

College of African Wildlife Management, Mweka
50th Anniversary Conference



Wildlife Management and Wildlife Tourism

In the Changing World:

Fifty Years of

Wildlife Management and Tourism

Training in Africa

29 - 31 October 2013

Moshi, Kilimanjaro Region, TANZANIA

Fifty Years of Wildlife Management and Tourism Training in Africa
2013
@College of African Wildlife Management, Mweka

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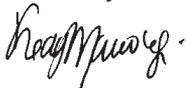
1.0 Introduction

1.1 Welcome to Mweka

Fifty years of existence of wildlife management by independent states of Africa comes with both glory and more challenges. There have been no extinctions of major wildlife species in some African countries. Some states have also maintained very healthy wildlife populations of some wildlife species which make significant contributions to wildlife tourism and the economies of some of the African states. Even with these achievements, wildlife management is still confronted with significant predicaments caused mainly by changes in wildlife management contexts, technological advancements and shifts in global economic and financial markets. Local extinctions of wildlife species are not uncommon across the African continent. Many wildlife populations are adversely affected by the human demand for land and natural resources. Wildlife populations are continually isolated by different human uses. These changes and challenges, and the related escalation of poaching in Africa, have placed wildlife species in far more danger of extinction. Who is to blame for the current state of wildlife in Africa? Where did Africa go wrong in conservation of its biological resources? Is the training offered by wildlife institutions in Africa partly responsible for the current wildlife management crisis in Africa? Is training offered by these institutions relevant to the present challenges facing wildlife management? What are the curriculum gaps, and how can they be addressed? Are the current wildlife management approaches working? Do community-based wildlife management, species management, the theory of change, adaptive management and ecosystem-based approaches work?

As we celebrate 50 years of existence, the College has decided to bring together practitioners in wildlife management from across the continent to provide answers to these challenging questions and discuss how to address these problems. The outcome of the discussions during the 50th Anniversary Conference will be compiled into a book which will guide wildlife management in Africa and inform the curriculum of training institutions across Africa.

Dr. Freddy S. Manongi



Acting Rector, College of African Wildlife Management, Mweka

1.2 Keynote Address

Role of Forensics in Wildlife Conservation

Professor George E. Otiang'a Owiti
Principal, Kenya Wildlife Service Training Institute

2.0 Program Timetable

2.1 Conference-at-a-Glance

TIME OF DAY	Day One 29 October 2013	¹Day Two 30 October 2013	¹Day Three 31 October 2013
0810hrs BUS PICK-UP AT HOTELS			
0815 - 0900hrs	Registration	0830hrs	0830hrs
0900 - 0930hrs	Opening Remarks and Pre-Conference Survey	Presentations: Sub-Theme 1	Discussion/Summary: Sub-Themes 2- 8
0930 - 1000hrs	Keynote Address		
1000 - 1100hrs	Current Wildlife Challenges		
1100-1120hrs	TEA & BITES		
1120 - 1320hrs	Current Wildlife Challenges	Presentations: Sub-Theme 1	Summary and Report Write-up: Sub-Themes 2-8
		Presentations: Sub-Themes 2, 3 and 6 Sub-Theme 4 Sub-Themes 5, 7 and 8	Group Reports: Sub-Themes 2-8
1320-1410hrs	LUNCH		
1410 - 1600hrs	Current Wildlife Challenges	Presentations: Sub-Themes 2, 3 and 6 Sub-Theme 4 Sub-Themes 5, 7 and 8	Expert Panel: The Way Forward
1600 - 1620hrs	TEA & BITES		
1620 -1800hrs	Current Wildlife Challenges	Presentations: Sub-Theme 4 Sub-Themes 5, 7 and 8	Post-Conference Outreach Discussion and Post-Conference Survey
		Discussions: Sub-Themes 2-8	Closing Remarks 1730hrs Bus Departs Mweka for Hotels
1815hrs BUS DEPARTS MWEKA FOR HOTELS			
	Dinner on your own	Dinner on your own	1930hrs Bus Pick-up for Group Dinner at AMEG; 2230hrs Bus Departs AMEG for Hotels

¹Sub-Themes:

1. Wildlife management training in Africa: challenges and prospects
2. Community-based natural resources management: wildlife rights, benefits and community responsibility
3. Human-wildlife conflicts: critical solutions
4. Wildlife management: information, challenges and prospects
5. Wildlife law enforcement: failures or successes
6. Wildlife management contemporary issues (technology, HIV/AIDS, gender, climate change, bush meat trade, poverty)
7. Wildlife governance: challenges and solutions
8. Wildlife management and tourism

2.2 Day-at-a-Glance

DAY ONE: 29 OCTOBER 2013 - Facilitator: Dr. Freddy S. Manongi

TIME OF DAY	TOPIC	SPEAKER	FORMAT	ROOM
0810hrs BUS PICK-UP AT HOTELS				
815 - 0900hrs REGISTRATION OPENS				
0900 - 0930hrs	Opening Remarks and Pre-Conference Survey	MANONGI, Dr. Freddy S.	Plenary	Major Kinloch
0930 -1000hrs	Role of Forensics in Wildlife Conservation	OTIANG'A-OWITI, Prof. George E.	Plenary	Major Kinloch
1000 -1100hrs	Current Challenges in Wildlife Management	CAMEROON:KPWANG, Mr. Abessolo DEMOCRATIC REPUBLIC OF CONGO:ATALIA, Dr. Mbayma ERITREA:GHEBREMARIAM, Mr. Futsium Hagos	Plenary	Major Kinloch
1100-1120hrs TEA & BITES				
ETHIOPIA: WAKJIRA, Mr. Kumara GAMBIA: KASSAMA, Mr. Mohammed GHANA: AGYARE, Dr. Andrew MALAWI: KUMCHEDWA, Mr. Brighton K. MOZAMBIQUE: SEQUELA, Mr. Augusto SOUTH SUDAN: PETER, Mr. Minasona Lero				
1120 -1320hrs	Current Challenges in Wildlife Management		Plenary	Major Kinloch
1320-1410hrs LUNCH				
SWAZILAND: DLAMINI, Mr. Maduze David TANZANIA: SONGORWA, Prof. Alexander TANZANIA: KIJAZI, Mr. Allan TANZANIA: KAWASANGE, Mr. Bruno TANZANIA: MDUMA, Dr. Simon R.				
1410 -1600hrs	Current Challenges in Wildlife Management		Plenary	Major Kinloch
1600-1620hrs TEA & BITES				
UGANDA: MAKOMBO, Mr. John ZAMBIA: ZYAMBO, Mr. Paul (2) LIBERIA: GBEINTORE, Mr. Edward ZIMBABWE:				
1620 -1800hrs	Current Challenges in Wildlife Management		Plenary	Major Kinloch
1815hrs BUS DEPARTS MWEKA FOR HOTELS				
DINNER ON YOUR OWN				

DAY TWO: 30 OCTOBER 2013 – See Subtheme Facilitators (below)

TIME OF DAY	TOPIC	SPEAKER	FORMAT	ROOM
0810hrs BUS PICK-UP AT HOTELS				
0830 -1100hrs	Sub-Theme 1: Wildlife management training in Africa: challenges and prospects Facilitator: SCHOLTE, Mr. Paul	MANONGI, Dr. Freddy S. TARLA, Mr. Francis DAMALU, Ms. Lowaeli OTIANG'A OWITI, Prof. George DOUGLAS, Mr. Malcolm BATSHABANG, Mr. Moemi R. LWANKOMEZI, Mr. Emmanuel NASASIRA, Mr. Richard MULENGA, Mr. Fredrick SYLVINA, Dr. Teresa J.	Plenary	Major Kinloch
1100-1120hrs TEA & BITES				
1120 -1200hrs	Sub-Theme 1 (continued) Facilitator: SCHOLTE, Mr. Paul	MSEJA, Mr. Gideon A. SCHOLTE, Mr. Paul	Plenary	Major Kinloch
	Sub-Theme 4 Facilitator: SCHOLTE, Mr. Paul	MANONGI, Dr. Freddy S. MAKUMBULE, Mr. Georgy K. MWAYA, Mr. Reginald T. MSEJA, Mr. Gideon A. NJOJU, Mr. Henry K.	Break-out	Major Kinloch
1200 -1320hrs	Sub-Themes 2, 3 and 6 Facilitator: MANONGI, Dr. Freddy	GAMASSA, Mr. Deo-Gratias M.(2) GAYO, Mr. L. (2) MANONGI, Dr. Freddy(2) CHAMBEGGA, Mr. Omoury(3)	Break-out	Gombe Stream
	Sub-Themes 5, 7 and 8 Facilitator: TARLA, Mr. Francis	KISINGO, Dr. Alex W. (5) RUGERINYANGE, Mr. Louis (5) MWAYA, Mr. Reginald (7) GENDA, Mr. Peter (7) SHILEREYO, Ms. Monica G. (7)	Break-out	Old Tea Room
1320-1410hrs LUNCH				

	Sub-Theme 4 Facilitator: SCHOLTE, Mr. Paul	KAHANA, Mr. Ladislaus W. DICKSON, Mr. Munzanza DJANG-FORDJOUR, Prof. K. T. SYLVINA, Dr. Teresa J. GUNNARS, Dr. Anneli MWINYI, Mr. Ally A. ALLY, Mr. Said Juma	Break-out	Major Kinloch
1410-1600hrs	Sub-Themes 2, 3 and 6 Facilitator: MANONGI, Dr. Freddy	TWAIBU, Mr. Twaha (3) ISMAIL, Mr. Ismail O. (3) MALIYA, Mr. Alphonse B. (6) BAILEY, Ms. Natalie (6) FUNK, Ms. Carla (6) KATONGE, Mr. J. H. (6)	Break-out	Gombe Stream
	Sub-Themes 5, 7 and 8 Facilitator: TARLA, Mr. Francis	NUHU, Mrs. Vivian A. N. (7) KING, Dr. Leslie (7) OROZCO-QUINTERO, Dr. Alejandra (7) KISINGO, Dr. Alex W. (7) MURRAY, Dr. Grant/Group (7) SHEKVULI, Mr. Sadiki Juma(8) NUHU, Mrs. Vivian A. N. (8)	Break-out	Old Tea Room
1600-1620hrs	TEA & BITES			
1620-1705hrs	Sub-Theme 4 Facilitator: SCHOLTE, Mr. Paul	MUTAYOBA, Dr. Benezeth M. ALI, Mr. Arega Mekonnen	Break-out	Major Kinloch
1705-1800hrs	Sub-Themes 5, 7 and 8 Facilitator: TARLA, Mr. Francis	KISINGO, Dr. Alex W. (8) KISASEMBE, Mr. Richard (8)	Break-out	Old Tea Room
1620-1800hrs	Sub-Theme 4 Group Discussion	Facilitator: SCHOLTE, Mr. Paul	Break-out	Major Kinloch
1705-1800hrs	Sub-Themes 2, 3 and 6 Group Discussion	Facilitator: MANONGI, Dr. Freddy	Break-out	Gombe Stream
	Sub-Themes 5, 7 and 8 Group Discussion	Facilitator: TARLA, Mr. Francis	Break-out	Old Tea Room
1815hrs BUS DEPARTS MWEKA FOR HOTELS				
DINNER ON YOUR OWN				

DAY THREE: 31 OCTOBER 2013 – See Subtheme Facilitators (below)

TIME OF DAY	TOPIC	SPEAKER	FORMAT	ROOM
0810hrs BUS PICK-UP AT HOTELS				
	Sub-Theme 4 Discussion/Summary	Facilitator: SCHOLTE, Mr. Paul	Break-out	Major Kinloch
0830-1100hrs	Sub-Themes 2, 3 and 6 Discussion/Summary	Facilitator: MANONGI, Dr. Freddy	Break-out	Gombe Stream
	Sub-Themes 5, 7 and 8 Discussion/Summary	Facilitator: TARLA, Mr. Francis	Break-out	Old Tea Room
1100-1120hrs				
TEA & BITES				
	Sub-Theme 4 Summary and Report Write-up	Facilitator: SCHOLTE, Mr. Paul	Break-out	Major Kinloch
11:20-1200hrs	Sub-Themes 2, 3 and 6 Summary and Report Write-up	Facilitator: MANONGI, Dr. Freddy	Break-out	Gombe Stream
	Sub-Themes 5, 7 and 8 Summary and Report Write-up	Facilitator: TARLA, Mr. Francis	Break-out	Old Tea Room
1200-1320hrs	Sub-Theme Reports Subthemes 2-8	SCHOLTE, Mr. Paul MANONGI, Dr. Freddy S. TARLA, Mr. Francis	Plenary	Major Kinloch
1320-1410hrs				
LUNCH				
1410-1600hrs	The Way Forward (G&A and Discussion)	Expert Panel: Directors of Wildlife	Plenary	Major Kinloch
1600-1620hrs				
TEA & BITES				
1620-1720hrs	Post-Conference Outreach Discussion and Post-Conference Survey	MANONGI, Dr. Freddy S.	Plenary	Major Kinloch
	Closing Remarks	SONGORWA, Prof. Alexander, TANZANIA Director of Wildlife	Plenary	Major Kinloch
1730hrs BUS DEPARTS MWEKA FOR HOTELS				
1930hrs BUS PICK-UP AT HOTELS FOR GROUP DINNER				
1930-2230hrs GROUP DINNER AT AMEG LODGE KILIMANJARO				

3.0 Current Challenges in Wildlife Management

4.0 Subtheme Abstracts

4.1 Sub-Theme 1: Wildlife management training in Africa: challenges and prospects

50 YEARS OF THE COLLEGE OF AFRICAN WILDLIFE MANAGEMENT: CHANGES, LESSONS LEARNED AND FUTURE

MANONGI, Freddy S.

Formal training of 25 men from Tanganyika, Kenya, Uganda, Malawi and Cameroon in two programs began on 24 June 1963. During the 2012/2013 academic year, a total of 500 students from Tanzania, South Sudan, Japan, Uganda, Canada, Zambia, Gambia, Mozambique, Germany, Norway and Zimbabwe were enrolled in 12 different programs, and 25.31% of them were women. Over the past fifty years, the number of students enrolled at the College has increased by almost 800%. The proportion of female students increased from 0% to 25.4%. The absolute number of foreign students has remained steady, ranging from 15-60, while the number of students from Tanzania has increased tremendously. Factors that influenced the nature and number of students enrolled at Mweka varied from changes in global financial markets, changes in wildlife management approaches, policies and legislation, political and socio-economics conditions, labor forces and technology, to changes in climatic conditions. The College's curriculum also changed over the past 50 years to embrace human contexts of wildlife management in Africa. In order to sustain Mweka's success, growth and, particularly, quality of training in the face of regional and global uncertainties, a structured, continuous and iterative process of robust decision making must be developed and implemented. In other words, the factors outlined above must be consistently and continuously monitored and mainstreamed into Mweka's structural, social, human, physical and financial capitals.

40 YEARS EXPERIENCE OF PROFESSIONAL WILDLIFE EDUCATION AT THE GAROUA WILDLIFE COLLEGE

TARLA, Francis and SCHOLTE, Paul

The *Ecole pour la Formation des Spécialistes de la Faune* in Garoua (Cameroon), hereafter 'Garoua' was created in 1970, to train wildlife managers in francophone Africa, comparable to 'Mweka' a decade earlier. Over the last 40 years, Garoua has trained over 1000 long course students from 24 countries, including Cameroon (24 %), West (40%) and Central Africa (34 %) and elsewhere (2%). The number of female students has increased from 2 % in the first years till over 20 % at present. Students at Garoua have on average ten years of professional work experience reflecting the mid-career character of the college. Over the years the percentage of students following diploma course has steadily increased, and has become the main direction. Garoua also has played an important role in providing short course training for park rangers in Cameroon and the wider region, often on site. Although a regional college in its orientation and products ('students'),

Garoua has a national status and has been supported by the Government of Cameroon through salaries of personnel, investments and running budgets etc. supplemented by donors through scholarships for foreign students and special support programs. However funding remains too limited to fully fulfill the College's ambitions, as laid down in the 2004-2014 strategic plan, that amongst other things foresees the implementation of a professional master in wildlife management. Garoua is increasingly looking for collaboration with institutions in francophone Africa, the USA, Europe etc.. It is one of the founding members of the Central African Network of Forestry and Environmental Education Institutions (RIFFEAC), allowing it to draw on expertise and experience of its 21 members, including its young sister college KCCEM. Despite the discussed drawbacks, Garoua has shown by its continued existence to be sustainable, an achievement given the harsh institutional environment in West-Central Africa.

TRAINING IN WILDLIFE MANAGEMENT AT PASIANSI WILDLIFE TRAINING INSTITUTE

DAMALU, Lowaeli

TRAINING IN WILDLIFE MANAGEMENT AT KENYA WILDLIFE SERVICE TRAINING INSTITUTE-NAIVASHA

OTIANG'A OWITI, Prof. George E.

TRAINING IN WILDLIFE MANAGEMENT AT SOUTHERN AFRICA WILDLIFE COLLEGE

DOUGLAS, Malcolm

TRAINING IN WILDLIFE MANAGEMENT AT BOTSWANA WILDLIFE TRAINING INSTITUTE

BATSHABANG, Moemi R.

EVALUATION OF THE EFFECTIVENESS OF ENVIRONMENTAL CONSERVATION EDUCATION: THE CASE OF MIKUMI NATIONAL PARKS

LWANKOMEZI, Emmanuel and KASWAMILA, Abiud

A study to assess the effectiveness of Environmental Conservation Education (ECE) was conducted in Kidoma, Kikwaraza, Magoma, and Tamkareli villages adjacent to Mikumi National Park. Data were collected through household questionnaires, Focus Group Discussion and physical field visits. Field results indicate that 51% of the households had the opinion that environmental conservation education has failed to achieve its set objectives. The remaining proportion thought the program has done well as evidenced by reduced deforestation and wildfires in the area. The failures to achieve targets are attributed by several factors including absence of environmental conservation leaflets and brochures at village level and Parks limited financial and human resources capacity. In order to make ECE effective several measures are suggested. These include improving ECE curricular, use of film shows to raise people's environmental conservation awareness, the program to cover more villages, recruitment of more ECE staff, and ECE budget increase.

THE KITABI COLLEGE OF CONSERVATION AND ENVIRONMENTAL MANAGEMENT, REACHING OUT TO THE ALBERTINE RIFT REGION

NASASIRA, Richard and SCHOLTE, Paul

KCCCEM is the youngest regional wildlife college that started in 2006 at the edge of Nyungwe National Park (Rwanda), the largest montane forest in the Albertine Region, offering a unique exposure to protected area management practices. Nyungwe and the famous mountain gorilla parks, are important tourist attractions, a pillar under Rwanda's 2020 Vision to become a service-based economy. The lack of trained staff is a major obstacle for their management and touristic exploitation. The Rwanda Development Board, responsible for park management and tourism development, initiated KCCCEM to cater for the professional development of its protected area staff. A need for training also exists in wider Albertine Rift region, comprising Eastern Congo with its famous world heritage protected areas, and Burundi. Here some 2000 rangers work and KCCCEM is the only training institution catering their needs. KCCCEM started off with extensive consultations with stakeholders leading to a 2 years diploma course curriculum in wildlife management. In its start-up phase (2008-2010), KCCCEM trained a pilot group of 12 diploma students. A curriculum review was undertaken that formed the base for a second intake of students (2011-2012). The Ministry of Education, through the Workforce Development Authority, has recently accredited this diploma course. KCCCEM has also hosted a large number of trainings, workshops and meetings raising capacities of some thousand protected areas staff, community leaders, tourist guides and other professionals in wildlife and tourism, as well as bringing in important revenues. The Rwanda Government has contributed substantial resources to KCCCEM, also supported by the MacArthur Foundation (scholarships, infrastructures) and NUFFIC (capacity building). KCCCEM has 12 permanent staff and draws from a network of visiting staff. In close collaboration with partners and assisted by its sister colleges, KCCCEM is presently developing its further expansion, also catering for wildlife tourism, and ensure its sustainability.

INTERNATIONAL TRAINING NEEDS ASSESSMENT: PROCESSES AND RESULTS

MULENGA, Fredrick

IMPACT OF 50 YEARS OF AFRICAN WILDLIFE TRAINING: ORGANIZATIONAL PERSPECTIVES

SYLVINA, Teresa J., KAHANA, Ladislaus, MWAYA, Reginald, MSEJA, Gideon A. and
MANONGI, Freddy S.

The 50 year anniversary of the College of African Wildlife Management, Mweka provides an ideal forum to study the College's impact over the past 50 years and determine present and future wildlife training challenges faced by Tanzania and other African countries. With these goals in mind, data were obtained from wildlife organizations in five African countries, as well as from Mweka alumni working throughout Africa. This presentation discusses results of the data collected at the organizational level. Leaders from wildlife management organizations were interviewed from five countries: Botswana, Ethiopia, Gambia, Mozambique and Tanzania. Team members conducted face-to-face, structured interviews and asked respondents fifteen predetermined questions. This approach allowed interviewers to adapt to the situation and get as much information as possible to acquire the data necessary to meet study objectives. It also allowed the interviewer the opportunity to clarify questions and elaborate on the purpose of the question, thereby helping the respondents give relevant, complete and honest responses. Results showed that several key conservation challenges are common among the respondents, while other conservation challenges were less common. A wide range of challenges facing individuals working in the wildlife management sector was reported. Current numbers of staff, their training levels and projected needs for staff and future training were also elucidated. Respondents expressed the critical need for the level of practical training offered only at Mweka, with an increased emphasis on combating poaching and community involvement in wildlife management. Practical field training is needed for those who have received only theoretical training at other institutions, particularly for those who will be filling leadership positions in the near future as Mweka graduates progress to retirement. In summary, there was evidence to suggest that the current model of training needs to be revisited and adapted to allow for student and lecturer exchanges across regions to enhance trans-boundary wildlife management efforts and to understand challenges and learn lessons from other regions in Africa.

IMPACT OF 50 YEARS OF AFRICAN WILDLIFE MANAGEMENT TRAINING: MWEKA ALUMNI PERSPECTIVES

MSEJA, Gideon A., SYLVINA, Teresa J., KAHANA, Ladislaus, MWAYA, Reginald, and
MANONGI, Freddy S.

As College of African Wildlife Management, Mweka marks its 50th anniversary a study was conducted to assess the training needs of Mweka alumni. This was done in conjunction with the Training Needs Assessment conducted at institutional level where leaders of conservation organizations participated. The

aim of this part of the study was to obtain data from all Mweka graduates. We received responses from graduates in Tanzania, Mozambique, Ethiopia, Gambia, Democratic Republic of Congo, Botswana and Ghana. We administered structured questionnaires, comprised of open and close-ended questions. The majority of respondents were working with Government conservation organizations and had experience of more than five years. Results indicated that Mweka training fits well with the current duties and responsibilities of the graduates. It was clear that many people would choose to study at Mweka if they were given the chance for further education, since it is the only wildlife management college which offers detailed and extended practical field training in Africa. Based on their existing educational levels, they proposed their training to be at the Bachelor Degree and Postgraduate Diploma levels; interest in short courses was also expressed. The knowledge, skills and attitudes acquired in all of the subjects offered by the College were reported to be highly needed for someone working in wildlife management and related fields. It is recommended that Mweka continue with the practical field training, as this is Mweka's special niche. Findings from this study will assist the College to expand its curricula to include current needs and address the gaps in training identified by the respondents. Although Mweka is currently renowned, investing more in the promotion of the College as a training resource for students from English-speaking African countries and the initiation of an active Mweka Alumni Association will provide means to disseminate information about the training opportunities at Mweka.

COMMON CHALLENGES AND OPPORTUNITIES OF COOPERATION FOR THE AFRICAN REGIONAL WILDLIFE COLLEGES

SCHOLTE, Paul, TARLA, Francis and NASASIRA, Richard

The lack of qualified national wildlife managers in independent Africa drove the establishment of the College of African Wildlife Management in Mweka (Tanzania) in 1963 and the Ecole pour la Formation des Spécialistes de la Faune in Garoua in Cameroon in 1970. The Southern African Wildlife College (SAWC) was founded, shortly after the end of the Apartheid regime in 1997, followed by the Kitabi College of Conservation and Environmental Management (KCEM) focusing on the Albertine Rift, in 2008. These four wildlife colleges have a regional orientation and focus on mid-career wildlife managers, leading to recognized diploma and certificate qualifications. Over the last 50 years, major changes have taken place in wildlife management that, apart from ecological and technical management, increasingly includes communication, community development and collaboration with rural development services and armed forces. The wildlife colleges have often struggled to update their curricula to cater for the knowledge, skills and attitudes necessary for wildlife managers to deal with these new challenges. Despite the large overlap in their missions and geographically distinct catchments, only in a few occasions have the regional colleges interacted with each other. The first exchanges passed through the training of each other's staff (Garoua at Mweka and SAWC), and temporarily intensified when creating a curriculum on the bushmeat crisis in 2002-4 (Mweka, Garoua, SAWC) and study trips by Garoua and KCEM to Mweka. Lately, Mweka, SAWC and Garoua assisted KCEM, amongst others, resulting in a joint wildlife tourism curriculum. Exchanges amongst the colleges have been

largely limited to academic contents. Major gains have recently been made in the field of strategic and business planning allowing the colleges to better position themselves in the changing landscape of education institutions and reduced governmental support. Although their respective institutional environments may be rather specific, much can be gained through further exchanges.

4.2 Sub-Theme 2: Community-based natural resources management: wildlife user rights, benefits and community responsibility

TEN YEARS OF WILDLIFE MANAGEMENT AREAS IN TANZANIA: HOPES AND ILLUSIONS

GAMASSA, Deo-Gratias M.

This paper explores hopes and challenges facing sustainability of achievements made in ten years of Wildlife Management Areas (WMAS) in Tanzania from 2003 to 2013. It revolves around conservation, governance and benefits which are pillars where the tenets of Community Based Natural Resources Management rest. They are examined to establish whether WMAs have produced outcomes which demonstrate stable integration of wildlife conservation and socio-economic development. One of the most significant lessons drawn is that there is noticeable contribution on poverty alleviation to communities. There are noteworthy achievements around social service infrastructure in education, health and; income benefits through wildlife utilisation, group alternative income generating activities, employment and investments from the private sector. The community centred benefits are frequently showcased to attest that there is hope in Wildlife Management Areas. Nevertheless, they are not well recognized at household level where attitudes and behaviours are shaped to influence conservation of wildlife as a resource base that supports the socio-economic development enjoyed by communities. Simply put there is no convincing evidence that demonstrates integration of wildlife conservation and socio-economic development. The heralded achievements are threatened by weak governance practices. There is a systemic environment of corruption which essentially results into inadequate transparency and accountability in income and investment contracts which erode community trust. There is also feeble administration, gender inequity and reluctance of central government to earnestly develop management responsibilities on wildlife resource to communities. The governance challenges coupled with poor link between socio-economic benefits and conservation of wildlife resource spell illusions on the sustainability of Wildlife Management Areas. It is recommended to scale up capacity building and performance monitoring in governance and natural resource management. Correspondingly review organization management tools like constitution, financial management regulations, conservation business plans, general management zone plans and procedures on negotiation and award of investment contracts.

THE CONTRIBUTION OF WILDLIFE MANAGEMENT AREAS (WMAs) ON CONSERVATION AND LIVELIHOOD: A CASE STUDY OF WAMI-MBIKI WMA

GAYO, L. and KASWAMILA, A. L.

Wildlife Management Areas (WMAs) are assumed to be incentives for conservation and a way to reduce poverty in areas where humans co-exist with wildlife. This study assessed the contribution of Wami-Mbiki WMA on the conservation of wildlife resources and livelihood. Data were collected using questionnaire surveys, interviews and Focus Group Discussions. A total of 130 respondents were involved in this study. SPSS version 15 and Excel 2007 were used to analyse data. Findings from this study showed that the WMA contributed TZS 20 million between 2008 and 2011 to each member village and such revenues were used in socio-economic developments including: building and/or renovating classrooms, village government offices and dispensaries, purchasing water pumps and constructing roads. Other benefits were employment, of which 90% was from WMA member villages. These benefits were without costs, except mainly crop damage. As for conservation benefits, habitat improvement and increase in fauna and flora diversity were observed. The study concludes that WMAs could be a solution for wildlife resources conservation and livelihood improvement if local people will be creative in developing conservation business enterprises and market them aggressively to create alternative livelihood opportunities, such as, small-scale income generating activities to reduce dependence on natural resources.

IS IT WILDLIFE BENEFITS? OR WILDLIFE OWNERSHIP BY LOCAL COMMUNITIES?

MANONGI, Freddy S. and SYLVINA, Teresa J.

Devolution of management of wildlife from central governments to local communities and people has gathered pace across Africa. Devolution assumes that, if you give local people rights to manage wildlife, they will in turn accrue benefits and become responsible through supporting wildlife conservation initiatives. Subsequently, poaching incidences will be reduced, human activities encroachment into wildlife areas will be minimized, and the wildlife populations will be restored and sustained in community lands. Can the local people accrue benefits of wildlife without ownership? Are we talking about user rights or wildlife benefits? Is it wildlife benefits, or wildlife ownership by local communities? Future studies in Community-Based Natural Resource Management (CBNRM) should attempt to respond to these questions and recommend appropriate approaches to human-wildlife conflicts in Africa.

4.3 Sub-Theme 3: Human-wildlife conflicts: critical solutions

ANALYZING DISPARITIES IN THE MEANING OF HUMAN-WILDLIFE CONFLICTS BETWEEN LOCAL PEOPLE AND WILDLIFE PRACTITIONERS AROUND SAADANI NATIONAL PARK

CHAMBEGGA, Omoury, NJOVU, Henry, KISASEMBE, Richard, NYAKUNGA, Oliva, MANONGI, Freddy S.

Wildlife managers are faced with the challenges on how to resolve human-wildlife conflicts in an effort to obviate unproductive consequences, protect human well-being and wildlife resources. We conducted a survey from July to August, 2012 in Matipwili, Saadani and Mkwaja surrounding Saadani National Park to analyze disparities in the meaning of human-wildlife conflicts between wildlife practitioners and local people (people living adjacent to Saadani National Park). Specifically, the survey explored differences in the meaning of human-wildlife conflicts, assesses underlying causes of disparities and ultimately, recommends a practical definition to be adopted by both local people and practitioners to establish a common understanding. Data were collected using household questionnaires, structured interviews, nominal group discussions, field observations and existing literature. Quantitative and qualitative data were analyzed using Statistical Packages for Social Sciences (SPSS) and content analysis, respectively. Results show that 65% of the local communities refer human-wildlife conflict in a situation in which wildlife goes beyond the park boundary and causes damage to human property (e.g. crops, livestock, storage facilities, houses) and/or kills or injures people. In addition to this, local people refer human-wildlife conflict as the failure of wildlife managers to involve them in conservation activities or decision making processes. Many respondents (41.3%) failed to differentiate human-wildlife conflicts from problems caused by wildlife. Wildlife practitioners and local people need to know the distinction and establish the link between human-wildlife conflicts and problems caused by wildlife. Human-wildlife conflicts often result from failure of wildlife practitioners to address, find meaningful solutions to or halt problems caused by wildlife or management actions. The most effective strategy to minimize human-wildlife conflicts is to minimize wildlife-related problems because it is these problems which turn into conflicts if they are mishandled.

HUMAN-WILDLIFE CONFLICTS AROUND SELOUS GAME RESERVE IN TANZANIA

TWAIBU, Twaha

Selous Game Reserve (SGR), covering an area of 50,000 km², is one of the largest protected areas in the world and by far, one of the outstanding global ecological entities. Its history is shaped by various forms of human-wildlife conflicts. This paper highlights the genesis of wildlife conservation in the SGR and different forms in which wildlife interacts with adjacent local communities and possible solutions as a way forward. The socio-economic status of the communities bordering the SGR, is one of the major determinants of human-wildlife interactions in Tanzania. For instance, poverty prompts people to poach in order to survive. Human-

wildlife conflicts have two scenarios. One is positive, in the sense that interaction involves the use of wildlife for food, medicines or spiritual purposes, for example. The other scenario is negative where interaction is defined by numerous costs associated with wildlife, such as crop damage, livestock depredation, killing/injury to people and wildlife, disease transmission, destruction of habitat, or loss of land or access to resources. This paper is framed around the following questions; (i) which are the different forms and how do humans interact with wildlife in SGR? (ii) How do different people perceive different forms of human-wildlife interaction (positive versus negative) (iii) which are the different strategies/solutions employed in addressing the negative forms of human-wildlife conflicts? and (iv) what are the implications of these interactions on the wildlife conservationist? In conclusion, this paper recommends that, policy makers and Protected Area (PA) Managers should address the needs of local people in order to minimize the prevailing conflicts resulting from negative interactions and promote harmonious coexistence between humans and wildlife. As many large carnivore species are endangered or threatened with extinction, the best we can do is to promote good will towards wildlife. This will only be possible when attacks on people are mitigated through sound management practice.

EFFECTS OF SEA SALT MINING ON SPATIAL DISTRIBUTION OF AQUATIC BIRDS IN SAADANI NATIONAL PARK, TANZANIA

ISMAIL, Ismail O.

Globally, biologists, ecologists, environmentalists and wardens regret development projects installed in protected areas due to the negative impacts they pose to biodiversity. Sea Salt Co. Ltd which mines sea salt in Saadani National Park (SANAPA) is not immune to criticisms from these professionals, as its environmental impacts have gone un-assessed. This study was designed to determine its effects on spatial distribution of aquatic birds by adopting a total count method. The results show that salt pans of the salt works are suitable wetland habitats for aquatic birds. A total of 9,659 aquatic birds comprising four orders, 14 families and 46 species were counted. Ninety-five percent of the birds ($n=9,130$; species= 24) occur in the salt pans and 5% ($n=529$; species=22) occur on the intertidal muddy shore. However, there is no significant variation in terms of species richness between the two habitats (Mann-Whitney Test ($U=706.5$; $P=0.549$)). Tidal cycles influence local migration, subsequently aquatic birds spend morning hours on the sea shore and evening hours in the salt works wetlands; some of them restrict their range within the salt pans. The salt pans are important for the conservation of aquatic birds; this is attested by their species abundance, diversity, local migration, occurrence of Lesser Flamingos (*Phoeniconaias minor*) and Palaearctic migratory birds. It is argued that Tanzania National Parks (TANAPA) should re-think its proposal to terminate the salt works, and allow SANAPA to coexist with the salt works because of conservation potentials of its wetlands. Experience could be gained from Rio Tinto Company: a South African based company that integrates mining with conservation of aquatic birds in the Richards Bay.

4.4 Sub-Theme 4: Wildlife management: information, challenges and prospects

ASSESSING THE ATTITUDE OF LOCAL PEOPLE TOWARDS WILDLIFE MANAGEMENT

MANONGI, Freddy S., OLEMAKO, Theresia, KAHANA, Ladislaus, MSEJA, Gideon A. and BENJAMIN, Beatrice

This research was conducted at Saadani-Januari, Saadani-Pwani, CCM-Saadani, Buyuni, Mkwaja, Mkunguni-Matipwili and Matipwili villages around Saadani National Park on June 2012. The goal of this study was to assess the attitude of local people towards wildlife management. Specifically the study (i) assessed the adequacy of wildlife management practices in addressing community interests and expectations, (ii) determined community interests and expectations from wildlife management practices, and (iii) determined factors influencing community attitudes, interests and expectations towards wildlife management. Questionnaires were administered to 70 randomly selected adult household members and the Statistical Package for Social Sciences was used for descriptive analysis of the data. Results indicate that the majority of respondents were peasants aging between 21-60 years old. Eighty-six percent of the respondents have lived around Saadani National Park for more than 10 years; hence, they are conversant with wildlife management in the area. Proportionally, those who considered living close to the national park a misfortune were equal to those who considered it fortunate. The community chose Game Reserve era to National Park era because they had good relationships, less conflicts and more access to park resources. However, they reported getting more problems during the game reserve era. Although the majority of respondents appreciated current benefits from wildlife, more than 85% of respondents had faced problems with wildlife and acknowledged that the authority was negligent in taking actions. Saadani community is interested in accessing the park resources, getting more individually-based economic gains and getting more assistance in social services. However, the low involvement of local people in park management, as identified during the survey, creates hatred and negativity toward managing authorities and makes local communities regard themselves as non-benefiting stakeholders to natural resources. These results call for alternative strategies in outreach services and a need to conduct a thorough analysis of the surrounding community for practical community involvement.

THE POSITION OF WWF ON WILDLIFE TRADE

MAKUMBULE, Georgy

CONTRADICTION BETWEEN SPECIES ECOLOGICAL VULNERABILITY AND SUSTAINABLE EXPLOITATION: THE CASE OF THE PANCAKE TORTOISE, *MALACOCHERSUS TORNIERI* (FAMILY TESTUDINIDAE) IN TANZANIA

MWAYA, Reginald T.

According to IUCN, species vulnerability entails the likelihood of becoming endangered if factors threatening its survival and reproduction deteriorate. Sustainable exploitation of renewable resources, on the other hand, prevents resource depletion and avoids extinction. Any vulnerable species claimed to be exploited sustainably is an oxymoron. The objectives of this paper are, therefore, 1) to explore the implication of such a contradictory phrase, focusing on the *Malacochersus tornieri*, 2) to discuss ecological threats facing *M. tornieri*, and 3) to extrapolate learning points from *M. tornieri* into other non-charismatic small vertebrates in Tanzania. This paper is built from literature review, field observation and the author's publications. The pancake tortoise distribution is restricted in Africa's Somali-Maasai and Zambesian floristic centres of endemism. Within its range (Kenya, Tanzania and Zambia), the species is found in low numbers and exists in highly fragmented subpopulations. Worse still, this tortoise is naturally constrained by having a long maturation time (of about 10 years), low reproductive potential (a clutch of one egg), and limited dispersal ability (due to anti-predator avoidance). Above all, the tortoise has been a popular species in the international pet trade. From 1978 to 2012, 48,173 individuals were exported both from species range countries of Kenya (4,749), Tanzania (19,505) and Zambia (17,160), as well as from non-range countries of Mozambique (2,850), DRC (3,700) and Uganda (209). The trade of the species from non-range countries suggests a prevalence of extensive illegal trade. In addition, pancake tortoise populations outside of Protected Areas show a reduced body condition index (BCI) and increased parasite loads, probably due to anthropogenic habitat degradation. Consequently, the vulnerability of the pancake tortoise disqualifies it as true candidate for sustainable exploitation.

MANAGING DECLINING POPULATION OF AFRICAN LION IN AFRICA

MSEJA, Gideon A.

Complexity involved in conserving large carnivores, especially in areas where they co-exist with humans, contributes to a decreasing trend associated with large carnivore's populations. In developing nations, rapid human population expansion and poverty lead to unregulated human behavior, and hence endangers African lion's populations. Though lion estimates are unreliable, it is assumed that its population has been reduced by 30-50%, while its range has shrunk to about 18%. This study was conducted in June and July 2012 with the objectives of reviewing major threats to African lion, assessing previous and current management approaches, and proposing new approaches to effectively manage lions in Africa. The context was only on the wild *Panthera leo leo*. Review of published literature, reports, online information, expert knowledge and personal experience were the methods used to acquire information for this study. Results show that lions are threatened by human-lion conflicts leading to retaliatory killings, sport hunting, ritual killing, reduction in lions prey base, political instability and lion poaching. Current lion management approaches raise many

doubts as to their effectiveness. Local scale/national level management segments management actions unsustainably, and the Protected Areas approach manages only part of the lions range. The current tenure system discourages human co-existence with lions. Furthermore, approaches to conflict management only treat the symptoms and not the root cause of the problems. If lions are to persist in Africa, then management approaches should be changed and include re-focusing of the management context to ecosystems and use a regional level approach, improve livestock husbandry, include aspects on the human dimension in management, use non-invasive techniques to genetically estimate the minimum population size, harmonize and publish on-line government hunting fees at the regional level and adopt adaptive management practices for lions. Changing local community attitudes may take a long time, but it is a pivot point if people are to live with lions.

MODELING POPULATION DYNAMICS OF AFRICAN BUFFALO IN MIKUMI-SELOUS ECOSYSTEMS

NJOVU, Henry

Knowledge on the population dynamics of African buffalo is a prerequisite for developing its successful harvest strategy. Acquiring such knowledge requires, among others, the use of population models which reveals important demographic information and suggests some management actions to be taken. This study aims at developing an understanding on how to take population estimates and influences of rainfall into account when developing harvest strategy. I hypothesize that annual quota would be influenced by population estimates and that population estimates would be influenced by rainfall. I used data on the buffalo population estimates, annual quota, harvest, and rainfall, as well as survival and fecundity rates obtained from different sources. The study employs the use of the package Popbio in the statistical program **R**, to construct and analyze an age-specific Leslie matrix population model. A tracing study on the increase phases of the Selous-Mikumi population estimates reveals that high annual average growth rates of 16% and 34% could be explained by stable and unstable age distributions, respectively. Results suggest population growth is sensitive to changes in the survival and fecundity rate of adults and juveniles. The annual harvest level is controlled by the annual harvest quota, which is set independently on the amount of rainfall and population estimates. This study shows empirically that age-specific population estimates provide detailed demographic information, which could be used to make informed decisions. I recommend the use of the distance sampling method that estimates the probability of detecting animals and is capable of providing age and sex specific demographic information, which facilitates identification of the causal factors of population changes. Finally, in order to halt buffalo population decline it is important that harvest strategy should not allow harvesting of adult and juvenile age class, instead calf, sub-adult and senescent age classes could be harvested.

IMPORTANCE OF MANIPULATIVE MANAGEMENT FOR FOREST GLADES AS SPECIAL HABITATS

KAHANA, Ladislaus. W. and SYLVINA, Teresa J.

Glades are open grassland patches in a continuous forest that hold unique ecological roles and associated species. Glades located in the forest matrix differ in plant communities and hence, influence the pattern of resource use by animal species using the glades, the surrounding forests or both. Changes in the physical environmental at the edge of a forest affect edge plant growth and distribution, as a result of clearing of the forest-glade edges. The edge where the two habitat types adjoin provides specialised niches for plants, birds and animals. Edges benefit species with different habitat requirements, including species that require specific habitat types, as well as generalists that occur on both sides of the edge. The distance the edge effects penetrate into the forest, in turn, influence the diversity and abundance of wildlife to be found in this zone. These micro-environmental changes at the edges may have a significant impact on the resources, for example an increase in plant diversity at the edge will attract a high number of animals and birds to forage there. The changes in plant composition and structure at the edges will thus influence animal and bird distributions, and plant densities. Therefore, manipulative management for forest glades and their edges increases plant species abundance, richness and diversity and should be enhanced for biodiversity conservation.

THE FUTURE OF WILDLIFE MANAGEMENT POST LAND REFORM IN ZIMBABWE

DICKSON, Munzanza

The Zimbabwe's fast track land reform programme caused, among other things, significant conservancy fragmentation which led to serious changes in wildlife distribution and their feeding habits. This study sought to investigate the impact of conservancy fragmentation on the feeding habits of the Roan antelope (*Hippotragus*) in Chiredzi river conservancy of Chiredzi north district. The descriptive survey design method was used in the research. A sample of five individuals was chosen using the convenience sampling method. The survey design method used involved field measurements, interviews, observation and written documents for data collection. Interviews were carried out face-to-face on the five selected individuals, after they had completed the questionnaires. Observations were only carried out by the researcher on the state of the conservancy and feeding habits of roan antelope. This plays a critical role in analysing the state of the feeding area, as well as the captive breeding area. Field measurements were done on the observed roan antelope and the carrying capacity of the conservancy. Measurements involved the weighing of the Roan Antelope body mass, height, and dental description. In this research, the above mentioned variables help in analysing the general physiological growth of the species in the environment of habitat compression. The research findings revealed that, as from 1998 to 2009 the population of Roan Antelope declined by almost 83%. The study also revealed that 65% of the total roan antelope which were found in the conservancy pre-2000 died as a result of forage shortages. Only 13% of the total population moved out from the conservancy for the search of

good pastures. Seven percent were killed as a result of poaching and 15% were exposed to predators and diseases, such as foot and mouth disease and anthrax. It is concluded that, it is very important to implement appropriate conservancy management strategies for wildlife, especially for Roan Antelope. It is, therefore, recommended that there should be the introduction of an intensive protected zone (I P Z) in order to restore the population of the Roan Antelope in the Chiredzi River Conservancy.

GROUP AND REPRODUCTIVE PERFORMANCE OF GRASSCUTTERS (*THRYONOMYS SWINDERIANUS*) FED DIFFERENT LEVELS OF PROTEIN SUPPLEMENT

DJANG-FORDJOUR, K.T., ANNOR, S. Y., POKU, P. A., OBOUR, S.A., DJANG-FORDJOUR, H. and YEBOAH S.

Grasscutter meat is a delicacy in West Africa enjoyed by indigenes and tourists. This study therefore seeks to sustain tourism and wildlife. Adequate nutrition is important for optimal performance of the grasscutter (*Thryonomys swinderianus*). Farmers in Ghana feed the grasscutter inadequate amounts of protein resulting in low performance. This study was carried out to determine the effect of different levels of dietary protein on the growth and reproductive performance, survival and carcass characteristics of the grasscutter in captivity for a period of fifteen months at the Grasscutter Section of the Department of Animal Science Education, Mampong Campus. Thirty-six weaner female grass cutters and twelve weaner male grass cutter were randomly selected and assigned in equal numbers to three supplementary diets consisting of three different dietary protein levels (10, 14 and 18%) in a Completely Randomized Design (CRD). Each treatment group was fed a basal diet of elephant grass (*Pennisetum purpureum*) and a supplement of concentrate. The males and females in the same treatment group were crossed between the ages of six to eight months. One hundred and fifty-three offspring resulted from the crossings. Mean feed intake, growth rate and final body weight were similar for all treatments. Feed conversion ratio of the grass cutters differed between treatment groups for animals on 10% CP, 14% CP and 18% CP. Litter size at birth and weaning also differed for animals on 10% CP, 14% CP and 18% CP, respectively. The corresponding means for post-weaning survival rates were 79.6 ± 3.38 , 82.7 ± 2.55 and 95.6 ± 3.49 for animals on 10% CP, 14% CP and 18% CP. It is recommended that addition of dietary supplement containing 10% crude protein to fresh grass is adequate for growth of captive grass cutters. However, dietary protein supplementation of 18% is recommended for reproductive purposes.

AN ECO-FRIENDLY APPROACH TO TACKLE THE ACCELERATING DECLINE OF AFRICA'S GREAT APES

SYLVINA, Teresa J.

The prospect of extinction of Africa's Great Apes, humankind's closest living relatives, has been gaining momentum over the past few decades. All African Great Ape species (chimpanzees, bonobos, eastern gorillas and western gorillas) are categorized as Endangered or Critically Endangered on the IUCN Red List. Forest habitat fragmentation and loss due to infrastructure development, commercial logging, the use of forest biomass for making charcoal, gathering of wood fuel and clearing of land for agricultural plots all contribute. These activities increase access into once remote, inaccessible habitats, leading to more hunting for meat, trophies and live infants, and fostering human-ape cross-species infectious disease transmission. The combined effects of these anthropogenic factors on Great Ape populations are much greater than the sum of their individual parts. The objective of this presentation is to promote an eco-friendly approach aimed at conserving Great Ape populations. Content is based on the author's research publications, direct observations, field experience, and a literature review. A completely solar-powered laboratory that leaves no environmental footprint has been designed and constructed based on the concept of bio-mimicry. In 2008, the lab was transported to Mahale Mountains National Park where it remains *in situ* to support scientific research on the health and disease status of the Mahale chimpanzees, to educate tourists on key chimpanzee conservation challenges and as an emergency touch point for Park staff and visitors in need of a reliable power source and a communication network in this remote environment. There is no question that infrastructure is required for development, ecotourism and for monitoring, protecting and studying declining ape populations. After 6 years of field testing, the method has proved to be very promising and a potential solution as a base camp to tackle challenges associated with the decline of Great Ape populations.

CHALLENGES OF THE BALTIC SEA – HOW DO WE COMBAT EUTROPHICATION?

GUNNARS, Anneli

The Baltic Sea is a sensitive brackish environment. This estuarine is in a critical state due to eutrophication and even though actions are taken, the degradation continues. Thus, the Baltic region has to face this complex environmental challenge to be able to develop tourism, recreational boating and fishing. The eutrophication of the Baltic Sea is mainly caused by an excessive nutrient load (phosphorus and nitrogen) from agriculture and municipal wastewater. But, how do we defeat eutrophication in marine environments? A lot of studies have been done on freshwater lakes. However, cross-system studies on phosphorus cycling have shown that there are natural differences between freshwater and brackish marine systems. While phosphorus is efficiently bound and removed in freshwater lakes, there is a critical shortage of iron in sea water, resulting in a higher phosphorus availability. This has been seen as mechanism contributing to nitrogen limitation of algal growth in coastal seas. Hence, this new knowledge provides a base for wastewater innovations as well as a better understanding of how to take actions against marine eutrophication.

ADER'S DUIKER CONSERVATION AND RECOVERY PROGRAMME IN ZANZIBAR

MWINYI, Ally A.

COMMUNITY PARTICIPATION ON THE CONSERVATION OF ENDEMIC PEMBA FLYING FOX IN PEMBA ISLAND, ZANZIBAR

ALLY, SAID J.

LONG-TERM GENETIC AND PHYSIOLOGICAL IMPACTS ASSOCIATED WITH EXTENSIVE ELEPHANT POACHING IN TANZANIA

MUTAYOBA, Benezeth M.

4.5 Sub-Theme 5: Wildlife law enforcement: failures or successes

TANZANIA'S FIGHT AGAINST ILLEGAL IVORY TRADE: LAW ENFORCEMENT FAILURES AND NON-COMPLIANCE TO INTERNATIONAL ENVIRONMENTAL LAWS

KISINGO, Alex W.

The African elephant (*Loxodontaafricana*) is facing the greatest crisis in decades as a result of a surge in illegal ivory trade despite the presence of a ban by the Convention on International Trade in Endangered Species of Flora and Fauna (CITES). There is a growing concern that Tanzania is among the leading source and a trafficking route for ivory to South-East Asian markets, claims that have been refuted by the Tanzanian government and conservation authorities. This paper describes the failures by Tanzania to comply by international laws in curbing illegal ivory trade. It examines various aspects of controlling the illegal killing of elephants, casting a light on their performance using data derived from qualitative research and secondary data sources. Results reveal a failure by Tanzania to curb ivory trade on various stances such as protection for elephants and confiscation of the ivory that originate within or transit through its borders. The study recommends increases in efforts to curb the ivory trade in compliance to various international laws it has ratified. This should be done from multiple fronts including improvement in capacity for law-enforcement and anti-poaching efforts, motivation and disciplining for protection staffs, public awareness and strengthening the penalties offered to offenders. Other measures should include more cross-border cooperation to increase efforts to disrupt smuggling networks and fighting the markets for the illegal ivory in consuming countries.

A CASE OF RANGER-BASED MONITORING IN NYUNGWE NATIONAL PARK, RWANDA - 2006-2010

RUGERINYANGE, Louis

Effective management of Protected Areas is dependent on information on the illegal and legal use of the habitat by people, the ecological and behavioural needs of key species, and trends in resource availability and ecological processes. Ranger-based monitoring was designed so that data are collected on a routine basis by park rangers as they patrol the park. This information is then used to guide the day-to-day management of the park. The responsibility of the Law Enforcement unit is to ensure that the park and its biodiversity is protected and maintained. RBM program is a key management tool for park authorities as it provides accurate and timely information to park managers. Until the introduction of RBM in Nyungwe National Park, patrol records were sporadic and disorganized and not presented to park managers in a clear and meaningful way. The main characteristics of RBM are: a system making full use of the presence of rangers in the forest, without increasing their workload; a system for data collection in a systematic and organized way with limited funds; a system using basic observations that aims to detect broad trends within the ecosystem. The bottom-up approach of ranger based monitoring includes a strong capacity building component and empowers field staff in park management activities. Like any monitoring information system, RBM information is only relevant to the management of the park if it is used in appropriate ways. Currently, RBM information is used for management of the park at three different levels: RBM data is used for (i) planning the deployment of patrols; (ii) training and community outreach; (iii) administering with local leaders through Joint Action Forum (JAF), partners and *Animateur de Conservation* (ANICO) through meetings and workshops on a 6-monthly basis.

4.6 Sub-Theme 6: Wildlife management contemporary issues (technology, HIV/AIDS, gender, climate change, bush meat trade, poverty)

POPULATION, HEALTH AND ENVIRONMENT LINKAGES: EXPERIENCE FROM THE DESIGN AND IMPLEMENTATION OF THE TUUNGANE PROJECT IN WESTERN TANZANIA

MALLYA, Alphonse B.

The Nature Conservancy is working with non-traditional partners to solve reproductive health and environmental issues in a whole-system approach in western Tanzania. This approach is how we can better respond to contemporary issues of increasing demands for natural resources in remote locations. The Nature Conservancy, Frankfurt Zoological Society and Pathfinder International have established the Tuungane (Let's Unite) project to address the health and conservation challenges in the Greater Mahale Ecosystem on the eastern side of Lake Tanganyika. Baseline surveys indicate a contraceptive prevalence rate of 17%, income of \$0.50 per day, 30% decrease in fish protein intake, and increasing threat to the 2,000 chimpanzees in the area. Outcomes are a result of a combination of poorly administered health facilities, transportation challenges, poor governance, overfishing, deforestation, and sedimentation. Tuungane project adopted 6 cross-cutting strategies: (1) improve local governance; (2) improve reproductive health outcomes; (3) strengthen terrestrial management; (4) establish sustainable fisheries; (5) create and promote alternative livelihoods; and (6) engage communities in behavior change and advocacy. Outputs include: (1) submitted 14 village land use plans for national registration; (2) established 5 local fishing groups; (3) identified priority forest protection sites; (4) trained 19 Community Health Workers who have recruited 529 new family planning clients; (5) started renovating 6 health facilities; (6) formed 30 community conservation banks, who have issued 684 microloans totaling \$173,000; and (7) completed baseline scientific assessments of fish, chimpanzees, health issues, social and economic issues. Challenges include: (1) Integration, (2) community expectation and (3) increasing threats (habitat conversion, sediment loading, and population growth). Successful integration will inspire changes to policies that will benefit under-served, biologically diverse regions in Tanzania. This project will create a model to strengthen reproductive health and conservation outcomes in the Lake Tanganyika basin and beyond.

INTERDISCIPLINARY APPROACHES TO COMPETING LAND AND NATURAL RESOURCE DEMANDS: LESSONS FROM THE AFRICA BIODIVERSITY COLLABORATIVE GROUP

BAILEY, Natalie

Conservationists have been wrestling with appropriately responding to competing demands for wildlife, land and natural resources for many years. From basic field biology to newer GIS and mapping tools, we are always looking for new resources to help us better identify the best ways to conserve

wildlife and habitat for a sustainable future. Competing claims to limited land and natural resources present numerous challenges to stakeholders including conservationists, local communities, governments and the private sector, and require innovative, interdisciplinary approaches to find solutions. Collaboration between international conservation NGOs, governments, development partners and others is a beneficial approach as it brings together different strategies, points of view and resources to address emerging and high priority threats to biodiversity and development in Africa. The Africa Biodiversity Collaborative Group (ABCG) engages in various approaches to address emerging and high-priority conservation issues affecting biodiversity in Africa. Our work is guided in part by the Dar Vision for the Future of Biodiversity in Africa, which foresees that "By 2025, environmental degradation and biodiversity loss in Africa have been significantly slowed, people and nature are adapting to climate change, and species and ecosystem services are providing a foundation for human welfare in a society committed to sustainable economic development and equitable sharing of natural resource benefits." This presentation will review some of the recent approaches undertaken by the ABCG and its members, including SMART law enforcement, evaluating trade offs in land use planning, the use of High Conservation Value forest assessments and collaborations with people of faith for conservation ends.

RECIPIENT PERSPECTIVES OF PRIVATE AID IN TANZANIA

FUNK, Carla

Environmental and development aid work is dependent on funding, and the funding model is changing. Formerly private support was a relatively small contributor to development efforts, but in the past decade private aid and philanthropy have shown to be a growing source of funding (Kaldor, Moore, & Selchow, 2012; Marten & Witte, 2008). Private philanthropic funding from the world's developed economies to countries of developing economies rose from \$53 billion USD to \$56 billion in latest figures (Center for Global Prosperity, 2012, p. 5). While still less than half of the \$128 billion invested in aid by governments (Center for Global Prosperity, 2012, p. 3), this figure represents significant and rising investment by private citizens in development aid. Within this global socio-economic backdrop, philanthropy is experiencing a paradigm shift in promoting economic growth and well-being abroad. In examining the role of philanthropy in development aid, this study explores the decision making process that private foundations and philanthropic individuals employ when supporting development aid projects. Are donors adhering to a theory of change or using guiding principles to make decisions about funding? If so, does following a particular guiding principle of granting makes a difference to recipients? Another goal of the research is to investigate the extent to which participants believe they have been included in private philanthropy decision-making and whether or not that makes a difference in their perceptions of success or failure of the project. This research focuses on development aid in Tanzania; the results would have significance for those engaged in coordinating environmental aims and poverty reduction. Field work will commence directly after this conference and input from conference presentation attendees will be welcome.

ASSESSMENT OF LAND USE CHANGES ADJACENT TO LAKE BABATI USING GIS AND REMOTE SENSING

KATONGE, J.H. and KASWAMILA, A.L.

Lake Babati is a lifeline for people's livelihood and aquatic resources within the Lake. However, the sustainability of the Lake for conservation and livelihood is increasingly being threatened due to anthropogenic factors. This study assessed the Land use changes and its implications in three villages adjacent to the Lake. The villages were Babat iMajengo, Singe and Bagara Ziwani. Data were collected using GIS and remote sense techniques, questionnaire survey, key informants interviews and physical field visits. Results indicate that between 2000 and 2011 cultivation and residential areas increased by 3.1% and 4.9% respectively and grazing areas decreased by 5.3%. Other changes were increased soil erosion, increased siltation and overfishing. The study concludes that Lake Babati has a major role in revamping both the district's and local people's economy and the conservation the Lake resources. To achieve a twin a twin goal of conservation and development the authors recommend the need to have an updated General Management Plan, enforcement of conservation by-laws, coordination between sectors at district level and involvement of local communities in major decisions regarding the utilization of the Lake.

4.7 Sub-Theme 7: Wildlife governance: challenges and solutions

THE EVALUATION OF KNOWLEDGE ON CORE ELEMENTS OF GOOD GOVERNANCE IN ADDRESSING HUMAN-WILDLIFE CONFLICT IN SAADANI NATIONAL PARK, TANZANIA

MWAYA, Reginald, MANONGI, Freddy S., MALLEY, Philipo H. and KASUNGA, Didacus B.

Good governance has been defined in line with or in relation to the decision-making process that recognizes incorporation of the interests of all stakeholders in the socio-economic development. Thus, the current buzzword "good governance" is a reminder of the importance of it as a catalyst to development in our societies. Although governance issues have been a common phrase among politicians, it is relatively new in other facets of management, such as wildlife conservation, and it is quite crucial, especially in this era of community involvement in natural resource management. Thus, we carried out a study in five (5) villages surrounding Saadani National Park (SANAPA) in order to answer the following questions: 1) In SANAPA's outreach issues, is the decision-making process participatory and consensus-oriented? 2) Are arrived decisions implemented transparently? And, 3) Is the process of decision making efficient and effective? The study further explored, 4) Are Park wardens held accountable for their decisions? 5) Is sharing of benefits equitable? To answer these questions, structured interviews were conducted in five villages around SANAPA. Seventy-four people were interviewed. Among the interviewees, 48.6% were between 21-40 years old (range: 18 - 81), and 43.2% of the respondents were small holder farmers with only 9.5% of them having a secondary education. When asked whether they were aware of village-initiated projects supported by SANAPA, 68.9% of the respondents said yes, as opposed to 14.9% who said no. Yet, 56.8%

of the respondents think they do not get any benefit from SANAPA, as opposed to 35.1% who said they realize the benefit. The elements of transparency and participatory planning scored less than 50%, but accountability among and efficiency on SANAPA staff scored above 50%. Implications of these results to the conservation of wildlife in and around SANAPA and future survival of wildlife in this area are discussed at length.

GOVERNANCE AND HUMAN-WILDLIFE CONFLICTS: CASE STUDY OF VILLAGES WEST OF SERENGETI NATIONAL PARK

GENDA, Peter, KEGAMBA, Juma, LYIMO, Felix, MBAGWA, Obeid and LYAKURWA, Gastor Jerome

Good governance is the key to management of conflicts resulting from human-wildlife interaction. Wildlife managers in Tanzania are facing many challenges in dealing with human-wildlife conflicts (HWC). Many of these challenges result from weakness in the laws, weakness in the protected area's managing authorities, poor institutional arrangement and lack of community involvement. Our study was geared towards investigating the relationship between governance and HWC. In order to gather information on the mentioned problem, we designed research questions that would trigger relevant responses from respondents in four villages, namely Makundusi, Nata-Mbiso, Rwamchanga and Nyichoka in west Serengeti. We selected these villages based on frequency incidences of HWC. Household surveys were conducted by a team of researchers from the College of African Wildlife Management between July and December 2012. Researchers had face-to-face interviews with villagers. The study revealed that most of the respondents (>50%) feel that it is the responsibility of the Government to mitigate HWC. They suggested establishment of a compensation scheme as a way to deal with HWC. Fifty-one percent of the respondents felt that the government accountability in dealing with HWC was low. Respondents realize the effort of the Government in ameliorating HWC (30%), yet they think that there is a lot to be done by the government since it has the full mandate for managing wildlife. Respondents were found to be aware of conservation activities in their areas, but their potential in resolving HWC has not been fully utilized due to poor approaches by conservation practitioners.

POLITICAL ECOLOGY OF WILDLIFE MANAGEMENT AREAS: AN EXAMINATION OF POWER DECENTRALIZATION IN BURUNGE WILDLIFE MANAGEMENT AREA, TANZANIA

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The study aimed to explore the reality of power decentralization to local communities in the management of Wildlife Management Areas (WMA) by using a case study of Burunge WMA. Specifically the study focused on main actors' roles and influence in the management, the way the benefits and costs of WMA are allocated, and social classes included in the distribution of costs and benefits of WMA. Questionnaires, Focus group Discussions and physical observations were used to collect data in 118 households that were randomly selected in four study villages. Results revealed that over 50% of the local communities found to

have no significant role and influence in the management of wildlife, also they reported that many benefits were not going to the community who bear the cost of living close to wild animal rather to the investors, leaders and few elite in the community. Burunge WMA was found to have negative consequences to the agro-pastoralists and community whose livelihoods depended on land that is currently located for WMA. The challenges such as low community involvement in pre and post establishment, inadequate accountability of the conservation NGO to local communities, and corruption were the bottlenecks to the success of Burunge WMA. However, this doesn't mean that government should get rid of this approach rather the Conservation NGOs and Ministry of Natural Resources and Tourism (MNRT) need to raise community awareness, and strengthening village institutions especially village environment committee. This will enable them to make decisions pertaining wildlife at local level and thus improving wildlife conservation and livelihoods.

WILDLIFE GOVERNANCE AS IN GHANA: ANALYSIS AND DECADES OF EXPERIENCE

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This abstract examines the challenges facing wildlife governance in Ghana and explores solutions to them. In Ghana, wildlife is first regarded as a free natural resource to be accessed without restriction as food. Some species are revered as totems or feared as a threat to human life. Despite this, wildlife is an important economic asset in Ghana, generating millions of dollars annually in income and investment from wildlife-based commerce such as wildlife trade (live exports and bush meat) and tourism. This contributes to the development of the nation and improved livelihoods of its citizenry. Four key stakeholders (Government; Civil society, Private sector and Donors) are involved in the effective governance of wildlife in Ghana to rake in the desired economic benefits. Major challenges faced by key stakeholders include corruption, lack of commitment, insufficient funding, inadequate staffing and logistics experienced by government, lead to gaps in key decision making. Civil society including traditional authorities, non-governmental organisations (NGOs) and the media, whose actions and promptings should complement and or be a check on the government experience overzealousness, sometimes mischief and rivalry, lack of knowledge and the requisite capacity (staffing). Greed or eagerness for better economic returns causes some in the private sector responsible for wildlife-based enterprises to cheat, and thereby undermine the sustainability of the wildlife resource for mutual benefits. Inappropriate prescriptions, inadequate / reduced support from the donor community coupled with stakeholder relationship undermined by lack of transparency, clear policy direction and competing needs; are challenges leading eventually to improper governance. Effective conservation education and public awareness; capacity development; appropriate resource allocation and effective monitoring and integrated management are critical solutions to challenges that all four sectors will need to address to ensure good governance and the long term sustainability of the wildlife resource in Ghana.

PROTECTED AREA GOVERNANCE AND POVERTY REDUCTION IN GHANA, TANZANIA AND CANADA: TOWARDS A SYNTHESIS

KING, Leslie and MURRAY, Grant

Over the past few decades there has been increasing attention paid to 'shared' forms of governance and to the creation of new protected areas that are designed to address 'non biological' goals and values. The rationale for these initiatives has, in part, been based on the belief that well-designed systems of PA governance will help to deliver desired outcomes and meet linked socio-cultural, economic and environmental objectives. Yet this has been an under-researched area, and there is a relative lack of explanation as to how governance systems can best be designed to reflect the values and goals of various actors, as well as *which* specific governance structures and processes tend to result in particular desired outcomes, in particular increasing community well-being and reducing poverty as well as conserving biodiversity. The governance theme of the Protected Areas and Poverty Reduction ICURA project investigated questions of what protected area governance innovations hold promise for producing such desired outcomes in the three countries, Ghana, Tanzania, and Canada. As part of the PAPR synthesis process, this paper compares findings from these investigations and compares barriers to effective PA governance and lessons learned from PA governance innovations in the three countries. We address the question of how PA governance systems can be designed to ensure outcomes that both conserve biodiversity and enhance human well-being and reduce poverty.

TRACING SPATIAL AND INSTITUTIONAL DYNAMICS AT THE SAADANI NATIONAL PARK: ASSESSING CHALLENGES AND POTENTIAL OF COMMUNAL ENVIRONMENTAL STEWARDSHIP IN A TOP-DOWN CONSERVATION MODEL

OROZCO-QUINTERO, Alejandra and CANESSA, Rosaline

Protected areas, despite their importance as strategic components of environmental regimes and their proven potential to contribute to addressing critical issues of adaptation to environmental change and sustainability, have so far had mixed results in achieving ecological and social goals. Past research suggests that this is due both to external factors, such as environmental change and degradation, and internal factors, such as governance design and insufficient ability to operate within and connect to wider socio-economic and institutional frameworks. We carried out field research from July 2012 to July 2013 at Saadani National Park on the relationship between chronic spatial challenges and the nature of multi-level institutional interplay in achieving both park and communities' goals. Through qualitative and spatial analysis we describe both community-level land use strategies and structures to address ecological and social challenges, and the park's approaches to environmental governance and management. Despite its preliminary character, the research reported here suggests that official land use decisions on conservation and the institutional and spatial arrangements and entitlements that emerged therefrom have weakened villages' commitment to ecological conservation, in spite of the positive effects on environmental awareness brought about with

the establishment of the park. As the empirical data reveals, there is a degree of spatial and institutional organization and awareness at the grassroots level that can mitigate and prevent environmental degradation, often assumed as foreign to resource-scarce and economically isolated communities. Moreover, the qualitative analysis shows pervasive organizational gaps hindering the development of linkages between critical environmental issues and actions at the grassroots level and park management strategies, notwithstanding the existence of a national policy framework on community engagement in park planning and management. Based on the accumulated evidence, we contest preconceived ideas of communities' lack of capacity and interest in conservation. Furthermore, we argue that despite isolated development funding and systematic security and law enforcement, active processes of institutional engagement and interplay are critical to enable both communities to benefit from and support conservation and the park to achieve its primary conservation goals.

SOCIAL ECOLOGICAL GOVERNANCE OF PROTECTED AREAS: DOES COMMUNITY-BASED IMPLY GOOD GOVERNANCE AND BETTER CONSERVATION AND SOCIAL OUTCOMES?

KISINGO, Alex W., DEARDEN, Phil, ROLLINS, Rick, ROBINSON, Lance, MURRAY, Grant and CLARKE, Marlea

Since the World Park Congress in Bali in 1982 lots of changes has happened in the conservation world with the realization of the need for community involvement in conservation. A number of programs have been established hand-in-hand with policy and legal changes to accommodate this new-paradigm in conservation. In Tanzanian wildlife sector, the new-paradigm was received with the establishment of community-based wildlife protected areas (Wildlife Management Areas) and the formulation of policy and legislations that incorporate communities as important actors in safeguarding the future of wildlife resources, particularly outside the PAs. Wildlife Management Areas have been expected to deliver both conservation and social goals. This paper uses the social ecological model to evaluate governance in Ikona and Makao Wildlife Management Areas and links to the attainment of conservation and social outcomes. The overall findings are that establishing protected areas as community-based does not necessarily mean good governance or better attainment of conservation and social outcomes.

PROTECTED AREAS AND POVERTY REDUCTION: SYNTHESIS OF RESEARCH FINDINGS

MURRAY, Grant, KING, Leslie, KAHANA, Ladislaus, KASWAMILA, Abiud, KISINGO, Alex W., OROZCO-QUINTERA, Alejandra, et al.

Protected Areas and Poverty Reduction: A Canada-Africa Research and Learning Alliance is a research and learning alliance that brings together universities, community organizations and government agencies in Canada, Ghana and Tanzania. It aims to address challenges of reducing rural poverty and ensuring environmental sustainability by focusing on protected areas and their adjacent communities in the three countries. The College of African Wildlife Management is a partner in the project and we shall use the opportunity of the Mweka 50th

Anniversary conference to present a synthesis of our findings as we approach the end of the 5 year research project. We shall be presenting lessons learned in the project in the areas of Protected Area Governance, Human – Wildlife Interactions and Conflict, Knowledge Mobilization, Costs and Benefits of Protected Areas, Tourism, and Poverty Reduction. We shall present case studies and Ph.D. work from the three countries that illustrate the findings related to these 6 themes of the research. We include recommendations about using the knowledge generated by the research, including improving protected area governance, reducing conflict, enhancing benefits and reducing the costs to communities living with protected areas, and using protected areas and tourism to reduce poverty and provide alternative livelihoods for those living adjacent to protected areas.

4.8 Sub-Theme 8: Wildlife management and tourism

POTENTIALS OF ECOTOURISM ON ENHANCED BIODIVERSITY CONSERVATION IN AMANI NATURE RESERVE, EAST USAMBARA

SHEKIVULI, Sadiki Juma

The Eastern Arc Mountains have been reported by the International Union for Conservation of Nature (IUCN) as one of the 25 world's biodiversity hotspot. The Amani Nature reserve (ANR), one of the blocks of the Eastern Arc Mountains, has a great potential of flora and fauna including endangered, threatened, endemic, rare and vulnerable species. Increased population growth, and related human socio-economic activities have increased pressure on forest resources, which threaten the ecosystem of East Usambara Mountains. A study was carried out to assess the potentials of ecotourism on enhanced biodiversity conservation based on specific objectives: 1) to identify the number of ecotourism programmes that have been established since the establishment of ANR, (2) to assess the current status of biodiversity values, (3) to identify important strengths, weaknesses, opportunities and threats of ecotourism, and (4) to assess the involvement of local community on biodiversity conservation. Methods used involved focus group discussions, monitored questionnaires, interviews and Participatory Rapid Appraisal (PRA). Findings indicated that respondents participate in tree planting projects (45%), butterfly farming projects (25%), and *Allanblackia* (Masambu) (11%); the rest participated in beekeeping and fish farming. Different endemic and rare flora and fauna species were identified and ranked due to their importance. Bird species, such as, *Bubo vosseleri*, *Sheppardia gunning* and *Anthreptes pallidigaster*, animal species, such as, *Rousettus (Stenonycteris) lanosuskempi*, *Rhynchocyon petersi* and *Beamys hindei*, and tree species, such as, *Cola usambarensis*, *Cephalospaera usambarensis* and *Saintpaulia* were identified. Amani has an absolute advantage to practice ecotourism because of the available unique natural environment despite some challenges. Local people seem to be knowledgeable in ecotourism with 42% of participants agreeing to shift to ecotourism from other environmentally-unfriendly activities and 58% disagreeing conditionally, if only ecotourism offers an absolute advantage over other sources of income. Ecotourism represents one of the potential reliable alternative means for enhanced biodiversity conservation in ANR.

WILDLIFE TOURISM – GHANA IN PERSPECTIVE

NUHU, Mrs. Vivian A. N.

Ghana cannot boast of the spectacular biological diversity found in east and southern Africa, yet one is intrigued by our wildlife's relationship to the varied cultures, food and festivals of Ghana. Though wildlife in Ghana is first regarded a natural resource to be accessed freely as food; revered by way of totems or feared as threats to human life, these same attributes are attractions to many tourists. Forty-five years of wildlife management in Ghana has proven that wildlife tourism is linked ironically to these attributes of revered wildlife species, thereby improving the lives of the rural poor, especially outside the protected areas. The annual traditional bushbuck hunt 'Aboakyer' festival and the BoabengFiema Monkey Sanctuary readily come to mind. Within the protected area system, walking safaris bring the tourist much closer to nature than in the well-endowed sites anywhere else in Africa. In the absence of wild animal attractions, man-made facilities such as the Kakum Canopy Walkway, (third in the world) and the cascading 800m Wli waterfall do receive lots of tourists, both local and foreign. Unfortunately, government faced with ever increasing budget demands for health, food, education and employment issues often leave little for wildlife management needs. The private sector, often looking for very quick economic returns, is hesitant about investing in wildlife-based tourism infrastructure, facilities and services as protected areas including national parks and Ramsar sites are linked poorly by road and public transport. Notwithstanding these shortfalls, many a tourist soon forgets the ordeals of travel when they get to see Ghanaian wildlife and meet the wonderful people of Ghana. Happily, government intends to promote eco-tourism through public/private partnership development approach and amending current wildlife regulations to give traditional authorities rights to more income from ecotourism infrastructural development and services to ensure wildlife sustainability while enforcing wildlife regulations.

EFFECTIVENESS OF THE RESOURCE INTERPRETATION PROGRAMS AT JOZANI-CHWAKA BAY NATIONAL PARK, ZANZIBAR

KISINGO, Alex W. and MNYENYE, Eva Allen

Evaluation of resource interpretation programs was carried out at Jozani-Chwaka Bay National Park in Zanzibar between April and May 2012. Data collection involved questionnaire survey to 32 park visitors, and key informant interviews with 8 park staffs. Three main resource interpretation programs were identified to include talks by guides, brochures, and posters and signs. Results suggest that despite some identified challenges; overall the park resource interpretation programs are effective in increasing awareness to visitors on the knowledge of wildlife resources and habitats. The results also suggest the park interpretation programs motivated and enhanced visitors' satisfaction in the park. We conclude that despite the observed effectiveness, resource interpretation programs in Jozani-Chwaka Bay National Park should be improved particular on the language aspect to satisfy visitors using different languages apart from English.

TOWARDS SUSTAINABLE TOURISM: APPLICABILITY OF GREEN TOURISM MARKETING IN THE CONSERVATION OF TOURIST ATTRACTIONS AT KILIMANJARO NATIONAL PARK

KISASEMBE, Richard

Green tourism marketing is relatively new in a business endeavor and came into prominence only in the late eighties. It was a deliberate movement towards achieving sustainable tourism development. This influenced many businesses and corporations to consider environmental issues in their strategic planning in order to meet stricter environmental standards. One of the businesses earmarked with environmental issues was tourism because of its volatile nature. The destination marketers, in this case, face challenges from the environmental point of view on appropriate good practice strategies for achieving sustainable tourism. Initially, individuals and companies adopted ecotourism which is observed to have limited scope; whereas, some companies have gone beyond ecotourism and opted for green tourism, which is much more concerned with tourism activities and facilities having little adverse impact on the environment. This paper therefore demonstrates how green tourism marketing is applied in the Protected Areas. The paper presents findings from Kilimanjaro National Park, one of the most visited Protected Areas in Tanzania. A descriptive research design considered three key stakeholders: Park staff, tourists and tour companies for a total of 50 respondents. The paper employed both qualitative and quantitative data analysis. Research findings revealed that there is little implementation of green tourism strategies, perhaps due to inadequate knowledge on green tourism. The majority of respondents were observed to confuse the concept of green tourism with eco-tourism and nature tourism, whereas green tourism goes ecotourism. Park management, tourists and tour company operators should have adequate green tourism knowledge when operating tourism activities in Protected Area so as to prevent degradation of the environment and nature.

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