REPORT FOR UGANGA WILDLIFE RESEARCH AND TRAINING INSTITUTE WORKSHOP AT MWEYA FROM 10th TO 12th OCTOBER 2018

WELCOMING REMARKS

Dr. Margret Draciru welcomed participants to the workshop on behalf of UWA ED

The chairman (Dr. Arthur Mugisha) asked participants to actively participate in the workshop discussions in order to collect views of all stakeholders invited. He also informed participants that the major objective of the workshop is to develop a research agenda for UWRTI as a way of addressing wildlife conservation challenges which have gone on for long

OFFICIAL OPENING

Director Tourism, Wildlife and Antiquities Mr. Lutalo James representing the Hon. Minister of Tourism, Wildlife and Antiquities also welcomed participants to the workshop. He also outlined the workshop expectations which include carrying out research that will guide priorities ranging from increasing inflow and stay of tourists in Uganda to other objectives defined in Uganda's constitution, Vision 2040, Sectoral plans and policies such as Uganda Wildlife policy 2014, UWRTI Act, Tourism master plan, etc

There is limited research on wildlife in Uganda despite the enormous wealth of Biodiversity

Uganda is the leading biodiversity country with rich flora and fauna species. Uganda has 54% of the World's existing Mountain gorilla population, over 2,000 species of bird species which is about 10% of all bird species worldwide and 50% of birds in Africa, 7.8% of mammal species in the world which translates into 39% of Africa's mammals, 13% of amphibian species and 14% of reptiles, over 2,000 species of butterflies, about 600 species of fish

There are new discoveries of mammal and bird species in the recent past. This creates opportunities for a lot more undiscovered potential which can only be known through research

Uganda's tourism is largely based on wildlife conservation as the major attraction. Tourism is the leading foreign exchange earner for Uganda and has been listed in the National Development Plan as one of the priority sectors for national transformation together with sectors such as IT, Agriculture, Energy, etc

The sector contributes about 7.2 trillion shillings annually, about 9% of GDP. It has generated about 8% of all jobs in Uganda. UWA alone employs about 3,000 staff

10% of uganda's land surface is protected as Wildlife Conservation Areas under various Protected Area categories ranging from National Parks to Wildlife Reserves, Sanctuaries and Community Wildlife Areas

Wildlife and forest conserved land surface make 18% of Uganda's land surface, which meets target 11 of Global Conservation Targets

Government has established Uganda Wildlife Research and Training Institute by an act of parliament to coordinate and develop research related to wildlife conservation in Uganda

The workshop is a good step towards advancing scientific research and knowledge in wildlife conservation to inform decision making

A number of districts have made resolutions to upgrade some Protected Areas such as Katonga Wildlife Reserve, Toro-Semliki Wildlife Reserve, Echuya Forest Reserve to National Park status. This is an unprecedented level of support for conservation

Pledged full government support towards conservation research agenda, and declared the workshop officially open

WORKSHOP OBJECTIVES: (Dr. Akankwasah Barirega)

The session chair for the day briefed members on the workshop aim which is to develop a National Research Agenda which will bring together all research players in the country under the coordination of Uganda Wildlife Research and Training Institute

Invited all participants for a group photo at the main entrance of the meeting venue

WORKSHOP EXPECTATIONS

All participants were asked to make self introduction by mention of their names and the organizations they were representing in the workshop and mention what their expectations are in attending the workshop. The member expectations mentioned include the following;

To develop a research agenda for Uganda

Coordinate institutions to work together for research

Develop a research roadmap

Partner with other agencies for joint research programs

Resurrection of research in Uganda's protected areas

Learn more about conservation in Uganda

How to integrate ecological concepts in national research agenda

Gain knowledge and skills in research

Create a future for Protected areas by addressing problems they are faced with such as invasives

Start a multi sectoral approach to research

Share experiences with field based players

Understand types of research in place

Identify research gaps in Protected Areas

Address management oriented research gaps through research

Generate adequate data to help in policy formulation

Start result oriented research

Opening up new research opportunities

Undersatnding research operations in Uganda

How media will be involved in research

Know who are the key actors in Uganda's research program

Gain knowledge in Wildlife based research

Understand how research can be used in Protected Area management

Resurrection and growth of research in Protected Area management

Application of research for effective use

Develop a practical implementable research agenda

Obtain research skills in economic valuation of wildlife resources

Initiate mutual collaboration of students

Ensure training of Ugandan students in Kent State University

Applied research for wildlife conservation

Use of research for socio-economic development of Uganda

Identify funding for research

Identify mutual benefits for Kent State University and UWRTI

Build capacity for wildlife conservation

Raise standards for research and training in the country

Address health issues such as Ebola outbreaks

Protect resources for community, national and international benefits

Improve tourism training using research

Obtain participant feedback on how to develop research agenda

Understand how government can prioritize research through increased funding

Have a functional and sustainable research agenda that informs management of wildlife

Understand a niche and relevance of wildlife conservation research in national transformation

HISTORICAL PERSPECTIVES OF RESEARCH (Dr. Arthur Mugisha)

1930s to 1950s:

There were low human populations in the country, high animal populations, aboundant forests, Colonial era, land would be acquired freely with vast unoccupied land anywhere, animals were a threat to humans sometimes creating a need to kill animals as a control measure in order to protect humans, sport hunting was introduced to cater for colonial interests

1960s to 1980s:

Only 3 national parks existed, there was a booming human population, commercial hunting and poaching for ivory, increased Human-Wildlife conflicts, rationalization of Protected Areas, Conservation education started, and civil unrest during the reign of Idi Amin, very mearger funding sources for conservation with one of the park managers awarded for managing Protected area with limited funding sources, increased awareness worldwide leading to Rio convention, Uganda Institute of Ecology (UIE) started by the likes of Dr. Sabiiti, Late Prof. Edroma. Other researchers like Dr. Chris Bakuneeta, Forest parks started, Research stations such as MUBFS, Budongo field station and Mbarara University ITFC came in to fill vacuum for research needs

Some donors such as World Bank and European Union and academic interests in theoretical research topics of the day caused government pulling out of supporting research

1990s to date:

A new wave of changing institutional and legal framework for wildlife conservation and creation of agencies (KWS, UWA, etc), High population growth, mainly composed of young people, High levels of invasiveness by exotic and indigenous species like *Dichlostachis*, Problem animal control intervention measures such as excavation of trenches, pepper spray, increased use of technology, new disease outbreaks, emerging issues such as climate change and oil and gas exploration, need to justify importance of conservation to socio-economic livelihoods through revenue sharing, introduced Wildlife Use-Rights, disaggregated research programs (ITFC, MUBFS, Budongo Field Station, Banded Mangoose Research Project), limited funding for research, New law passed by parliament (UWRTI) to coordinate conservation research

WILDLIFE RESEARCH AND PROTECTED AREA MANAGEMENT (Mr. Aggrey Rwetsiba)

UWA strategic plan (2014-2019) has 2 strategic area programs for promoting scientific research for informed decision making in conservation

Identified the need for management oriented research to enable sustainable management and address conservation challanges

1950s:

Institute originally created to carry out research to inform problem animal culling, later renamed Uganda Institute of Ecology

1980s and 1990s:

Started research projects in various parks, mainly focusing on academic research

Some long term research projects which led to new tourism products such as Gorilla tourism

Monitoring and Research policy and Monitoring and research plan in place to govern the research program under various themes such as Ecology, Socio-economics, Management research and Development activities

Research information has been used in wildlife translocation and re-introduction activities, General Management Plan preparation, Negotiating Collaborative agreements with agreements with communities and other forms of partnerships, implementation of Wildlife Use Rights programs like sport hunting, Resource mobilization and use of technology in data collection

UWA monitoring and research priority topics such as oil and gas exploration, climate change studies, invasive species management, etc.

Research is very key in informing planning and decision making, monitoring and detecting environmental changes

DISCUSSION

Wildlife and human interactions is part of traditional history of Ugandans over the years and had mechanisms for sustainable utilization

Gaps in social science research and application in academic programs

Most of the research in the past was academic and was not addressing management needs

There was limited interaction between the park managers and researchers in the past especially in deciding research priorities

Need to revive Wildlife Clubs of Uganda for conservation education and dissemination of research information to the general public

Need to define historical research needs, stereotypes that affect wildlife conservation in Uganda

UWRTI should be supported to become a centre of excellence nationally and regionally

Reduced wildlife populations coupled with increasing colonization of ecosystems with invasive species

Need for a wildlife research symposium

Need for interdisciplinary research and academic programs. Wildlife training should go beyond ecological aspects to include sociological and technological aspects and find how they can be applied in wildlife conservation

Need to fully exploit positive aspects of globalization

Research gaps in human population growth impacts on conservation

Need for value addition in wildlife resources

The concept of national park management was foreign and was adopted in Uganda leading to exclusion of local communities in management

Target human behavior in ensuring sustainable use such as control of invasive species

Need for research programs to guide policy decisions and planning for park management

Understanding relevance/ objectives of Protected Areas and Protected Area sizes and their effectiveness through research

Need to understand the application of research in wildlife management including funding sources

We should carry out more socio-economic research on traditional aspects of conservation and use them to promote conservation

Need to integrate research in wildlife conservation

Creation of research data bank from research findings carried out in Protected Areas

Increased access to research information in decision making by park officials

Multi sectoral approach in responding to research findings and making management interventions

Limited research on flora with a bias towards fauna studies in Protected Areas. This affects habitat management decisions such as control of invasive species

Target to increase Protected Area size to 17% by 2020. This can be achieved by working with communities to protect genetic resources on private land

Research findings from research programs carried out in Protected Areas since 1996 are shared with UWA. This has been made possible by making a condition to pay money which is refunded after sharing of research reports and research findings with UWA. However, in organizing research symposia, there are challenges of facilitating foreign based researchers to attend and share their research findings

Need for continuous research to understand animal adaptation and ecological changes in the habitat

Need research programs to build capacity and train young professionals who will take over from the historical

Wildlife expertise is needed in court prosecution of poachers. Experts should be developed for various taxa

Need to increase information access and sharing of research findings between UWA and other stakeholders

Increase participation of youths and students in wildlife conservation through Wildlife Clubs of Uganda

Need to research more on tourism aspects of conservation as one of the research priorities

Empower communities with wildlife resources to benefit from wildlife utilization based on research

Make use of baseline information in guiding decision making

Need to have a budget line for summarizing research reports in sharable formats

WILDLIFE CONSERVATION RESEARCH IN UGANDA BY ITFC (Dr. Robert Bitariho)

ITFC started in 1991. Based in Albertine Rift, focused on forest ecology

Undertake research and monitoring, support park management and contribute to capacity building

The institute has a number of researchers and students. It has research facilities such as herbarium, library, etc

Institute has generated research questions in collaboration with BMCA

Has contributed to Protected Area planning process by identifying key research needs for BMCA

Some of the projects undertaken include; monitoring impacts of human use of forest resources on sustainable management of the park, monitoring water quality, integrating Batwa cultural values into conservation and tourism, gender mainstreaming through research by increasing womens' participation in conservation, carry out status of key animal species such as gorilla census carried out every 5 years, wildlife monitoring using cameras, biodiversity assessment in Forest Reserves, monitoring of flora and climate monitoring

Increasing amounts of funds available to local communities through revenue sharing and other conservation programs that target improving peoples livelihoods are not causing the intended reduction in Human-Wildlife conflicts

Need to carry out collective planning to avoid overlaps, need to increase synergies through sectoral working groups

Need to increase collaboration between research institutions and civil society instead of treating each other as competitors

Build capacity for local researchers to publish their research findings through collaborating with western universities and researchers

Implement new revenue sharing guidelines that increase benefit of local communities from conservation as opposed to old system of giving the money to the districts where it could not reach grass root communities

WILDLIFE RESEARCH IN UGANDA BY MUBFS (Samuel Adengakin)

Makerere University Biological Field Station established in 1970, originally as Kibale Forest Project. Handed over to Makerere University in 1987 to ensure sustainability

Hosts local and international researchers and students. Over 300 research papers published

Based on Kibaale National Park, with studies on habitat changes (logging) and primate behavoiur. Limnology studies in fisheries resources. Other studies include studies on zoonotic disease transmission aspects and on a number of taxa including butterflies, giant pangolin, etc

Research done at the centre has led to new tourism products at Kanyanchu Tourism Centre

Research based planning to support community conservation initiatives such as KAFRED and conservation education programs in schools

Chimpanzee genetic census was undertaken in Kibale National Park using camera trapping. Information generated can be applied by UWA in management and policy decision making such as on designing habituation programs

Preliminary chimpanzee population size monitoring estimates put population at 1500, highly varying from 800 estimated from nest counts

Research program makes interventions in anti poaching patrols and rescue of chimpanzees from snares. This has led to reduced poaching incidences in the patrolled areas

Need to compare research data with UWA patrol data collected for comparison

OPEN DISCUSSIONS

There is need to communicate research findings to political leadership and wider public outside conservationists

Need to carry out more research on chimpanzee populations outside Protected Areas

Need for research undertaken at Kibale to be replicated in other areas where conflicts are very high

More understanding needed on ecological effects of habituation processes on chimpanzees

More understanding needed on use of masks on primate tourism and how practical it is to make it replicable in other areas

Capacity building required to train new managers on research

To promote in country lab analysis instead of carrying most of the samples abroad

Need to carry out more studies on poaching dynamics and other research outputs to guide decision making

RESEARCH ON INVASIVE PLANTS BY NARO

Has 7 National research institutions and 9 Zonal research institutions

Invasive Alien Species unit working under different sectors and sectoral regulations

Current project ongoing on control of invasive species in Queen Elizabeth and Lake Mburo National Parks

Invasiness by *Acacia hockii* impacts on conservation leading to habitat loss and increased Human-Wildlife conflicts and reduced tourist satisfaction

Mechanical extraction of plants is being undertaken in Queen Elizabeth National Park. About 300 Hectares has been cleared

Other species include *Perthenium hysterophus*. Biological control of 2 species of beetles from South Africa is being experimented. There are plans to assess economic impacts the beetles will have on other biological resources after clearing the weed

Salvinia molesta (Kariba weed) has social and economic impacts on fishing communities. Mechanical control methods are being used. Salvinia weevil (*Cyrtobagous salviniae*) experimentation is being used under controlled conditions. Impacts on economic

WILDLIFE CONSERVATION RESEARCH IN UGANDA FROM THE EXPERIENCE OF WCS (Samuel Ayebare)

Working in Uganda since 1957. Undertaken anumber of wildlife surveys and other research projects, landscape studies and impacts of oil and gas mining on biodiversity

Research on emerging isuues such as Climate Change and disease transmission to great apes

Species specific surveys undertaken on a number of taxa ranging from mammals, birds to reptiles, etc

Research on key biodiversity areas has been used in identifying Important Bird Areas, National Red Listing, Experimental Ecosystem Accounting for Uganda and Developing a Great Virunga Landscape Species Database

Other projects undertaken with UWA include improvement of intelligence and law enforcement, establishment of canine unit, use of SMART (a spatial analysis tool) and engaging Chinese government to address illegal activities in Uganda

Wildlife radio telemetry on lion distribution in Murchison Falls National Park and Elephant ranging patterns in Kidepo landscape

Supporting Community Conservation programs such as Scouts programs, Trench excavation and Monitoring livestock loss. Land cover mapping and Conservation planning have been undertaken

The organization also supports conservation financing programs such as Uganda Biodiversity Fund, Carbon Financing like REDD+

DISCUSSIONS

There is requirement for genetic modification of biological agents used in invasive animal control that can be made in a such a way that it can die immediately after accomplishing its intended use

Need for literature on indigenous invasive species since most studies by NARO are targeting exotic invasive species

Need to understand the steps which can be put in place to manage oil and gas extraction in a sustainable manner along biodiversity conservation

Conservation organizations should consider engaging local people in data collection in order to increase local community participation in conservation

Need for rationalization of research funding on non priority areas such as research topics already done elsewhere

Plans required for restoration of degraded habitats

PRESENTATION OF WILDLIFE RESEARCH EXPERIENCES BY KENT STATE UNIVERSITY

KSU staff previously participated in voluntary activities in wildlife conservation in Uganda from 1996 to 1998. Other student visits were held in the past

Need to increase student exchanges and experience sharing between USA universities and Uganda

Design practical field based studies to guide conservation decision making. This involves hands on training on data collection, analysis and presentation

Use of serial photographs over time to monitor habitat changes. Historical data can provide evidence on when environmental changes began to occur which can determine whether certain management practice applied on a habitat such as burning practice is responsible for the current changes or not

Long term climate change studies using historical data

DISCUSSION

Limited funding for research

Lack of researched data leading to failure to understand concepts and subsequently making a wrong decision