for management of natural resources in a sustainable manner	Omambia, D.	31	September 2004
	COMPASS II HIV/AIDS Integration Plan	Irwin, B.	27	September 2004
Contract Deliverables				
	Project Final Report	Sherchand, B. et al	110	August 2009
	Semi-Annual Progress Report: Oct 08 – March 09	Sherchand, B. et al	56	April 2009
	Annual Progress Report - 2008	Sherchand, B. et al	44	October 2008
	Semi-Annual Progress Report: Oct 07 – March 08	Sherchand, B. et al	67	April 2008
	Annual Work Plan – 2008/09	Sherchand, B. et al	50	March 2008
	Annual Progress Report - 2007	Dickinson, J. et al	52	October 2007
	Quarterly Progress Report: 3 rd quarter 2007 (01 April–30 June 2007)	Johnson, T. et al.	91	July 2007
	Quarterly Progress Report: 2 nd quarter 2007 (01 January–31 March 2007)	Johnson, T. et al.	90	April 2007
	Quarterly Progress Report: 1 st quarter 2007 (01 October–31 December 2006)	Johnson, T. et al.	98	January 2007
	Annual Work Plan: 2007	Johnson, T. et al.	71	October 2006
	Annual Progress Report - 2006	Johnson, T. et al.	52	October 2006
	Quarterly Progress Report: 3 rd quarter 2006 (01 April–30 June 2006)	Dickinson, J. et al.	91	July 2006
	Quarterly Progress Report: 2 nd quarter 2006 (01 January–31 March 2006)	Johnson, T. et al.	83	April 2006
	Quarterly Progress Report: 1 st quarter 2006 (01 October–31 December 2005)	Johnson, T. et al.	77	January 2006
	Annual Work Plan: 2006	Johnson, T. et al.	68	October 2005

SERIES / No.	TITLE	AUTHOR(S)	No. PAGES	PUBLICATION DATE
	Annual Progress Report—2005	Johnson, T. et al.	40	October 2005
	COMPASS II Monitoring & Evaluation Plan	Sambo; E.Y.; Wilson, J.; Flaming, L. and Sichinga, K.	72	August 2005
	Quarterly Progress Report: 3 rd quarter 2005 (01 April—30 June 2005)	Johnson, T. et al.	74	July 2005
	Quarterly Progress Report: 2 nd quarter 2005 (01 January—31 March 2005)	Johnson, T. et al.	71	April 2005
	Quarterly Progress Report: 1 st quarter 2005 (01 October—31 December 2004)	Johnson, T. et al.	73	January 2005
	Annual Progress Report—2004	Johnson, T. et al.	31	November 2004
	Annual Work Plan: 2005	Johnson, T. et al.	96	October 2004
	Getting Past Tick-Boxes: gender mainstreaming plan for COMPASS II	Luché-Thayer, J.; Omambia, D. and Blumberg, R.L.	52	September 2004
	Annual Work Plan: 2004—2005	Johnson, T.	68	May 2004
Workshop Proceedings				
	Proceedings of the Round Table Meeting on Collaborative Management of Protected Areas in Malawi	James R. Seyler	122	December 2008
	Traditional Authorities Conference on Community-Based Natural Resource Management: proceedings of a conference held 19-20 October 2005 in Lilongwe	N. Moyo (ed.)	40	January 2006
	Regional CBNRM Stakeholders Consultation – Part 1 Southern Region: proceedings of a workshop held 09-10 November 2004 in Zomba	P. Munthali (ed.)	24	December 2004
	Regional CBNRM Stakeholders Consultation – Part 2 Southern Region: proceedings of a workshop held 11-12 November 2004 in Zomba	N. Moyo and T. Chitaukali (eds.)	22	December 2004
	Regional CBNRM Stakeholders Consultation – Central Region: proceedings of a workshop held 16-17 November 2004 in Lilongwe	N. Moyo and T. Chitaukali (eds.)	15	December 2004
	Regional CBNRM Stakeholders Consultation – Northern Region: proceedings of a workshop held 23-24 November 2004 in Mzuzu	N. Moyo and T. Chitaukali (eds.)	26	December 2004
	National CBNRM Stakeholders Consultation: proceedings of a workshop held 22-23 September 2004 in Blantyre	N. Moyo and T. Chitaukali (eds.)	31	October 2004

SERIES / No.	TITLE	AUTHOR(S)	No. PAGES	PUBLICATION DATE
Internal Reports				
	Report on Training of the COMPASS II Public Awareness Team	Simon, L.	23	August 2005
	Internet Mapping: user's guide to the COMPASS II interactive mapping application	Bouvier, I.	19	December 2004
	COMPASS II Natural Resource-Based Products Venture Fund Design	Humpal, D. and Namale, B.	37	December 2004
	Software Application Training Manual for COMPASS II	Campbell, M.	20	September 2004

Annex 5: COMPASS II Data Tables for Reporting Period -- Ending Period May 31, 2009

CBNRM activities & natural products enterprises	Communities Adopting CBNRM	Participating Households	Production Units	Cum. Total Prod'n. volume	Volume	Cum. Total H-hold Revenue (MK)	Total value sold (MK)	Total value consumed (MK)	Average Unit Price (MK)	Date of most recent data	Data Source/Comments
					Bought By known Processors						
1	2	3	4	5		6	7	8	9	10	11
Beekeeping/ Honey Production											
Chisasila/Kande (Nkhata Bay)	6	110	kg	500		60,000	60,000	0	120.000	Jul-05	COMPASS grant #09
Tsogolo la Ana (Chikwawa)	14	416	kg	1,968		204,060	147,360	56,700	103.689	Sep-05	COMPASS grant #19
Kayezi CBNRM - World Vision (Mzimba)	8	560	liters	1,212		85,770	72,000	13,770	70.767	Mar-03	COMPASS grant #25
Bwanje Env. Rehab. Dev. Org. (Ntcheu)	15	142	liters	2,379		125,388	49,796	75,592	52.706	Jul-05	COMPASS grant #28
Njimbula VNRMC - NICE (Dedza)	1	18	liters	891		40,795	700	40,095	45.786	Jul-05	COMPASS grant #32
Khanganya VNRMC - NICE (Dedza)	1	40	liters	1,980		91,900	47,450	44,450	46.414	Jul-05	COMPASS grant #32
Chitsanzo Women's Club (Lilongwe)	3	13	liters	760		82,650	82,000	650	108.750	Sep-05	COMPASS grant #33
Chilingoma VNRMC (Rumphi)	2	13	kg	1,683		122,600	74,000	48,600	72.846	Sep-05	COMPASS grant #39
Mulanje beekeeping - Village Hands/WESM	80	164	kg	7,966		1,155,000	1,155,000	0	145.000	Sep-04	COMPASS II field surveys
Mulanje community beekeepers	8	165	kg	66,000		7,260,000	7,260,000	0	110.000	Apr-06	Mulanje valuation study
Phalombe community beekeepers	3	15	kg	6,000		660,000	660,000	0	110.000	Apr-06	Mulanje valuation study
Misuku beekeeping clubs (Chitipa)	10	105	kg	2,000		300,000	300,000	0	150.000	Sep-06	COMPASS II fieldwork
Kameme beekeeping clubs (Chitipa)	3	12	kg	883		132,353	132,353	0	149.890	Sep-06	COMPASS II fieldwork
Chitipa beekeeping clubs (Chitipa)	2	22	kg	3,051		457,647	457,647	0	149.999	Sep-06	COMPASS II fieldwork
Chisenga beekeeping clubs (Chitipa)	5	50	kg	1,000		150,000	150,000	0	150.000	Sep-06	COMPASS II fieldwork
Karonga beekeeping clubs (Karonga)	3	79	kg	500		75,000	75,000	0	150.000	Sep-06	COMPASS II fieldwork
Nyika/Therere beekeeping clubs (Chitipa)	2	20	kg	50		6,000	6,000	0	120.000	Sep-06	COMPASS II field surveys
Nyika/Thazima beekeeping clubs (Rumphi)	14	139	kg	13,898		1,976,388	1,976,388	0	142.207	Sep-06	COMPASS II fieldwork
Nyika/Chakaka beekeeping clubs (Rumphi)	13	130	kg	14,949		2,153,880	2,153,880	0	144.082	Sep-06	COMPASS II fieldwork
Vwaza Marsh beekeeping clubs (Mzimba)	3	35	kg	1,027		153,240	153,240	0	149.211	Sep-06	COMPASS II fieldwork
Kabunduli/Mzenga beekeeping clubs (Mzimba)	n/a	n/a	kg	19,000		2,850,000	2,850,000	0	150.000	Sep-06	COMPASS II fieldwork
SBDARA beekeeping clubs (Nkhata Bay)	8	980	kg	1,547		447,010	447,010	0	288.869	Sep-06	COMPASS II fieldwork
Nkhotako Community Bee keeping clubs	3	60	Kg			447,010	447,010	0		Sep-06	COMPASS II fieldwork
Chikwawa beekeeping clubs (Chikwawa)	n/a	n/a	kg	1,800		270,000	270,000	0	150.000	Sep-05	COMPASS II field surveys
Chuma Chobisika survey beekeepers (various)	n/a	55	kg	25,690		3,082,740	3,082,740	0	119.998	Sep-06	Chuma Chobisika survey
Nyika (livingstonia and Nchenachena)	58	451	Kg	250		125,000	125,000	0	250.000	Jul-07	COMPASS II fieldwork
MGS Groups Honey sales	n/a	6,035	kg	3,577		894,195	894,195	0	250.000	Jul-07	COMPASS II fieldwork
Vwaza-Rumphi/Mthuzi	1	14	kg	250	0	50,000	50,000	0	200		COMPASS II fieldwork
Nyika/Ntchenachena	19	190	kg	3,000	0	750,000	750,000	0	250	May-09	COMPASS II fieldwork
Nyika/Chakaka	0	0	kg	8,000	0	2,000,000	2,000,000	0	250	May-09	COMPASS II fieldwork
Nyika/Thazima beekeeping clubs (Rumphi)	2	58	Kg	2,992	0	748,000	748,000	0	250	May-09	COMPASS II fieldwork
Nyika/Bonde-fingira beekeeping clubs (Rumphi)	19	270	kg	500	0	150,000	150,000	0	300	May-09	COMPASS II fieldwork
Nyika/Mhuju Enterprise (Rumphi)	7	84	Kg	3,000	0	600,000	600,000	0	200	May-09	COMPASS II fieldwork
Nyika/N'gonga beekeeping clubs (Rumphi)	18	92	kg	1,500	0	375,000	375,000	0	250	May-09	COMPASS II fieldwork
Nyika/Fulirwa beekeeping clubs (Karonga)	23	40	kg	1,000	0	200,000	200,000	0	200	May-09	COMPASS II fieldwork
Nyika/Gamba beekeeping clubs (Chitipa)	13	160	kg	2,000	0	500,000	500,000	0	250	May-09	COMPASS II fieldwork
Nyika/Henga beekeeping clubs (Rumphi)	14	82	Kg		0	0	0	0	0	May-09	COMPASS II fieldwork
Kasungu/Santhe	4	18	Kg	870	0	609,000	609,000	0	700	May-09	COMPASS II fieldwork
Kasungu/Ntchenda-Chulu beekeeping clubs (Kasungu)	45	450	kg	150	0	37,500	37,500	0	250	May-09	COMPASS II fieldwork
Nkhotakota/Kawarenga Beekeeping clubs (NKK)	6	42	kg	0	0	0	0	0	0	May-09	COMPASS II fieldwork
Nkhotakota/Tongole Beekeeping clubs (NKK)	8	32	kg	61	0	15,125	15,125	1,500	250	May-09	COMPASS II fieldwork
Nkhotakota/Takondwe Beekeeping clubs (NKK)	9	56	kg	0	0	0	0	0	0	May-09	COMPASS II fieldwork
Nkhotakota/Mbewa honey	10	57	Kg	0	0	0	0	0	0	May-09	COMPASS II fieldwork
Nkhotakota/Ngala Beekeeping clubs (NKK)	4	20	kg	0	0	0	0	0	0	May-09	COMPASS II fieldwork
Nkhotakota/Kabululu Beekeeping clubs (NKK)	8	20	kg	0	0	0	0	0	0	May-09	COMPASS II fieldwork
Nkhotakota/Makhanjera Beekeeping clubs (NKK)	10	20	kg	0	0	0	0	0	0	May-09	COMPASS II fieldwork
Nkhat bay/Mkuwazi/Awonyepo	1	16	kg	45	0	9,000	11,250	0	250	Dec-08	COMPASS II fieldwork
Nkhata bay/Mkuwazi/Chigwiti	1	15	kg	500	0	100,000	100,000	0	200		COMPASS II fieldwork
Nkhata bay/Khamalipindula Cooperative	2	35	kg	2,500	0	500,000	500,000	0	200		COMPASS II fieldwork
Nkhat bay/Chombe	1	21	kg	900	0	180,000	180,000	0	200		COMPASS II fieldwork
Nkhata Bay/Chombe Beekeepers Wax sale			kg	4	0	800	800	0	200		COMPASS II fieldwork
Nkhata bay/Kadeti	1	13	Kg	1,500	0	300,000	300,000	0	200		COMPASS II fieldwork
Nkhata bay/Kavuzi	1	31	kg	900	0	180,000	180,000	0	200		COMPASS II fieldwork
Nkhata bay/Chipuzumumba	1	81	Kg	580	0	116,000	116,000	0	200		COMPASS II fieldwork

CBNRM activities & natural products enterprises	Communities Adopting CBNRM	Participating Households	Production Units	Cum. Total Prod'n. volume	Volume	Cum. Total H-hold Revenue (MK)	Total value sold (MK)	Total value consumed (MK)	Average Unit Price (MK)	Date of most recent data	Data Source/Comments
					Bought By known Processors						
1	2	3	4	5		6	7	8	9	10	11
Nkhata bay/Lwaniatonga	1	11	Kg	250	0	50,000	50,000	0	200		COMPASS II fieldwork
Nkhata bay/Luwere	1	13	Kg	950	0	190,000	190,000	0	200		COMPASS II fieldwork
Nkhata bay/Banga	1	10	Kg	600	0	120,000	120,000	0	200		COMPASS II fieldwork
Nkhata bay/ Kabunduli	44	615	kg	18,320	0	3,800,000	3,664,000	0	200		COMPASS II fieldwork
Nkhata Bay/Kawalazi Beekeeping Cooperative	11	120	kg	5,000	5,000	1,000,000	1,000,000	0	200	Jul-08	COMPASS II fieldwork
Nkhata Bay/Mphwayinisoka Beekeeping Enterprise	1	13		45		9,066	9,066		200		
Dedza/Thete Honey Producers and Marketing cooperative	20	119	kg	0	0	0	0	0	0		COMPASS II fieldwork
Dedza/Tuma Forest Reserve	15	384	kg	58		14,500	14,500		250		
Chikwawa/Majete	4	88	kg	500	0	125,000	125,000	0	250	May-09	COMPASS II fieldwork
Mchinji NASME beekeeping clubs	15	375	Kg	2,000	2,000	400,000	400,000	0	200	May-09	COMPASS II fieldwork
Zinga Farms	1	0	Kg	3,500	3,500	700,000	700,000	0	200	May-09	COMPASS II fieldwork
Mulanje/Sapitwa Beekeepers Association	100	2,446	kg	9,744	0	2,436,000	2,436,000	0	250	May-09	COMPASS II fieldwork
Lilongwe/Sendwe Beekeeping Enterprise	4	67	kg	250		3,600,000			200		
Nkhata bay/ Kabunduli	1	1	kg	59		11,800			200	May-09	
Nkhata Bay/Mwambazi Beekeeping Enterprise	1	12	kg	23		4,670			200	May-09	
Nkhata Bay/Dunduzi Beekeeping Enterprise	1	7	kg	8		1,500			200	May-09	
Nkhata Bay/James Phiri	1	1	kg	23		4,670			200	May-09	
Nyika/Managani Beekeeping Club	1	11	kg	875		175,000			200	May-09	
Chitipa/Kaphika Msiska (mr) Honey	1	1	kg	1,000		250,000			250	May-09	
Chitipa/Kaphika Msiska (mr) wax				18		4,500	4,500		250	May-09	
Chiwogolo Apiaries	0	0	kg	18,000	3,000	3,600,000	4,200,000	0	200	May-09	COMPASS II fieldwork
Northern Honey Processors	0	0	kg	0	15,000	0	3,000,000	0	200	May-09	COMPASS II fieldwork
SABADARA	0	980	kg	0	40,500	0	8,100,000	0	200	May-09	COMPASS II fieldwork
Tsapa Beekeeping Services	0	0	kg	0	11,500	0	2,300,000	0	200	May-09	COMPASS II fieldwork
Nyika Honey	0	0	kg	0	5,500	0	1,100,000	0	200	May-09	COMPASS II fieldwork
EPL Ltd	0	0	kg	0	11,000	0	2,200,000	0	200	May-09	COMPASS II fieldwork
Livingstonia Enterprise	5	87	kg	0	10,000	0	2,000,000	0	200	May-09	COMPASS II fieldwork
Nali Ltd	0	0	kg	0	1,450	0	362,500	0	250	May-09	COMPASS II fieldwork
CTL	0	0	Kg	0	5,000	0	1,000,000	0	200	May-09	COMPASS II fieldwork
Village Hands	80	160	Kg	0	6,200	0	1,240,000	0	200	May-09	COMPASS II fieldwork
Kati Kati Pure Honey	0	0	Kg	0	3,100	0	496,000	0	160	May-09	COMPASS II fieldwork
McBee Honey	0	0	Kg	0	6,500	0	1,677,000	0	258	May-09	COMPASS II fieldwork
Mzuzu Smallholder Cooperative Honey	0	0	kg	0	84,100	0	21,025,000	0	250	May-09	COMPASS II fieldwork
Sub-total	802	17,267		272,036	213,350	47,325,757	87,965,010	281,357			

CBNRM activities & natural products enterprises	Communities Adopting CBNRM	Participating Households	Production Units	Cum. Total Prod'n. volume	Volume	Cum. Total H-hold Revenue (MK)	Total value sold (MK)	Total value consumed (MK)	Average Unit Price (MK)	Date of most recent data	Data Source/Comments
					Bought By known Processors						
1	2	3	4	5		6	7	8	9	10	11
Ecotourism / Community Wildlife Co-management											
Liwonde Nat'l Park VNRCs (Machinga)	68	211	visitors	n/a		0	0	0	n/a	Mar-03	COMPASS grant #12
Nyafulu Gate - Liwonde NP (Machinga)	3	69	km fence	10		0	0	0	n/a	Jun-03	COMPASS grant #18
Nyafulu Comm. Ctr - Liwonde NP (Machinga)	1	39	center	1		0	0	0	n/a	Jun-03	COMPASS grant #41
Hippo Sanctuary - WAG (Salima)	1	1	visitors	340		17,000	17,000	0	50,000	Oct-04	COMPASS grant #42
Lake Malawi Nat'l Park (Mangochi)	1	4	visitors	480		48,000	48,000	0	100,000	Jul-05	COMPASS grants #43, 51
Jambo Africa Lodge - Lengwe NP (Chikwawa)	1	1	visitors	66		615,938	615,938	0	9,375,000	Jul-05	COMPASS grant #52
Lengwe, Majete, Mwabvi VNRCs (Chikwawa)	7	210	visitors	0		0	0	0	0.000	Jul-05	COMPASS II field surveys
Mulanje Mtn. ecotourism (Mulanje)	3	n/a	porter-days	1,624		1,298,800	1,298,800	0	800,000	Apr-06	Mulanje valuation study
Mulanje Mtn. ecotourism (Mulanje)	n/a	n/a	guide-days	98		97,800	97,800	0	1,000,000	Apr-06	Mulanje valuation study
Nyika-Vwaza Assn. (Chitipa, Rumphu, Mzimba)	104	1,577	HH avg/mo	444		8,407,933	8,407,933	0	5,331,600	Feb-06	Nyika-Vwaza survey
Mtondya Dance Troupe	1	8				4,000	4,000	0	n/a	Jul-07	COMPASS II Field Work
Sub-total	190	2,120		3,062		10,489,471	10,489,471	0			
Nurseries and Orchards											
Matindi Youth Orgn. (Blantyre)	5	25	seedlings	31,000		275,498	139,500	135,998	17,000	Jul-05	COMPASS grants #03, 30
Chisoti Youth - Grafted Fruit Trees (NKK)	29	516	seedlings	71,700		681,238	424,000	257,238	5,914	Jul-05	COMPASS grant #34
Chitipa community forestry	n/a	n/a	seedlings	unknown		118,000	118,000	0	n/a	Sep-05	field VNRMC surveys
Nkhata Bay community forestry	n/a	n/a	seedlings	10,207		102,071	102,071	0	10,000	Sep-05	field VNRMC surveys
Nkhotakota community forestry	n/a	n/a	seedlings	16,000		560,000	560,000	0	35,000	Sep-05	field VNRMC surveys
Lilongwe community forestry	n/a	n/a	seedlings	95,000		1,425,000	1,425,000	0	15,000	Sep-05	field VNRMC surveys
Mangochi community forestry	n/a	n/a	seedlings	1,777		17,770	17,770	0	10,000	Sep-05	field VNRMC surveys
Machinga community forestry	n/a	n/a	seedlings	37,500		937,500	937,500	0	25,000	Sep-05	field VNRMC surveys
Chikwawa community forestry	n/a	n/a	seedlings	8,000		80,000	80,000	0	10,000	Sep-05	field VNRMC surveys
Sub-total	34	541		271,184		4,197,078	3,803,841	393,237			
Guinea Fowl											
Bwanje Env. Rehab. Dev. Org. (Ntcheu)	6	49	eggs	9,450		243,750	236,250	7,500	25,000	Jul-05	COMPASS grant #28
Bwanje Env. Rehab. Dev. Org. (Ntcheu)	n/a	93	birds	1,490		805,500	670,500	135,000	450,000	Jun-03	COMPASS grant #28
Dedza Env. - NICE / Kantiki (Dedza)	1	14	eggs	8,720		174,396	77,464	96,932	20,000	Jul-05	COMPASS grant #32
Dedza Env. - NICE / Kantiki (Dedza)	n/a	n/a	birds	562		163,700	71,100	92,600	291,281	Jul-05	COMPASS grant #32
Intl Eye Foundation (Chikwawa)	12	350	eggs	300		3,000	3,000	0	10,000	Jul-05	COMPASS grant #26
Tsogolo la Ana (Chikwawa)	26	523	eggs	90,640		1,008,600	156,470	852,130	11,128	Jul-05	COMPASS grant #19
Tsogolo la Ana (Chikwawa)	n/a	n/a	birds	7,876		1,081,230	954,500	126,730	137,282	Jul-05	COMPASS grant #19
Lilongwe CBNRM	n/a	n/a	eggs	2,200		22,000	22,000	0	10,000	Sep-05	COMPASS II field surveys
Lilongwe CBNRM	n/a	n/a	birds	152		38,000	38,000	0	250,000	Sep-05	COMPASS II field surveys
Sub-total	45	1,029		121,390		3,540,176	2,229,284	1,310,892			

CBNRM activities & natural products enterprises	Communities Adopting CBNRM	Participating Households	Production Units	Cum. Total Prod'n. volume	Volume	Cum. Total H-hold Revenue (MK)	Total value sold (MK)	Total value consumed (MK)	Average Unit Price (MK)	Date of most recent data	Data Source/Comments
					Bought By known Processors						
1	2	3	4	5	6	7	8	9	10	11	
Forest Products - timber, poles, and others(eg. Mushroom)											
Bwanje Env. Rehab. Dev. Org. (Ntcheu)	10	1,258	trees	461,250		79,043	30,100	48,943	0.065	Mar-03	COMPASS grant #05
Bwanje Env. Rehab. Dev. Org. (Ntcheu)	30	3,000	trees	1,193,850		51,825	25,000	26,825	0.021	Apr-03	COMPASS grant #28
Chisoti Youth - Sani Hill Rehab. (Nkhotakota)	16	500	trees	20,090		9,394	4,538	4,856	0.226	Mar-03	COMPASS grant #06
Livingstonia - RUFA Manchewe (Rumphi)	75	986	trees	251,062		21,665	10,422	11,243	0.042	Mar-03	COMPASS grant #07
Livingstonia - RUFA Pamoza (Rumphi)	122	12,830	trees	62,500		10,038	4,686	5,352	0.075	Apr-03	COMPASS grant #46
Ntenje Afforestation (Mangochi)	3	33	trees	82,520		7,054	3,310	3,744	0.040	Jul-05	COMPASS grant #11
Mpalasa Afforestation (Balaka)	4	40	trees	52,235		4,340	2,000	2,340	0.038	Jul-05	COMPASS grant #15
Nsipe Afforestation (Ntcheu)	10	127	trees	200,666		253,220	112,005	141,215	0.558	Jul-05	COMPASS grant #17
Dedza Env. - NICE (Dedza, Salima, Ntcheu)	24	900	trees	410,425		1,759,175	786,695	972,480	1.917	Jul-05	COMPASS grant #22
Dedza Env. - NICE (Dedza)	16	3,000	trees	760,000		3,423,401	2,411,000	1,012,401	3.172	Jul-05	COMPASS grant #32
Tsogolo la Ana (Chikwawa)	42	2,157	trees	462,491		919,850	302,000	617,850	1.989	Mar-03	COMPASS grant #36
Chiling'oma VNRMC (Rumphi)	12	372	trees	19,300		13,400	0	13,400	0.694	Mar-03	COMPASS grant #39
Chamkondo VNRMC (Lilongwe)	1	62	trees	n/a		217,000	0	217,000	0.000	Oct-04	Best Practice database
Chitipa community forestry	2	1,705	m3/yr	50		7,500	7,500	0	150.000	Sep-05	field VNRMC surveys
Chitipa community forestry	n/a	n/a	poles	641		22,435	20,835	1,600	35.000	Sep-05	field VNRMC surveys
Rumphi community forestry	0	0		0		0	0	0	-	Sep-06	COMPASS II fieldwork
Mzimba community forestry	36	45		0		0	0	0	-	Sep-06	COMPASS II fieldwork
Nkhata Bay community forestry	12	2,721	m3/yr	250		62,500	62,500	0	250.000	Sep-05	field VNRMC surveys
Nkhata Bay community forestry	n/a	n/a	poles	1,230		61,500	56,650	4,850	50.000	Sep-06	COMPASS II fieldwork
Nkhotakota community forestry	12	5,462	m3/yr	450		112,500	112,500	0	250.000	Sep-05	field VNRMC surveys
Nkhotakota community forestry	n/a	n/a	poles	2,500		125,000	123,500	1,500	50.000	Sep-05	field VNRMC surveys
Lilongwe community forestry	28	1,712	m3/yr	245		110,250	110,250	0	450.000	Sep-05	field VNRMC surveys
Lilongwe community forestry	n/a	n/a	poles	22,450		561,852	561,852	0	25.027	Sep-05	field VNRMC surveys
Ntcheu community forestry	36	1,080	n/a	n/a		0	0	0	0.000	Sep-06	COMPASS II fieldwork
Mangochi community forestry	20	2,320	poles	530		13,350	13,250	100	25.189	Sep-05	field VNRMC surveys
Machinga community forestry	n/a	4,000	poles	n/a		0	0	0	0.000	Sep-05	field VNRMC surveys
Chikwawa community forestry	4	4,500	m3/yr	55		13,750	13,750	0	250.000	Sep-05	field VNRMC surveys
Phalombe forest reserve co-management	3	1,051	thatch grass	20,181		281,319	0	281,319	13.940	Apr-06	Mulanje valuation study
Phalombe forest reserve co-management	n/a	n/a	poles	11,892		154,598	0	154,598	13.000	Apr-06	Mulanje valuation study
Phalombe forest reserve co-management	n/a	n/a	rope	525		793	0	793	1.510	Apr-06	Mulanje valuation study
Mulanje forest reserve co-management	3	1,512	thatch grass	29,033		404,714	0	404,714	13.940	Apr-06	Mulanje valuation study
Mulanje forest reserve co-management	n/a	n/a	poles	17,108		222,409	0	222,409	13.000	Apr-06	Mulanje valuation study
Mulanje forest reserve co-management	n/a	n/a	rope	755		0	0	0	1.510	Apr-06	Mulanje valuation study
Chuma Chobisika survey CBNRM (various)		743	poles	2,229		66,870	66,870	0	30.000	Sep-06	Chuma Chobisika survey
Mtonya Mushrooms Enterprise	1	25	kg	112		50,400	50,400		450.000	May-09	COMPASS II fieldreport
Takondwa NR Enterprise(mushrooms)	1	10	Kg	10		3,500	3,500		350.000	Sep-08	COMPASS II fieldreport
Togole Mushroom Growers Club	1	15	Kg	70		3,500	3,500		500.000	Apr-09	COMPASS II fieldreport
Esha farms Spawn	1	19	Kg	906		362,400	362,400		400.000	Apr-09	COMPASS II fieldreport
Esha Farms Mushrooms	1	1	Kg	592		296,000	296,000		500.000	Apr-09	COMPASS II fieldreport
Mzuzu Mushroom Clubs	19	172	Kg	575		258,750	258,750		450.000	Apr-09	COMPASS II fieldreport
Ngowe Mushroom Growers Association	22	264	Kg	2,490		996,000	996,000		400.000		COMPASS II fieldreport
NRC Spawn Producer- supplier	1	1	litres	4,724		1,417,337	1,417,337		300.000	May-09	COMPASS II fieldreport
NRC Mushroom sales	1	85		1,187		474,800	474,800		400.000	Apr-09	COMPASS II fieldreport
Mchinji/NASME Mushroom growers	84	1230	Kg	1,800		720,000	720,000		400.000	Apr-09	COMPASS II fieldreport
Nkhotakota/ Lozi Women's Group	1	8	Kg	43		25,500	25,500		600.000	Apr-09	COMPASS II fieldreport
Chikangawa Wild Mushroom Club	15	237									
Sub-total	669	54,183		4,099,022		13,598,931	9,449,400	4,149,531			

CBNRM activities & natural products enterprises	Communities Adopting CBNRM	Participating Households	Production Units	Cum. Total Prod'n. volume	Volume	Cum. Total H-hold Revenue (MK)	Total value sold (MK)	Total value consumed (MK)	Average Unit Price (MK)	Date of most recent data	Data Source/Comments
					Bought By known Processors						
1	2	3	4	5	6	7	8	9	10	11	
Other & Miscellaneous Natural Products											
Ndirande Women Briquettes Group (Blantyre)	3	25	briquettes	150,000		285,701	90,701	195,000	1.905	Jul-05	COMPASS grants #01, 31
Saopampeni Cane Rat Farm (Salima)	3	20	cane rats	15		0	0	0	0.000	Mar-03	COMPASS grant #14
DAPP Communal Herb Gardens (Chiradzulu)	45	1,760	seedlings	13,812		379	0	0	n/a	Jul-05	COMPASS grants #16, 48
Songani Community Care Group (Zomba)	20	221	briquettes	127,750		3,000	3,000	0	0.023	Jul-05	COMPASS grant #20
Chimwembe Dam Mushrooms (Blantyre)	1	6	kg	229		60,313	57,313	3,000	263.088	Mar-03	COMPASS grant #27
Magomero Fruit Processing (Chiradzulu)	5	10	liters juice	2,337		130,140	130,140	0	55.687	Jul-05	COMPASS grant #40
Magomero Fruit Processing (Chiradzulu)	n/a	n/a	bottles jam	798		59,850	59,850	0	75.000	Jul-05	COMPASS grant #40
Nyafulu Chili Pepper Prod'n. (Machinga)	7	92	kg	6,020		665,700	665,700	0	110.581	Jun-03	COMPASS grant #41
Lipangwe Organic Farm (Lilongwe)	23	1,546	kg	unknown		391,000	391,000	0	n/a	Jul-05	COMPASS grant #42
Southern Viphya Craft Assn. (Mzimba)	9	19	kg	unknown		60,000	60,000	0	n/a	Aug-06	COMPASS grant #44
Likhabula & Chitikale crafts prod'n. (Mulanje)	2	42	craftsmen	42		1,587,600	1,587,600	0	37,800.000	Apr-06	Mulanje valuation study
MGS Service Provider fees	301	n/a	fees			1,888,840	1,888,840		n/a	Apr-08	COMPASS II fieldwork
Mzuzu Coffee Planters Cooperative Union	1		kg	31,000		13,830,360	13,830,360	0	446.141	May-09	COMPASS II fieldwork
Tongole Dried Fruit	2	12	Kg	99		38,850	38,850			Apr-09	COMPASS II fieldwork
Mzuzu Coffee Planters Cooperative Union	1		kg	204,000		106,044,000				May-09	COMPASS II fieldwork
Sub-total	423	3,753	0	536,102		125,045,733	18,803,354	198,000			
Aquaculture - Fishponds & Cage Culture											
Chigumula Fish Farm (Blantyre)	1	7	kg	480		101,625	101,625	0	211.719	Mar-03	COMPASS grant #04
Kalino Fish Farm (Zomba)	3	11	kg	150		39,885	39,885	0	265.900	Jul-05	COMPASS grants #23, 50
Mchengawede Fish Farming Club (Zomba)	1	19	kg	unknown		324,000.00	243,000.00	81,000.00	64.000	Jul-05	COMPASS grant #37
Tsogolo la Ana (Chikwawa)	10	75	kg	unknown		42,000	21,000.00	21,000.00	n/a	Jul-03	COMPASS grant #49
Tidziwane Fish Farming Club (Mwanza)	1	15	kg	63		8,806	4,403.00	4,403.00	70.000	Jul-05	COMPASS grant #54
Chitipa community fish ponds	n/a	179	kg	1,520		53,200	53,200	0	35.000	Sep-05	COMPASS II field surveys
Nkhata Bay community fish ponds	n/a	n/a	kg	unknown		560,000	560,000	0	n/a	Sep-05	COMPASS II field surveys
Nkhotakota community fish ponds	n/a	n/a	kg	unknown		496,203	496,203	0	n/a	Sep-05	COMPASS II field surveys
Mulanje/Phalombe community fish ponds	n/a	400	kg	5,080		899,719	404,368	495,351	199.000	Apr-06	Mulanje valuation study
Chikwawa community fish ponds	n/a	n/a	fingerling	unknown		128,363	93,188	35,175	n/a	Sep-05	COMPASS II field surveys
Bawi fish ponds (????)	n/a	n/a	kg	unknown		213,000	161,000	52,000	n/a	Sep-05	COMPASS II field surveys
Mpalasa Fish Farming (Balaka)	5	20	kg	287		10,750	4,300	6,450	37.456	Jul-05	own initiative
Chingali Fish Farm (Zomba)	1	40	kg	47		11,700	11,700	0	248.936	May-06	former World Vision site
Mangochi Smallscale Cage Culture	1	1					114,000			Apr-08	COMPASS II fieldwork
Nkhotakota Khufi cage culture	9	20		90			11,400			May-09	COMPASS II fieldwork
Nkhotakota Kaliba Cage Culture	3	15								May-09	COMPASS II fieldwork
Nkhotakota Kambindingu Cage Culture	9	11								May-09	COMPASS II fieldwork
Chia Lagoon Cage Culture	3	20									
Sub-total	47	833		7,717		2,889,251	2,319,272	695,379			
Tree Seed Oils											
Kwambiri baobab suppliers (Mangochi)	1	63	kg	0		0	0	0	n/a	Sep-06	Tree Crops Ltd.
Kapiri baobab suppliers (Mangochi)	1	50	kg	6,344		174,185	174,185	0	27.457	Sep-06	Tree Crops Ltd.
Phanga baobab suppliers (Mangochi)	1	74	kg	17,282		478,310	478,310	0	27.677	Sep-06	Tree Crops Ltd.
Maldeco baobab suppliers (Mangochi)	1	19	kg	8,917		253,485	253,485	0	28.427	Sep-06	Tree Crops Ltd.
Chironga baobab suppliers (Mangochi)	1	14	kg	3,202		92,995	92,995	0	29.043	Sep-06	Tree Crops Ltd.
Makokola baobab suppliers (Mangochi)	1	67	kg	16,379		465,050	465,050	0	28.393	Sep-06	Tree Crops Ltd.
Malembo baobab suppliers (Mangochi)	1	9	kg	2,380		63,800	63,800	0	26.807	Sep-06	Tree Crops Ltd.
Yesaya baobab suppliers (Mangochi)	1	46	kg	9,065		263,345	263,345	0	29.051	Sep-06	Tree Crops Ltd.
TreeCrops Baobab (Mangochi) Powder		175	Kg	80,000		2,870,400	2,870,400			May-09	Tree Crops Ltd.
TreeCrops Baobab (Mangochi) 2008 info powder & oil	5	143	Kg			4,991,164				May-09	Tree Crops Ltd.
Sub-total	13	660		143,569		9,652,734	4,661,570	0			

CBNRM activities & natural products enterprises	Communities Adopting CBNRM	Participating Households	Production Units	Cum. Total Prod'n. volume	Volume	Cum. Total H-hold Revenue (MK)	Total value sold (MK)	Total value consumed (MK)	Average Unit Price (MK)	Date of most recent data	Data Source/Comments
					Bought By known Processors						
1	2	3	4	5		6	7	8	9	10	11
Lake Fisheries Management											
Mwaiwathu Fisheries Cmte (Zomba)	52	420	kg	unknown		18,600	18,600	0	n/a	Mar-03	COMPASS grant #24
Nkhono BVC (Nkhotakota)	10	3,503	kg	unknown		9,000	9,000	0	n/a	Jul-05	COMPASS grant #38
Lake Chikukutu Fisheries Assn. (NKK)	9	409	kg	unknown		0	0	0	n/a	Jun-06	COMPASS II fieldwork
Liwaladzi Fisheries Assn. (NKK)	6	457	kg	unknown		0	0	0	n/a	Sep-06	COMPASS II fieldwork
Bua North Fisheries Assn. (NKK)	6	635	kg	unknown		0	0	0	n/a	Aug-06	COMPASS II fieldwork
Bua South Fisheries Assn. (NKK)	6	540	kg	unknown		0	0	0	n/a	Aug-06	COMPASS II fieldwork
Kambindingu Fisheries Assn. (NKK)	11	450	kg	unknown		0	0	0	n/a	Aug-06	COMPASS II fieldwork
Lake Chiuta Fisheries Assn. (Machinga)	14	903	kg	903		31,605	31,605	0	35,000	Jul-06	COMPASS II fieldwork
Machinga East Fisheries Assn. (Machinga)	7	481	kg	310		12,400	12,400	0	40,000	Jul-06	COMPASS II fieldwork
Machinga West Fisheries Assn. (Machinga)	8	614	kg	1,874		74,960	74,960	0	40,000	Jul-06	COMPASS II fieldwork
Zomba East Fisheries Assn. (Zomba)	7	564	kg	1,005		40,200	40,200	0	40,000	Oct-06	COMPASS II fieldwork
Kuntumanji Fisheries Assn. (Zomba)	5	333	kg	650		26,000	26,000	0	40,000	Oct-06	COMPASS II fieldwork
Mwambo Fisheries Assn. (Zomba)	8	457	kg	45		1,800	1,800	0	40,000	Oct-06	COMPASS II fieldwork
Phalombe Fisheries Assn. (Phalombe)	13	1328	kg	2,300		92,000	92,000	0	40,000	Aug-06	COMPASS II fieldwork
Sub-total	162	11,094		7,087		306,565	306,565	0			
Agroforestry Home Gardens & Drip Irrigation											
Mulanje NASFAM field trials	1	92	kg	7,296		326,478	31,493	294,985	n/a	Feb-07	drip irrigation survey
Mangochi NASFAM field trials	1	60	kg	4,934		142,251	30,446	111,805	n/a	Feb-07	drip irrigation survey
Balaka NASFAM field trials	1	62	kg	2,535		114,951	23,444	91,506	n/a	Feb-07	drip irrigation survey
Mchinji NASFAM field trials	1	52	kg	5,549		111,189	50,538	60,652	n/a	Feb-07	drip irrigation survey
Lilongwe NASFAM field trials	1	116	kg	10,733		238,615	166,436	72,179	n/a	Feb-07	drip irrigation survey
Mzimba NASFAM field trials	1	73	kg	4,423		126,010	22,388	103,622	n/a	Feb-07	drip irrigation survey
Nsanje FHI field trials	1	56	kg	4,891		170,751	22,132	148,620	n/a	Feb-07	drip irrigation survey
Chikwawa FHI field trials	1	56	kg	2,871		123,102	0	123,102	n/a	Feb-07	drip irrigation survey
Mangochi FHI field trials	2	86	kg	4,882		138,912	70,371	68,541	n/a	Feb-07	drip irrigation survey
Blantyre FHI field trials	3	108	kg	5,981		177,485	91,925	85,561	n/a	Feb-07	drip irrigation survey
Dowa FHI field trials	1	109	kg	3,802		163,312	29,482	133,831	n/a	Feb-07	drip irrigation survey
Dowa TLC field trials	1	46	kg	6,382		174,739	76,525	98,214.19	n/a	Feb-07	drip irrigation survey
Lilongwe TLC field trials	1	110	kg	14,211		255,058	126,084	128,975	n/a	Feb-07	drip irrigation survey
Blantyre TLC field trials	1	12	kg	1,316		108,559	6,898	101,661	n/a	Feb-07	drip irrigation survey
Balaka SAVE field trials	2	146	kg	8,751		241,370	96,339	145,031	n/a	Feb-07	drip irrigation survey
Nsanje GOAL field trials	1	14	kg	151		4,449	0	4,449	n/a	Feb-07	drip irrigation survey
Sub-total	20	1,198		88,708		2,617,231	844,501	1,772,732			
TOTAL of ALL NATURAL PRODUCTS	2,405	92,678				219,662,925.13					
US\$ equivalent of total revenues						\$ 1,873,061.20					
exchange rate used = oanda.com rate for date of most recent data											
n/a = data not available or not applicable											
Figures in italics in the Total HH revenue column refer to revenue from 2007 & 2008											