Efficacy of institutional framework in managing wild life trade in Uganda: Preliminary evidence

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Abstract

Purpose: The aim of this paper is to report preliminary evidence on evaluating the efficacy of the institutional framework in the management of trade in wildlife products in Uganda.

Methodology: The study adopted a descriptive cross sectional survey design. Analysis was done thematically and content for qualitative (interview) data and archival data respectfully; and also SPSS for quantitative data analysis from a sample 169 subjects. The hypotheses were tested using hierarchical regression.

Findings: The institutional framework for managing wildlife trade in Uganda is weak. The study also found that efficacious institutional framework and management tools of planning and control have a predictive force.

Originality/Value: This paper answers the pertinent question of whether the management of wildlife in Uganda in the propensity to use and patronize wildlife trade is efficacious. The paper provides the initial evidence of the application of institutional and broken windows theories as relevant frameworks for understanding management of wildlife trade.

Paper Type: Research Paper

Key words: Wildlife, broken windows theory, Institutional framework, Wildlife products, poaching and Wildlife crimes

1. Introduction and motivation

Wildlife trade involves trade in both fauna and flora. The Wildlife Act Cap 200 of Uganda permits trade in wildlife through Class D Wildlife Use Right (WUR) whose purpose is to authorize the trade in wildlife and wildlife products. Wildlife use rights was envisaged as an incentive to promote the conservation of wildlife outside Protected Areas (PAs) and eliminate the negative perception by some people who still regarded wildlife as Government property and of benefit mainly to foreign tourists. Trade as a wildlife use right leads to better wildlife management and increase in animal populations in those areas where they have been depleted (Sonia, 2013). An interested party pays

application fees of 100 US Dollars and license fees of 100 US Dollars. Section 29 of the Uganda Wildlife Act (Cap. 200 of 2000) further provides for six wildlife use right classes under which the general public can benefit from wildlife (Kyewalyanga, 2015). However, Uganda Wildlife Authority Report of 2015 indicates that the overall objective of granting WUR is to promote sustainable extractive utilization of wildlife by facilitating the involvement of landowners and users in managing wildlife on private land.

According to Makumbi and Manyindo (2000), in the 1970's however, Government killed some animals under license for control, administrative, scientific and cropping purposes following the research conducted by Sir Richard Laws in 1968 that suggested that for example elephant populations in Uganda were too high and caused overcrowded habitats, malnourishment and habitat destruction and hence the cropping of elephants in Uganda. Between 1970 and 1979 inclusive the following elephants (in brackets) were killed: 1970 (3,467); 1971 (2,622); 1972 (2,469); 1973 (2,945); 1974 (1,322); 1975 (1,292); 1976 (1,626); 1977 (4,726); 1978 (4,879); 1979 (799). The large number of animals killed under license between 1970 and 1974 may be because a study done by Sir Richard Laws gave momentum to those in Government who wanted to increase revenue from wildlife hunting fees and the sale of ivory (Makumbi and Manyindo, 2000). In 1974, however the rapid decline in elephant population led to a ban on licensed elephant hunting to be introduced in 1975. The Government then also acknowledged the fact that many licensed hunters in the early 1970s were killing more animals than they were allowed to. Between 1974 and 1976 therefore, licensed animal killing appeared to have been controlled. It is not clear why the elephants killed in 1977-78 was high relative to the rest of the years.

The main institution charged with regulating wildlife trade in Uganda is the Uganda Wildlife Authority (UWA). As a signatory to the Convention on International Trade in Endangered Species (CITES) of wild fauna and flora, Uganda has two important authorities that regulate trade in wildlife; that is the Management Authority (MA) and the Scientific Authority (SA) for CITES in Uganda (Mwanje, 2017). The MA is the Ministry of Tourism, Wildlife and Antiquities where the focal person is the Commissioner for wildlife conservation. The scientific authority is UWA for wild animals and the Ministry of Water and Environment for wild plants where the focal point is the Forest Sector Support Department (FSSD).

A 2015 report of the Ministry of Tourism, Wildlife and Antiquities shows that more ivory seizures have been registered in Uganda relative to the past years. Most of the confiscations were being made in Asia having passed through Uganda's borders and other non-gazetted exit points unnoticed. Yet every year, considerable amount of money is spent protecting animals in the wild relative to what is spent on stemming the demand for trade in wildlife products where trade in wildlife products is both legal and illegal (World Wildlife Fund (WWF), 2014)). Illegal wildlife trade has led to overexploitation of fauna and flora worldwide. Over exploitation is the second-largest direct threat to many species after habitat loss (WWF, 2014). The value of global illegal wildlife trade has been estimated at between $5 and $20 billion per year (World Bank, 2014) and has drastically reduced many wildlife populations around the world. Indeed, a 2013 report released by the WWF, the International Union for Conservation of Nature and the wildlife trade monitoring network (TRAFFIC) said elephant, pangolin, leopard, lion poaching had reached a 15-year high, pushing the animals close to extinction (Dedan, 2013) - the main challenge in East African region, being the high demand for wildlife products in Asia, particularly China where they are signs of pride and prestige. According to the Daily Monitor newspaper of 4th June, 2016, the price of ivory for instance, has increased from $5 per kg in 1989 to a wholesale price of $2,100 per kg in China in 2014. Illegal wildlife trade is unsustainable, it harms wild populations of animals and plants and pushes endangered species towards extinction (Gede, 2014).

The purpose of this paper is to report preliminary results on evaluating the efficacy of the institutional framework in the management of trade in wildlife products in Uganda. We use institutional theory by Scott (2001) as a theoretical lens for this study as the theory adopts a sociological perspective in the understanding of organizational structures and behaviour (Dunn, 2010). The theory draws attention to how organizations' decision making is influenced by the institutional, social and cultural factors as identified by Scott (2001), and in particular how rationalized activities are adopted by organizations. The theory emphasizes the use of rules, laws and sanctions as enforcement mechanisms, with expedience as basis for compliance (Scott 2004). The theory can explain the institutional decision making and the influence of the regulatory and oversight agencies in curbing illegal trade in wildlife products. The theory shows the relevance of structures, processes and systems (DiMaggio & Powell, 2003). The institution is useful in that when coercive pressures are high (for example under state mandate), organizations quickly adopt new structures. Under low coercive pressures, the rate of adoption is much slower (DiMaggio & Powell, 2003). Increased adoption builds legitimacy in the institutional environment, accelerating the rate of adoption of the new structural form.

However, institutional theory explains organizational structures and behaviours better in environments characterized by strong institutions. Since the 2015 report of the Ministry of Tourism, Wildlife and Antiquities shows that most of the confiscations were being made in Asia having passed through Uganda's borders and other non-gazetted exit points unnoticed, the institutional theory needs to be supplemented in the understanding of the efficacy of institutional framework in managing wild life trade in Uganda. The Broken Windows Crime theory propounded by social scientists Wilson and Kelling, in an article titled "Broken Windows" which appeared in the March 1982 edition of The Atlantic Monthly (Wilson and Kelling (1982) suggests that there is an important relationship between disorder and Crime. The Broken Windows theory states that, incivilities and disorder exacerbate the fear of Crime which, in turn, weakens the social cohesion in the neighbourhood. If there are physical and social signs that reveal that a particular area is unattended, other kinds of disorder might be attracted to that area (Weask, 2014). Overall, this climate makes the neighbourhood crime-prone, and more serious crimes are likely to occur (Wilson & Kelling, 1982). The Broken Windows theory is a criminological theory of the norm-setting and signalling effect of urban disorder and vandalism on additional crime and anti-social behaviour. The theory states that maintaining and monitoring urban environments in a well-ordered condition may stop further vandalism and escalation into more serious crime. This theory is therefore relevant in demystifying the fact that those who commit disorder and crime (such as poachers) have a clear tie to groups suffering from financial instability and may be of minority status. Essentially, everyone perceives disorder differently, and can contemplate seriousness of a crime based on those perceptions. Thus one way the law enforcement organs can foster observance of the law, order and peace is by partnering with the community to maintain order. The proponents of the Broken Windows theory suggest that the successful strategy for preventing vandalism is to fix the problems when they are small. In this paper we are aiming to show that it is better to improve the efficacy of institutional framework in order to improve the management of wildlife in Uganda.

Wildlife is vital to the lives of a high proportion of the world's population, often the poorest. Some rural households depend on local wild animals for their meat protein and on local trees for fuel, and both wild animals and plants provide components of traditional medicines used by the majority of people in the world (Donaldson, 2013). Trade in illegal wildlife products has the potential to be very damaging (Kent, et al., 1980). Populations of species on earth declined by an average 40% between 1970 and 2000 and the second-biggest direct threat to species survival, after habitat destruction, is wildlife trade (Ruthworth, 2014). Extinction is the greatest threat to animals

that are victims of wildlife poaching. In 2011, the International Union for the Conservation of Nature (IUCN, 2014) declared the Western Black Rhinoceros extinct (Razor, 2013). This subspecies of the critically endangered Black Rhino was poached due to the belief in the healing properties of its horn. The continuation of illegal wildlife trade leaves a question as to whether the wildlife management in Uganda is playing its role in the preservation of wildlife and whether the institutional framework enables the proper management of wild life. This issue of poaching is a focus of government legislation, in terms of anti-poaching laws and zoning laws. And there are many other things to address, but none are coming to mind (WWF, 2013). Illegal Wildlife Trade links to violence, radicalism, terror, organized crime, corruption and fraud. Income from illegal wildlife trade funds violent activities (IFAW, 2013). As for the mammals, 345 mammal species are found in Uganda, the second largest collection in Africa. However illegal wildlife trade has brought iconic species such as the mountain gorilla, the chimpanzee and the African elephant, to critically endangered status and threatened species respectively (WWF, 2016).

Indeed, there is no indication that the rhino, elephant and mountain Gorilla poaching crisis is coming under control in Africa, as the animal deaths continue despite the government responses to combat poaching, including the deployment of army personnel in National parks (WWF, 2014). It is against this background that we sought to evaluate the efficacy of institutional systems in the management of wildlife trade in Uganda.

Analysing data solicited from officials from Uganda Wildlife Authority, Uganda Wildlife Education Center, game rangers, Uganda Wildlife Authority law enforcement officers and magistrates, on one hand, and document reviews plus field observations; we find that the current wildlife law has got long period imprisonment sentences but low fines and this has given a lot of powers to the magistrates to give fines as opposed to imprisonment. The judicial officers are lenient when it comes to sentencing and the type of punishment to pass and collection of intelligence - peculiar nature of wildlife offences that makes the collection, analysis and dissemination of intelligence unreliable. Corruption is a big ulcer in Wildlife management and this is reflected in the mode of operation of the law enforcement organs. Some UWA employees get involved in commission of wildlife crimes and while prosecuting, the same employees interfere with the process; leading to loss of evidence and connivance with the Police and the wildlife traffickers.

The results of this study are significant in two ways. First they contribute to existing literature (Kent, et al., 1980; Idran, 2014; Kalumba, 2014; Meden, 2013). The conclusion and recommendations of Kent et al (1980), Idran (2014), Kalumba (2014) and Meden (2013) were drawn based on illegal trade in wildlife; our study is both on illegal and legal trade in wildlife products. In creating a nexus between the earlier works and this study, we examine trade in wildlife products without special focus on a particular field of wildlife and this bridges the gap of having limited data on a particular field of wildlife. Secondly, the results answer the pertinent question of whether the management of wildlife in Uganda in the propensity to use and patronize wildlife trade is efficient. The study contributes to a better understanding of the measures that ought to be taken into account when a country is adopting legal trade in wildlife products. In particular the findings are useful to wildlife agencies and such other similar bodies and the partners in Uganda when handling trade in wildlife products.

The rest of the paper proceeds as follows: Section 2 reviews literature. This is followed by a discussion of the research methodology in Section 3.Section 4 presents and discusses results. The final section is concluding remarks.

2. Literature Review

Shepherd and Magnus (2014) noted that Uganda as a party to the Convention on International Trade in Endangered Species of Wild flora and Fauna (CITES) has not enacted specific legislation to implement the convention. Instead, they rely on general wildlife and forest laws, or in some cases they use their customs or foreign trade legislation to control trade in CITES listed species. At times these laws were enacted long before CITES came into existence. If national legislation does not provide for the basic implementation of the CITES permit system, it becomes difficult both to prevent criminals groups from engaging in the illegal trade in wildlife species and to punish the perpetrators. The lack of national legislation implementing CITES greatly diminishes the effectiveness of the treaty in specific members and throughout the world, the researcher noted.

Sharma (2009) noted that among the weaknesses in the management structures is to do with the way investigations and evidence is handled. Investigation of wildlife and forest offences is a challenge for a whole community and is not limited to law enforcement agencies. It usually involves a great variety of government departments, private industry and civil society organisations each of which helps to bring an additional dimension to the response (Sanderson, 2006). In bridging the gap, dealing with wildlife and forest offences in isolation especially without the buy-in of enforcement agencies such as police and customs, affects the ability to efficiently address the causes and consequences of this phenomenon (Mulumba, 2017).Nevertheless, collaboration among various agencies often with conflicting or opposing mandates and objectives is not always easy and may often engender conflict of interest when it comes to management of trade in wildlife products. Organisations and agencies are sometimes reluctant to help law enforcement because of concerns that they may alienate their constituents because their priorities may be different, because sufficient resources may not be available or because there are legal constraints (for instance in the case of classified information and data protection (Gede, 2014).

Smith (2011) noted that consultation and partnership building can occur at various levels and may be formalized in Memorandum of Understanding (MoUs) or committees. They may also be adhoc and informal based on changing needs and developments. In some jurisdictions, interdepartmental committees have been set up to coordinate control and enforcement measures across government sectors (Shepherd, and Magnus, 2014). Some communities organize local events that bring together concerned individuals, community groups, local administrators and representatives of central authorities to consult with law enforcement agencies about the best ways to prevent and suppress local wildlife and forest offences (Mwanje, 2017). Gainura (2014) who carried out a study on the effectiveness of parks in protecting tropical biodiversity noted that participation in wildlife trade is determined by the degree of people's awareness, and that this therefore needs to be changed if the illegal and unsustainable trade in wild species is to be reduced. Empirical literature on the effectiveness of wildlife authorities in promoting good wildlife management is not unambiguous. Earlier studies have pointed out that wildlife institutions should be at the peak of the management framework but this is found to be very insignificant (Jacobs, 2014). The dynamics of wildlife authorities seem to be related more with economic fundamentals. Many other studies also tried to see how effective the wildlife institutions can be when it comes to comparing the costs and benefits of these institutions. Among the studies that did not find significant impact of the institutional framework are the broad cross country analyses in EU member countries by Meden (2013). The study used primary surveys that involved the tourism agencies themselves that are a go between. They have found out that the advantages of wildlife authorities in terms of attracting tourism and good management are not limited. Kabumba (2013), in his article as to why Ugandan conservation is failing noted that efforts to improve wildlife resource management have had a strong focus both on improving the sustainability of wild harvests and on promoting non-wild alternative supplies

of traded plants and animals, such as through cultivation, domestication or captive breeding. Gede (2014) who carried out a study on the need and theoretical basis for exploring wildlife value orientations cross-culturally noted that despite internationally-recognized protection, and protection at national levels, poaching networks in the region are generally well developed and are professional, particularly where the trade in Tigers is concerned. Therefore, reducing the poaching of Tigers is a significant challenge. For example, in Indonesia, despite the establishment of specialized units by the government to reduce Tiger poaching, Edrian (2013)'s study indicates that Tigers in Sumatra continue to be poached on a large scale and Tiger parts are widely available in markets on the island (Shepherd and Magnus, 2014). This corresponds with the conclusions of Nowell and Xu (2007), based on data provided in Sanderson (2006), that the institutional framework still has a number of gaps that need to be closed, while international trade bans have helped conserve wild Tigers, national trade bans could be more effective in reducing the practice.

Furthermore, Egbeni (2014) in his study on the changing culture of wildlife management in Nigeria noted that awareness-raising in the four target countries was largely considered to be unsuccessful as an intervention aimed at altering consumer behaviour although it should be noted that, in Vietnam, at least, consumer awareness that Tigers are endangered is very high (Ilechi, 2013). However, while awareness-raising efforts aimed at reducing the consumption of wildlife products, in combination with regulatory approaches, is generally considered to have been successful, according to Ilechi (2013) awareness-raising has not seemed to have had a noticeable effect on the levels of poaching in Indochina or Indonesia, where these animals are often sourced. This is a minor criticism but actually one that would seem to indicate that Ilechi (2013)'s study may be broader in applicability than the current study that is centered specifically on Uganda. A joint study by justice network Africa on illegal trade in wildlife products in East Africa has indicated Kenya, Uganda, Tanzania and Rwanda are losing up to USD 2.8 billion a year because of the rampant trade in illegal tourism products (Kante, 2013). According to this study, other factors play a negligible role in wildlife management hence the legal/ institutional fundamentals are more important. The study also argued that there are cases in which managers themselves play a positive role. This could be related to Kaplan (2010) argument that once the decision to set up in a broad area is made managers may affect the decision regarding the more precise issues (Georgian, 2013). Kabumba (2013) in his study on the growing extinction of mountain Gorillas in Uganda noted that the Wildlife Act governs the conservation, sustainable management and utilization of the wildlife resources. The Wildlife Act is designed to enhance economic and social benefits from wildlife management through the establishment of wildlife use rights and the promotion of tourism (Kabumba, 2013). Ddamba (2013) in his study on illegally traded wildlife resources noted that Uganda Wildlife Authority has developed guidelines on how to curb the vice but this has not been effective given the loopholes in the law, the interpreters of the law with specific focus on the courts while passing judgments. The sentences are light compared to the crimes committed which have slowed the curbing of illegal wildlife trade henceforth creating a knowledge gap. According to Omachi (2011), as far as laws attract tourism development that would not come otherwise, they are not inefficient even if they create distortion. His arguments imply that the effectiveness of the legal framework should only be evaluated against its primary goal of discouraging trade in illegal wildlife products. In general this study supports the notion that good laws are effective in attracting tourism development. On the other hand, Nwane (2012) witnessed a mixed result, countries' experience showed a success and failure story of using the law in stimulating wildlife development. Bintoora (2005) noted that governments and development partners should focus on regional coordination and revamping of existing wildlife investigative and/or prosecutorial units in our countries. This should result in jointly investigated trans-boundary wildlife crime cases.

The arguments presented so far have ignored the fact that laws may have loopholes although laws are good. Omachi (2012) presented a rather balanced view after a thorough review of literatures; it could not be said laws in every country are good but it depends on how they are applied. For example Milliken and Shaw (2012) study on Public acceptance of wildlife trapping noted that Asian operatives involved across the illegal rhino horn trade have exploited Singapore's 'unusually high' levels of crime and institutional corruption to establish an extremely sophisticated criminal enterprise linking key demand countries such as Vietnam to South Africa. The Environmental Investigation Agency Report 2013 stated that between 2009 and 2012, 185 Vietnamese nationals engaged in rhino hunts in South Africa, accounting for 48 per cent of total hunts in that period (Rehem, 2014).

According to Kalumba (2014), poaching is interwoven into some of Central and East Africa's most brutal conflicts and many of those combatants are essentially members of criminal gangs, preying upon the communities. Edeno (2013) the illegal trade could have been minimal if there was good planning but this also seems to be lacking. Mokoane (2002) suggests that there is need for increased number of arrests, prosecutions and stiffer sentencing, preferably mandatory imprisonment for poachers and this necessitates planning (Lithuli, 2014). The primary motivating factor for wildlife traders is economic, ranging from small scale local income generation to major profit-oriented business, such as marine fisheries and logging companies. Between collectors of wildlife and the ultimate users, any number of middlemen may be involved in the wildlife trade, including specialists involved in storage, handling, transport, manufacturing, industrial production, marketing, and the export and retail businesses (Harrison, 2011). In fact most of us are involved in wildlife trade in some way, even if it just as end consumers of wildlife products. According to Oborne (2010) the the design of interventions is shaped by a series of assumptions made by governments, nongovernmental organisations, and others of what drives illegal and unsustainable wildlife trade, and which conditions need to change in order to reduce it. The interventions set in place employ a series of measures to manipulate, influence and change these key conditions (Kante, 2013). While many of the assumptions that guide the design of wildlife trade interventions are based on common-sense thinking, and most are informed by long experience and lessons learned by practitioners in the field, they are rarely made explicit, or investigated thoroughly prior to or during the course of project design (Georgian, 2013). To improve the effectiveness of interventions, there is therefore a need to ascertain whether the assumed economic and social drivers of wildlife trade, and related chains of causalities, linkages and outcomes that are being acted upon, are actually borne out by evidence. This can be done through serious control and coordination (Oborne, 2010).

Arising from the foregoing discourse, the following research questions are addressed in this paper.

Q1: What is the current state of management of wildlife trade in Uganda?

Q2: Is the current wildlife trade institutional framework efficient for the proper management of wildlife trade?

Arising from the foregoing discourse and to further address our research objective, the following hypotheses will be tested:

H_1: There is positive relationship between efficacious institutional systems (institutional and legal frameworks) and management of trade in wildlife products

H_2: A positive relationship exists between management tools of planning and control with management of trade in wildlife products.

3. Methodology
Study setting, design, population and sample

The study was carried out in Central, Western and Northern Uganda. In Central Uganda, the key study areas were the Uganda Wildlife Authority head offices in Kampala, Entebbe International Airport, Uganda Wildlife Education Centre in Entebbe and Civil Society Organisations. In Western Uganda, the key study areas were Mpondwe Border Post and one gazetted Wildlife protected area namely Queen Elizabeth National Park. In Northern Uganda, the study area was Murchison Falls National Park. The study adopted a cross-sectional survey research design that is useful in obtaining facts and perceptions of respondents. The study was conducted based on a sample size of 169** that was drawn from a population of 250 (estimated) using the Polit and Hungler (1999) statistical formula as it was deemed infinite. However, to allow for non-response we targeted to obtain data from 202 subjects. Table 1 Shows that the study sample was made up of officials from UWA, officials from UWEC, game rangers, UWA law enforcement officers, magistrates and community leaders in areas surrounding National Parks. The characteristics of this sample can be discerned from Table II

** Determined as follows:

$$n= \frac{t^2 \times p(1-p)}{m^2}$$

Where;

n = required sample size; t = confidence level at 95% (standard value of 1.96)
p = estimated prevalence of malnutrition in the project area, m = margin of error at 5% (standard value of 0.05)

$$n= \frac{1.96^2 \times .3(1-.3)}{.05^2}$$

$$n = \frac{1.8416 \times .21}{.0025}$$

$$n = \frac{.4034}{.0011}$$

$$n = 169$$

Category	Target population	Sample Size	Sampling Technique
Officials from UWA	60	45	Stratified Sampling
Officials from UWEC	40	36	Stratified Sampling
Game rangers	90	74	Convenience Sampling
Local leaders around national parks	15	10	Convenient sampling
UWA law enforcement Officers	20	18	Stratified Sampling
Entebbe airport personnel and border point personnel	15	11	Convenience Sampling
Magistrates	10	08	Stratified Sampling
Total	**250**	**202**	

Table 1: Population, Sample Size and Sampling Techniques

Characteristic			Frequency	Percent
Age	20-29		70	41.4
30-39			54	32.0
40-49			32	18.9
Over 50			11	6.5
Total			166	98.2
Total			169	100.0
Gender	Male		131	77.5
	Female		38	22.4
	Total		164	97.0
Total			169	100.0
Marital Status	Married		96	56.8
	Single		61	36.1
	Divorced		3	1.8
	Separated		2	1.2
	Widowed		1	.6
	Others		6	3.5
	Total		165	97.6
Total			169	100.0
Education	Certificate		40	23.7
	Diploma		52	30.8
	Degree		56	33.1
	Post Graduate		21	12.4
	Total		166	98.2
Total			169	100.0

Table II Sample characteristics

Table 1 suggests that probability sampling and non-probability sampling were used to select the study sample. Probability sampling is a sampling technique in which the probability of getting any particular sample may be calculated (Ezeani, 2009). Convenience sampling was used to sample game rangers and local leaders around National Parks. According to Ezeani (2009), convenience sampling methods are outstanding in the phenomenological studies where the objective is to identify and clarify enriching phenomenon. We found convenience sampling method as an effective way to build the sample frame where one or two respondents could be drawn. Stratified sampling was adopted in selecting officials from UWA, officials from UWEC, game rangers, UWA law enforcement officers, magistrates. According to Creswell (2009), stratified sampling ensures that every member has an equal chance of being recruited into the sample. The participants were put in strata based on the institution/departments of work, henceforth a sample frame was constructed and the members were thereafter randomly sampled.

Data Collection Methods, Data quality control and Data Analysis

Triangulation was adopted for purposes of getting quality data. We used a questionnaire to enlist perceptions of the respondents on the study singularities, document/literature reviews (more generally secondary data sources) and observations. Triangulation means using more than one method to collect data on the same topic (Somekh and Lewin, 2005). We used triangulation of

methods because of the need to ensure the validity of research through the use of a variety of methods to collect data on the same topic, which involves different types of samples as well as methods of data collection (Groves, et al., 2009) and also to supplement cross-validation by capturing different dimensions of the same phenomenon (Kothari, 2004). Quantitative data was collected by means of a structured self-administered questionnaire, which was supplemented with qualitative data obtained from semi-structured interviews. A questionnaire was compiled that consisted of closed-ended multiple choice, dichotomous and scaled (Likert scale) questions. Table III shows the item scales. Questionnaires were e-mailed and others hand delivered to the respondents. Due to the availability of information from only a certain group of officials, the study was based on criterion-type purposive sampling. Moreover as already indicated, archival data/document review was also employed in this study.

Key informant interview were used to obtain information from key respondents who were vastly knowledgeable on the subject matter under study. According to Kothari (2004), key informant interviews ensure that critical aspects of the study do not miss out crucial issues. Interviews were also used because they have the advantage of ensuring probing for more information, clarification and capturing facial expression of the interviewees (Somekh and Lewin, 2005). We conducted 16 interviews with a few selected respondents among the following categories of respondents: officials from UWA (Directors, Deputy Directors, Mangers and Wardens), officials from UWEC (Rangers), officials from the Ministry of Tourism, Wildlife and Antiquities (Directors, and Commissioners), UWA law enforcement officers, magistrates, Entebbe Airport personnel and Mpondwe border point Personnel (URA customs officials, border internal security officer and border post police officers).

In the secondary analysis of qualitative data, good documentation cannot be underestimated as it provides necessary background and much needed context both of which make re-use a more worthwhile and systematic endeavor (Kothari., 2004). Secondary data is obtained through the use of published and unpublished documents (Junker and Pennink, 2010). Various publications, magazines, newspapers, reports, hand books, wildlife reports, historical documents and other sources of published information were reviewed.

Items	Mean	Std. Dev.
Scale items for Institutional framework: α =.694		
The structures in the wildlife management sector are adequate	3.12	1.29
The infrastructure in the wildlife management sector is adequate	3.28	1.30
The Uganda Wildlife Authority has got well developed institutional framework structures	3.65	1.07
Uganda Wildlife Authority has got a well functional and achievable strategic plan	3.83	1.03
There are well developed systems to guard against illegal wildlife trade	3.40	1.21
Uganda Wildlife Authority has got effective intelligence gathering systems with regards to illegal wildlife trade	3.61	1.13
Uganda Wildlife Authority has put in place a system to sensitize other stakeholders about trade in illegal wildlife products	3.73	1.06
There is effective monitoring and evaluation of budget performance at Uganda Wildlife Authority	3.36	1.10
Scale items for Legal framework: α =.660		
Uganda has laws in place for wildlife conservation and management	4.45	.68
The public is aware of the existing laws on wildlife conservation and management	3.26	.10

Table III: Measurement scales

Items	Mean	Std. Dev.
The Policies in place are effectively utilized	3.17	1.24
The institutions have tried to effectively implement the existing policies on wildlife trade	3.80	.99
There is good evaluation of the policy implementation in relation to wildlife trade	3.25	1.06
There are adequate mechanisms to address indigenous knowledge on wildlife conservation	3.40	1.16
The regulations available to control illegal wildlife trade are in place	4.10	.95
Scale items for Management Tools: α =.749		
The wildlife conservation and management institutions level of functioning is satisfactory	3.38	1.15
Uganda Wildlife Authority observes all its functions as laid down in the wildlife Act	3.61	.99
There are existing procedures facilitating wildlife trade in Uganda	3.69	1.02
The general public is aware of the functions of the Uganda Wildlife Authority	3.40	1.16
Monitoring and Evaluation processes are in place to check the effective functions of the Uganda Wildlife Authority	3.75	1.03
The allocation of funds is done as per the mandates of Uganda Wildlife Authority	3.73	1.15
The systems are well functional with regard to wildlife trade	3.39	1.07
Uganda wildlife Authority has put in place a system to value wildlife economically	3.76	1.01
Uganda Wildlife Authority has got a partnership policy to ensure joint efforts against illegal wildlife trade	4.09	.79
There is thorough organisation for effective management of illegal wildlife trade	3.24	1.11
Uganda Wildlife Authority has ensured adequate staff to address the issue of illegal wildlife trade	3.39	1.15
Illegal Wildlife Trade has been effectively controlled Uganda Wildlife Authority using the available resources	3.70	1.19
Uganda Wildlife Authority has coordinated well with the relevant organs to curb illegal wildlife trade in Uganda	3.86	.97
Adequate participation by all stakeholders in the budgeting process is practiced at UWA	3.23	1.13
Budgeting at Uganda Wildlife Authority follows the core mandate of the institution	3.61	1.01
Uganda Wildlife Authority has consistently achieved planned budget at the beginning of a financial year	3.38	.98
The Uganda Wildlife Authority budget addresses community involvement in Wildlife Conservation	3.53	1.07
Scale items for Management of trade in wild life: α =.612		
There are mechanisms to detect illegal wildlife products at ports of entry and exit/ boarder points	3.67	1.13
The customs officials are adequately trained in illegal wildlife products at ports of entry and exit/boarder points	3.29	1.09
There is a forum for collecting views from stakeholders about management of illegal wildlife trade	3.38	1.07
The public is sensitized about illegal wildlife trade	3.41	1.07
There is effective monitoring and evaluation of budget performance at Uganda Wildlife Authority	3.33	1.09
The Uganda Wildlife Authority budgets for community compensation regarding Human Wildlife Conflicts	2.77	1.28

Source: Primary Data (2017)

Table III: Measurement scales

According to Ragin (2011), secondary data is helpful in the research design of subsequent primary research and can provide a baseline with which the collected primary data results can be compared to other methods. According to Somekh and Lewin (2005), documents can be helpful in the research design of subsequent primary research and can provide a baseline with which the collected primary data results can be compared to other methods. Based on these precedents we enlisted data from document reviews for the relevant content analysis.

Quantitative data was managed according to the recommendations by field (2009) and analysed using SPSS. Qualitative responses were analysed using thematic analysis. Creswell (2009) recommends that interview data is examined and classified in terms of themes derived from the objectives. Clusters of text with similar meaning was presented together and analysed in relation to the study. The interview data was sorted and grouped into themes. Opinions transcribed in form of voices and verbatims were used in this case. Thematic analysis was used to categorize key responses and contradictions and the content analysis from secondary data was used to organize themes while using codes (Sekaran, 2003). This enabled the identification of similarities within data and establishment of contradictions. Thus we verbatims in reporting study findings. Before this, we evaluated and analyzed the adequacy of information in answering the research questions through coding of data, identifying categories and parameters that emerged in the responses (Glenn Firebaugh, 2013). While analyzing qualitative data, summaries were made on how different themes/variables are related.

4. Results and Discussion

Results

Descriptive statistics

We generated means and standard deviations to summarize the observed data. We also report the skewness and kurtosis statistics in order to assess normality among single variables. According to Field (2009), the values of skewness and kurtosis should be near zero in a normal distribution. Skew is a tilt in a distribution and Kurtosis is the peakedness of a distribution. Skewness and Kurtosis statistics for normal data ranges between -3.29 and 3.29 (Field, 2009). Positive values of Skewness show a pile up of scores on the left of the distribution and negative values indicate a pile up of scores on the right (Field, 2009). According to Garson (2012), Skewness and Kurtosis statistics should be within the +2 to -2 range, though for kurtosis a more lenient +3 to -3 range can also show normality. Using these benchmarks, the normality of the data was tenable (Table IV). We also report the means of latent variables because according to Field (2009), means represent a summary of the data while standard deviations show how well the means represent the data. The main purpose is to establish whether the statistical means were a good fit of the observed data (Field, 2009). Table IV reveals that all mean scores of the items range from 3.3089 to 3.6313 with the standard deviations from 0.51247 to 0.65436. Because of small standard deviations compared to mean values, it is clear that the data points are close to the means and hence the calculated means highly represented the observed data (Field, 2009; Saunders et al., 2007). Based on the means, institutional framework, legal framework, management tools and the management of wildlife trade were perceived stronger.

Variables	N	Min.	Max	Mean	Std. Dev.	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Institutional framework	169	1.00	4.63	3.4952	.64959	-1.010	.212	1.783	.420
Legal framework	169	1.29	5.00	3.6313	.58772	-.817	.199	1.847	.396
Efficacy of institutional framework	169	1.61	4.75	3.5419	.54625	-1.033	.222	1.876	.440
Management tools	169	2.00	4.59	3.5616	.51247	-.546	.216	.360	.428
Management of trade in wildlife	169	1.67	4.67	3.3089	.65436	-.488	.198	-.159	.394
Valid N (listwise)	169								

Efficacy of institutional framework

Table IV: Descriptive statistics

Management of wildlife trade in Uganda

The first research question sought to find out the current state of management of wildlife trade in Uganda. Our preliminary findings suggest there are management mechanisms to detect illegal wildlife products at ports of entry and exit/border points (all the means are above 3.0 on a scale of 1(strongly disagree) – 5 (strongly agree) Table III. Documentary evidence and observation suggested that the most efficient means of detection was the use of scanners. Scanners for this purpose are only available and used at Entebbe Air Port (Mulumba (2017). This kind of management is made explicit from the following excerpt from an interviewee.

> "…all the departments are well functional for example the law enforcement unit is more active than ever before. In this department, there is a Canine unit established to aid the intelligence and investigation unit, and law enforcement. These are helping to intercept products in illegal trade at various border points including Entebbe International Airport".

In trying to corroborate this evidence with available secondary data. Figure 1 indicates increasing trend of illegal wildlife products seizures at Entebbe Airport.
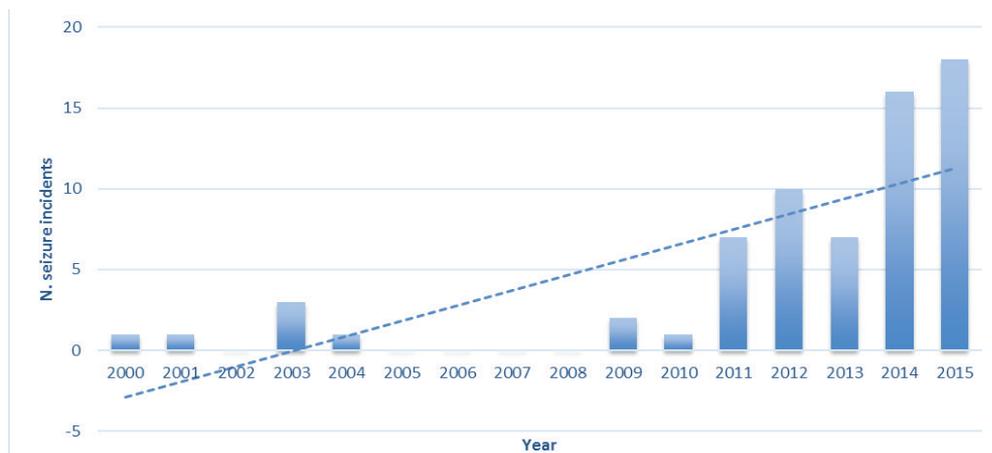
Graph:

Seizures trend at Entebbe International Airport

Source: **Harrison M et al. (2015)**

According to the AWF report of 2017, most of the illegal wildlife products are trafficked to USA, Europe, Asia and Australia (Table V). Uganda appears to be a transit route through Entebbe International Airport. About 20 traffickers are intercepted and arrested every month at the Airport. Some of the key drivers and enablers of Wildlife Poaching are raising illegal markets for elephant ivory, rhino horn, live pangolins and their scales driven mostly by demand in Southeast Asia and East Asia. Indeed management mechanisms resulted in the seizure of over 500Kgs of illegal ivory and arrest and prosecution of 22 suspects in connection with illegal ivory trade between 2016 and November 2017. However most of these seizures have taken place at Entebbe Airport and not at the border points.

Our study finds that much as Ivory, Rhino horn and Pangolin scale has been seized at Entebbe Airport, there has never been a single arrest of illegal wildlife products or any individual with illegal wildlife products at some sensitive porous border points like Mpondwe. We found that Mpondwe border point is very porous (see exhibit 1 (field data), ivory is smuggled in timber logs and it is very difficult to detect since it is disguised as timber and also concealed in charcoal. Findings revealed that Mpondwe border officials do not possess scanners to help them detect the products. The situation is worsened by inadequate staffing as there are no UWA officials at the Border point. We also did not find any UWA official at the following porous border points too: Goli in Nebbi, Vura in Arua, Lia in Arua, Busunga, Virunga, Lhubiriha, Kyanika, Oraba in Koboko, Kanungu, Bunagana, Ishasha, Ntoroko and Padea

Exhibit 1:
Mpondwe a porous
border. Mpondwe
boarder post sniffer
dog store in the
background

Mpondwe boarder post

Mpondwe boarder post Sniffer dogs' site

Summary of Uganda Wildlife Illegal Trade Products and the destinations

Group Species	Part/Form	Destination
Elephant	Ivory (Raw and worked)	East Asia
Rhino	Horns	South east Asia
Cat family(lion, cheetah, leopard)	Skins/live pets, teeth, claws and potentially bone	Middle East, East Asia
Reptiles(chameleons, lizards, snakes)	Live specimen	Europe, USA
Amphibians	Live specimen	Southeast Asia
Birds	Live specimen	Europe, USA
Pangolin	Live specimens, scales	East Asia
Tortoise	Asia, East & Southeast	
Hippo	Teeth	Australia

Source: AWF Report (2017)

We found that complex transportation routes that frequently change are used to take advantage of the most porous borders and lax enforcement; they bundle illegal and legal cargo together on transport vessels and falsify documents so that illegal wildlife can enter legitimate supply chains. A UWA Report of 2015 indicates that corruption in government circles as well as proliferation of weapons across borders in insecure areas in neighbouring countries remains an ulcer. The issue of seizures is worsened by the customs/URA officers who are disabled because illegal wildlife trade is a highly organised cartel/crime with highly connected people (gangs). A report to CITES on ETIS data noted that " Uganda, Ethiopia and Nigeria rarely supply ivory from local elephants populations, but frequently function as entry ports and /or exit countries for ivory sourced elsewhere (CITES, 2013a). A closer analysis of CITES's study seems to point to a disagreement on Ivory trade routes. There are so many stakeholders at the border including loaders, off loaders clearing agents among others who engage in illegal wildlife trade. These products come within sealed trucks from Congo and as customs officials, they use rudimentary methods to check these trucks. As revealed by the BISO at Mpondwe, the greatest challenge has been connivance between UWA rangers and illegal wildlife traders. The rangers hire guns to the illegal wildlife traders for example in the year 2014, thirteen people were arrested on spot with guns used for poaching. Marked ivory from Uganda has ended up in Congo for illegal wildlife trade. According to a study of the National Enforcement of Protected Areas and Border Crossing in Uganda (2012) "Controlling the illegal trade in Wildlife", Uganda is repeatedly a transit country rather than a source country for illegal trade in wildlife and wildlife products.

On licensing and wildlife user rights, we found that while there are six classes of WUR namely, Class A: Hunting; Class B: Farming; Class C: Ranching; Class D: Trading; Class E: Educational and research and Class F: General extraction use rights, many Ugandans are not aware of WURs (see also Mulumba, 2017) even when a UWA official noted

"…there has been raising awareness at the National and International level through interagency   workshops, designing Communication and Education materials about Illegal Wildlife Trade". UWA   holds a number of workshops to sensitise the various stakeholders   o n issues of illegal trade in wildlife   products in Uganda for example judicial officials and local leaders. Some of these programs target people around protected areas"

The above statement from the interviewee may seem contradictory or contentious to the earlier views held by the authorities at the border and people staying around National Parks who noted that there is growing concern that they are not sensitised about trade in wildlife products. The legal officer, UWA noted that

"…UWA has not done enough to create awareness on wildlife products that are traded in Uganda"

There were mixed responses about sensitization drives as the border officials at Mpondwe border post denied having received an invitation to a UWA sensitization workshop. However, the law enforcement manager at UWA noted that UWA has tried to cause awareness about trade in wildlife products and cannot be blamed. This was supported and confirmed by the Community Conservation Manager, UWA who also noted that.

"…we have held a number of workshops to sensitise the public about the illegal trade in Wildlife products for example in Masindi, Buliisa, Kiryadongo in Murchison Falls Conservation Area. In 2015, we held a workshop in Kapchorwa together with the Kapchorwa District Internal Security Officer, Resident District Commissioner, Chief Administrative Officer etc.

According to a study of the National Enforcement of Protected Areas and Border Crossing in Uganda "Controlling the illegal trade in Wildlife", pointed out that the failure to cause awareness is costing UWA. Table VI shows that creation of awareness is mandated:

Convention/Instrument	Requirement
The Convention on Biological Diversity (1992)	Requires each nation to promote sustainable use of natural resources using Conservation Education awareness campaigns
The Pan African Convention of Nature and Natural Resources (1968)	Parties to the convention undertake to establish and manage protected areas, and to protect certain species - using Conservation Education awareness campaigns.
The Ramsar Convention (1971)	Provides for the protection of biological diversity in wetlands. The protection in this case can be fostered through wildlife education campaigns.
The Convention on International Trade in Endangered Species of Fauna and Flora(CITES)(1973)	Has the main objective to control and regulate international trade in wildlife species, classification and the use of permits. This can best be handled when one has relied on education to cause awareness
The East African Community Protocol on Environment and Natural Resources	The protocol requires Uganda to cooperate in management of trans boundary wildlife resources, promoting of social and economic incentives for conservation and to conclude agreements aimed at conserving trans boundary wildlife resources

Table VI. International Instruments/ Conventions mandating wildlife conservation and education

On whether research forms part of the management regime of trade in wildlife, some interviewees had this to say *vis a vis* this aspect:

"…research on wildlife species and conservation is poor. At UWA, the research unit is inadequate and no actual research goes on and what is being done is majorly a regulatory role hence issuing permits for research. There is an initiative by the Government of Uganda to establish the Uganda Wildlife Research and Training Institute to concentrate on Wildlife Research"

"…gone are the days when the research unit at UWA had expert researchers, these days the young researchers are not vigilant at research and lack interest".

Regarding community engagement, we find that The Ministry of Tourism, Wildlife and Antiquities-Queen Elizabeth National Park General Management Plan (2011-2012), noted that communities that live around the Park are poor, the major sources of income include agriculture, trading and fishing. Communities have limited resources such as land, pasture and water. Most of the youths in the area have got low education levels which leads to their unemployment and some of them have ended up in fishing villages, hence increasing human population. Land shortage coupled with increasing population around the protected areas has increased pressure on park resources. Communities have been involved in poaching wild animals, charcoal burning, timber cutting, and park land encroachment as alternative means of household livelihood. Water sources have been challenges around the PA especially during the dry periods. The parks has experienced pressure from the local communities to give water for domestic use as well as for livestock. Indeed we found a MOU at Queen Elizabeth National Park signed with neighbouring communities for access to different types of resources like fishing, bee keeping with bee hives within the park boundaries, grass and firewood. Communities around the parks are given benefits through their local governments for purposes of development. The following excerpt from an interviewee exemplifies:

> "…UWA adequately deals with community compensation with regard to supporting matters of Wildlife Conservation. For every visitor entering the park, 20% of the fee paid is declared and given to the local government of the district where the park is found."

However, the major concern is that these funds disappear the moment the local government administrators receive the funds, with very little or nothing reaching the intended beneficiaries (the real communities that are terribly affected by the wildlife) hence this exacerbates the problem of Human-Wildlife Conflicts in most National Parks in Uganda for example Queen Elizabeth National Park. Consider the following excerpts:

> "…the best meal/most favourite meal for the Bakonjo is wild meat. Wild meat is mixed with domestic meat and they lack capacity to identify game meat. The DNA could be proof to identify wild meat"

> "… Iam aware that at Kafu they sell a lot of bush meat although many people claim that it is not bush meat. We have however not taken any significant step to address this concern".

> "…the communities staying around National Parks so much believe in bush meat and many have branded this kind of meat tasty"

Such responses suggest that the lack of alternative sources of food and income and in broader sense the lack of rural and economic development force vulnerable groups to rely on wildlife resources for their existence consistent with the Brocken Windows hypothesis. In terms of appropriate budget for management activities, the respondents indicate that there is sufficient budget (Table III) for curbing illegal wildlife trade in Uganda although a respondent had this to say.

> "…sometimes there are budget constraints, since the money allocated is sometimes not enough yet activities are many".

This might be the case henceforth there appears to exist an effective monitoring and evaluation of budget performance at Uganda Wildlife Authority. Consider,

> "…M and E processes are needed to check the effective functioning of UWA. M and E system at UWA has got 2 Units namely. Planning and Monitoring and Evaluation. M and E plan/implementation schedule with indicators is available and Quarterly review is done periodically by Management to bring out achievements, challenges and failures. Annual Performance review is also done. Two and half year mid-term review of the Strategic Plan was done. The current situation is tackling illegal

activities in Protected Areas yet Illegal Wildlife Trade has become a serious matter that requires more serious attention. The M and E manager proposed that Illegal Wildlife Trade should be handled as a separate Strategic objective for it to attract the funding and attention it deserves. The M and E Unit is still under staffed."

Benefit	Location
Roads built around Bwindi Impenetrable National Park opened access to markets	Bwindi Impenetrable National Park
Funding school classrooms	Mgahinga National Park
National Park receive up to $457 per year	Kibale National Park
School constructed	Queen Elizabeth National Park
Greater participation of local people in park meetings and projects	Bwindi Impenetrable National Park

Table VII: Suggests that communities have started sharing revenue from wildlife conservation.

Institutional framework for proper management of wildlife trade

Our second research question was whether wildlife trade institutional framework is efficient for the proper management of wildlife trade. Our results suggest that the structures including the necessary infrastructure in the wildlife management sector are somehow adequate and the institutional framework structures appear commendable (Table III). The following interview excerpts also concur.

> *"…all our departments are well functional for example the law enforcement unit is more active than ever before."*

> *"…There is a Memorandum of Understanding with United Nations Office on Drugs and Crime, Lusaka Agreement task force signed to cooperate on trans boundary matters. There is partnership with sister agencies on curbing trade in illegal wildlife products and conservation for example Natural Resource Conservation Network, Uganda Conservation Foundation, Wildlife Conservation Society, African Wildlife Foundation, Uganda Wildlife Education Centre, World Wildlife Fund for Nature , Lusaka Agreement Task Force, Sister agencies like Kenya Wildlife service, Tanzania National Parks, Uganda Revenue Authority, Uganda Peoples Defence Forces, Uganda Police, Uganda Revenue Authority and the Judiciary."*

We also find that while there are existing laws, these are either normally not adhered too or there are loopholes in them to be exploited. One interviewee had this say:

> *"…the Bakonjo connive with UWA staff (Rangers) and pay them One (1) Million Uganda shillings for every animal shot, this is a big weakness in UWA.*

This is consistent with the Media (New vision 21st January, 2015, Daily Monitor 29th January, 2015 and Red Pepper 5th March, 2015)   that reported that Uganda Wildlife Authority wrongly cleared the export of seven tones of pangolin scales, collected from UWA stores and old trophies held by communities across the country. The NGO Green Watch later sued UWA for refusing or failing to fulfil their mandate to protect the environment. The Uganda High Court issued a temporary injunction restraining anybody from exporting Pangolin scales.

A key informant had this to say also:

> "…UWA has not developed capacity to handle issues of illegal wildlife trade at various border points. The Institution has not been able to generate credible evidence, it has the investigation capacity that is still not effectively utilized."

Another interviewee noted that

> "…the implementers do not appreciate that laws exist. The conservation laws are not taken seriously by the offices. Lack of appreciation of the existing law is a challenge. Institutional lapses caused the regulations not to be drafted".

Another interviewee noted that:

> "…Management and governance structures at UWA are so weak. UWA did not have a fully-fledged intelligence unit not until recently. UWA has staffing gaps mainly in the area of law enforcement yet the area of operation is large"

Table VIII shows that officials of the major national parks and other wildlife sites acknowledge existence of wildlife laws that provide for offences to protect habitats, offences to regulate hunting, offences to regulate trade in wildlife & their products and offences of improper administration of regulatory procedures.

Table VIII: Evidence of existence of wildlife laws

No.	Wildlife question	Murchison	Queen Elizabeth	Mgahinga	Lake Mburo	Kidepo	Kibale
1	There is specialised wildlife law enforcement	Yes	Yes	Yes	yes	Yes	yes
2	Wildlife law enforcement is good	Yes	Yes	Yes	yes	Yes	yes
3	There are searches and seizures	Yes	Yes	Yes	yes	Yes	yes
4	Regular arrests of suspects	Yes	Yes	yes	yes	yes	yes
5	Suspects are prosecuted under the law	Yes	Yes	yes	yes	yes	yes

Source: Primary Data(2017)

Imprisonment is the main custodial penalty with a maximum of 30 years. Uganda's highest prison term is a minimum of 7 years. However prior literature (Ddamba, 2016) suggests that CITES need to be invoked as the existing law appears weak providing non deterrent sentences for those involved in illegal trade of wildlife products. Other interviewees had this say on the existence of Law

> "…the Wildlife Act Cap 200 is in place to guide Wildlife Conservation and Management in Uganda and other sister laws like the Forestry and Tree planting Act, NEA Act and Policy, Land Act, Petroleum Act. However, the Wildlife Act in its state has gaps for example non-custodial/deterrent sentences are given to offenders, hence the need by government draft a new wildlife law."

"…the laws are effectively being utilised including the bye laws that apply to National Parks in Uganda. In National Parks and the surrounding areas some people have been sensitised about the existence and applicability of these laws. The Wildlife Act has been printed and circulated to the UWA partners and workshops have been held to sensitise key players on the law for its effective implementation although it has not been easy for UWA and gaps exist."

"…The Wildlife Act has got gaps with weak penalties which are not deterrent enough. The highest punishment is 7 years imprisonment and a fine of 10 Million Uganda Shillings. These are very obsolete and many illegal wildlife traders/offenders have been getting off the hook. The penalties were put up in 1996 when the law was put in place. Being in unlawful possession of wildlife products as an offence is lacking in the current Wildlife Act. Schedules showing which wildlife species are protected and those which are not protected have also been lacking. The international Agreements enabling fighting illegal wildlife trade are not domesticated so there is no force of law in this regard. Also, the current Wildlife Act is not understood and appreciated for implementation and enforcement by stakeholders including UWA rangers, Police, Customs, ordinary Ugandans yet these are the ones tasked to enforce the law. For example before a wildlife offender is arrested, he is supposed to be told about the offence."

"…there are weaknesses in the Wildlife law in terms of weak penalties. Fines are very small and not deterrent enough".

"…The level of awareness of the Wildlife Act by stakeholders in terms of wildlife trading is very low and people resort to go the illegal way for wildlife trade. The challenge is that the current wildlife law has got high terms of imprisonment but low fines and this has given a lot of powers to the magistrates to give fines as opposed to imprisonment."

We also found a draft amendment bill but which is incomplete and has not yet been passed into law as of 2018. Its highlights are presented in Table IX

No	Current Wildlife Law	Proposed Amendments in the new Wildlife Law(Draft bill 2014 not passed yet)
1	Highest Imprisonment term is 7 years	Highest Imprisonment term is life imprisonment
2	Highest Fine in the current Law is 10M Uganda Shillings	Highest Fine in the proposed law is value of the species
3	Unlawful Possession of wildlife product is lacking	Unlawful Possession of a wildlife product has been included as an offence
4	Lack of a section on the licencing of professional hunters	
5	Lack of regulations in the law regarding Wildlife sport hunting	
6	Lack of regulation in the law regarding traditional leaders possessing Wild Animal products	

Table IX: Current wildlife law and proposed amendments in the new wildlife law (Draft bill 2014 not passed yet as per 2018)

No	Current Wildlife Law	Proposed Amendments in the new Wildlife Law(Draft bill 2014 not passed yet)
7	Lack of regulations clearly specifying which wildlife species can be traded and which ones should not be traded	
8	Lack of prescription of the size of the land required for Wildlife farming	
9	Lack of user rights on acreage for legal trade	
10	The law is silent on punishment for aggravated wildlife crime like on protected and endangered species	The new bill specifies life imprisonment for aggravated wildlife crime

Source: Primary Data (2017)

As to whether Uganda Wildlife Authority has effective intelligence gathering systems with regard to illegal wildlife trade, we find that there has been establishment of infrastructure like Ranger outposts, Roads and Wildlife Centres in areas where there is high population of wildlife outside protected areas for example Kyankwanzi in Kiboga district, Sangobay and in future plans to establish a wildlife centre in Kalangala and River Kafu basin were revealed. There appears to be strengthened law enforcement at the protected area level through recruitment of more Wildlife rangers, SWIFT UPDF personnel and Uganda Tourism Police has been carried out. Corroborative evidence is contained in the UWA Annual Report of 2016 that noted measures to curb illegal Wildlife Trade in Uganda including enforcement and intelligence gathering strengthening: 1) a restructured UWA and a special unit for investigating wildlife crime, which is the intelligence Unit for intelligence gathering, and law enforcement unit; 2) set up of the Canine Unit (Sniffer dogs) to sniff illegal wildlife products at Entebbe International Airport; 3) purchase of equipment with ability to trace a criminal from the scene of crime including telephones, GPS, cameras, computers (laptops) and 4) set up of a prosecution (legal Unit) at UWA. The Director of Public Prosecution (DPP) has given UWA powers to prosecute wildlife criminals. There is management of Ivory stock piles in a strong secure room, establishment of a Database for an inventory of this ivory, provision of extra security at the ivory strong room as well as periodic auditing of the ivory stock piles. With the above situation facing the wildlife sector, Okello (2017) noted that there was establishment of a special wildlife court named Standards, Utilities and Wildlife court to deal with wildlife crime headed by His worship James Eremye (2017). National, regional and international collaboration/ Partnerships with other stakeholders like Uganda Revenue Authority, Judiciary, Police, UPDF, NGOS like NRCN, UNODC, UCF, WCS, AWF, WWF among others are also helping to curb trade in illegal wildlife products.

As to whether there is proper economic valuation of the wildlife products by courts of law,findings revealed that Uganda Wildlife Authority has not put in place a system to value wildlife products. An interviewee had this to say:

> *"…we have no way to value wildlife products since the Wildlife Act does not also cater for this, hope the new law will create provisions on valuing wildlife products so that the punishment given to culprit is commensurate to the crime committed"*

As to whether the regulations/laws are effective, a key informant had this say:

" *corruption is a big ulcer in wildlife trade and this has been reflected in the enforcement organs mode of operation. The nation was shocked; by the ruling of Justice Wilson Masalu Musene in the URA case that Uganda Revenue Authority should hand over confiscated ivory to the owners. On 17th October 2013, 832kgs of Ivory were discovered at Ken freight Inland Container Deposit (ICD) in Bweyogerere. The consignment was then taken to URA customs stores for safe custody pending the investigations of the matter and possible reprimand of the culprits.*

Correlation analysis results

The study hypothesised that there is positive relationship between efficacious institutional systems (institutional and legal frameworks) and management of trade in wildlife products (H_1) and that a positive relationship exists between management tools of planning and control with management of trade in wildlife products (H_2). The correlation results are presented in Table X. The results indicate a significant positive relationship between institutional systems and management of wildlife trade ($r = .525$, $p < 0.01$). This appears to provide support for the first hypothesis (H_1). This means that differences in management of wildlife trade in Uganda can be a result of efficacious institutional systems relating to institutional and legal framework. Table X also shows a significant positive relationship exists between management tools of planning and control and management of trade in wildlife($r = .664$, $p < 0.01$); suggesting that H_2 is substantiated. This is also means that variances in management of wildlife trade in Uganda can be a result of planning and control.

Variables	1	2	3	4	5
Institutional framework (1)	1				
Legal framework (2)	.529**	1			
Efficacy of institutional framework (3)	.886**	.862**	1		
Management tools/techniques (4)	.713**	.554**	.708**	1	
Management of wild life trade (5)	.561**	.391**	.525**	.664**	1

Table X: Zero order correlations

Nevertheless, we know that univariate analyses do not control for other factors which make interpreting of the results grim. For this reason we extended the analysis to a multivariate setting. The first thing I did was to examine the correlations among our independent variables to determine whether multicollinearity problems exist. Field (2009) says that multicollinearity becomes a problem only when the correlations exceed 0.80 or 0.90. As Table X shows, none of the correlations between independent variables is close to these threshold values. This also suggests that the different dimensions of efficacy of institutional framework are sufficiently discriminated but converge within the global variable (with correlations all above 0.70). But, Myers (1990) suggest that a certain degree of multicollinearity can subsist even when none of the correlation coefficients are very large. To supplement, we also examined the variance inflation factors (VIFs) in our models to further test for multicollinearity. The highest VIFs were well below the threshold value of 10 suggested by Field (2009) indicating that multicollinearity does not cause problems to the regressions.

Regression analysis results

We carried out a hierarchical regression analysis following Aiken and West (1991) and entered variables simultaneously within each hierarchical group. This tool is useful in evaluating the contributions of predictors above and beyond previously entered predictors, as a means of statistical control, and for examining incremental validity. Table XI shows the results.

Variables	Model 1	Model 2	Model 3
Constant	3.914	1.802	.631
Efficacy of institutional framework		.543**	.020
Management tools			.844**
Control variables			
Gender	-.089	-.034	-.095
Age	-.170*	-.141*	-.142
Education	.050	.034	.067
Marital Status	-.056	-.015	.010
Model *F*	1.210	6.277**	11.970**
R	.233[a]	524[b]	.683[c]
R^2	.054	.274	.467
Adjusted R^2	.009	.231**	.428**
F change	1.210	25.152	29.614
R^2 change	.054	.220	.193
Durbin-Watson			1.683

Table XI: Hierarchical Regression Results

a. Predictors: (Constant), Marital Status, Gender, Education ,Age
b. Predictors: (Constant), Marital Status, Gender, Education ,Age, Efficacy of institutional framework
c.   Predictors: (Constant), Marital Status, Gender, Education ,Age, Efficacy of institutional framework, management tools
d. Dependent Variable: Management of trade in wildlife

Notes: **Significant at the 0.001 level
        *Significant at the 0.05 level

Model 1 in Table X shows the baseline model with only control variables of age, gender, marital status and education that potentially could contaminate the results of the study. As it turns out the control variables do not explain any significant variance in management of trade in wild life. This suggests that the models are not sensitive to confounding factors and that the models are highly conceivable. Regarding H_1, the unstandardized β coefficient for efficacious institutional systems is significant at p <0.01 or better for model 2. In model 2 we find that efficacious institutional systems is a significant predictor, contributing about 23.1 percent of the variance in management of wildlife trade, offering further substantiation to H_1. Overall, the results suggest that model 3 in Table X1 is the more plausible model. The incremental improvement in adjusted R_2 in models 1-3 in Table X1 suggests that a better-fitting model emerges as efficacy of institutional framework and management tools are sequentially introduced. Our study therefore explains 42.8% of the variance in management of trade in wildlife. Nevertheless, the introduction of management tools in model 3 diminishes the significance of efficacy of institutional framework in that model. This then suggests that management tools of planning and control is a potential full mediator in the relationship between efficacy of institutional framework and management of wildlife trade. It is therefore reasonable to conclude that both hypotheses H_1 and H_2 are substantiated in this study.

Discussion

The results of this study provide evidence of the link between institutions that manage wild life trade and the management of wildlife trade. This paper provides evidence of the importance of institutional systems in the management of trade in wildlife products. This implies that the management of wildlife trade is dependent on the existing systems in the wildlife industry in Uganda. In emphasizing the element of institutional systems, the study further buttresses the institutional theory by demonstrating how it links to management and balances the interests of multiple constituents. The importance of structures and systems should not be ignored because these factors also directly influence the management of trade in wildlife products despite the presence of agencies like UWA and the partners. Indeed the institutional theory is useful in that when coercive pressures are high (for example under state mandate), organizations quickly adopt new structures.

The objective of this study was to evaluate the efficacy of institutional framework in the management of wildlife products in Uganda. Results show that the Uganda border is porous. This is consistent with Rosette (2013) who pointed out that there are so many porous borders in Africa that are serving as good transit routes. Findings revealed that lapses within the institutional systems have contributed to the increase in poaching and trade in illegal wildlife products. Kasara (2013) noted that some communities around the National Parks host poachers from neighbouring countries. Poachers are linked to middlemen who provide logistics, intelligence, and supplies. The middlemen usually pay the poachers and benefit much more financially than the poachers on the ground. Findings revealed that customs/URA office is disabled because illegal wildlife trade is highly organised cartel/crime with highly connected people (gangs). There are so many stakeholders at the border including loaders, off loaders clearing agents among others and the potential to engage in illegal wildlife trade by some of these stakeholders is high. These products come within sealed trucks from Congo and as customs they use rudimentary methods to check these trucks so scanners are needed and deployment of UWA officials at these points. The results of this paper therefore advance the efficacy of the theory of Broken Windows (Wilson and Kelling, 1982) in the understanding of management of wildlife trade.

The issue of community participation has become clear in as far as it is a positive element in managing wildlife trade. Consultation and partnership building can occur at various levels. Literature (see e.g. Smith, 2011) suggests that consultation and partnership building can occur at various levels and may be formalized in Memorandum of Understanding (MoUs) or committees: They may be adhoc and informal based on changing needs and developments; interdepartmental to coordinate control and enforcement measures across government sectors; may be regular meeting between government and industry representatives to consider commercial and other economic interests in enhancing law enforcement; may be local events that bring together concerned individuals, community groups, local administrators and representatives of central authorities to consult with law enforcement agencies about the best ways to prevent and suppress local wildlife and forest offences. However, findings revealed that community partnerships in reducing wildlife crime are a phenomenon in its initial stages which calls for further research about it. Communities do not know the economic value of the wildlife.

The results of this paper imply that institutions framework alone does not cause enough variances in the management of wildlife trade if the management tools of planning and control are non-existent. Indeed we found that major border points are not manned by any UWA official. This further accentuates the validity of the Brocken Windows theory in a sense that when UWA and such other similar bodies do not (broken windows) plan for and control activities related to wildlife, this creates porous borders ('Broken Windows') and this in turn exacerbates illegal activities relating to

wild life. The Broken Windows theory suggests that maintaining and monitoring (a tool of control) borders to close the gaps may stop further illegal trade in wildlife. Findings have shown that agency in the fight against smugling of goods (URA) operates a reward scheme for enforcement officers as incentives for apprehensions and seizures relating to smuggled goods. Previous literature indicates that many agencies in the fight against wildlife crime do not operate rewards schemes for enforcement officers as incentives for apprehensions and seizures relating to wildlife and forest offences (Omach, 2012) and this creates 'broken windows'. These schemes have the potential to raise detection rates ('repair windows') for wildlife and forest offences.

Corruption which is a 'broken window' is a negative element in management of trade in wild life. In some cases the courts of law do not properly value wildlife products and neither is there a proper system of valuation wildlife products generally. This reflects the general lack of a valuation mechanism of heritage assets. Although this problem is not peculiar to Uganda as for example there is no international financial reporting standard that would provide the basis for disclosure, measurement, recognition and presentation of national heritage assets, UWA and courts of Law need to develop an acceptable system of valuing wildlife products. This is because what you cannot measure you cannot control. This is yet another 'broken window'.

The regression results suggest that all these glaring issues conspire to explain the state of affairs in the management of wild life trade in Uganda. Management tools carry with them the force of existing laws and other instructional systems at UWA to cause variance in management of wildlife trade. This potentially means that management tools of planning and control act as a conduit through which efficacious institutional framework impact on proper management of wild life products. It appears that UWA may be focusing more on seizures than prevention perhaps in part because, Uganda may be a transit route; but if the seizures are Ugandan wildlife products there is need for proper planning and control mechanisms such as monitoring, supervision and organizing.

5. Concluding remarks.

The objective of this paper was to report preliminary results of a study on the evaluation of the efficacy of institutional framework in the management of trade in wildlife products in Uganda. We first put forward two research questions relating to finding out the current state of management of wildlife trade whether the prevailing institutional framework was efficient for the proper management of wildlife trade in Uganda. Next, arising from employing institutional and broken windows theoretical frameworks and literature review, we put forward and tested two hypotheses. Analyzing archival and field data, we find that the prevailing laws and other institutional frameworks do not provide the necessary route for ensuring proper management of wildlife trade and in curbing illegal trade in wild life products. For example the current wildlife law has got long period imprisonment sentences but low fines and this has given a lot of powers to the magistrates to give fines as opposed to imprisonment. The judicial officers are lenient when it comes to sentencing. Also, the type of punishment to pass and collection of intelligence as well as the peculiar nature of wildlife offences makes the collection, analysis and dissemination of intelligence unreliable. Corruption is endemic in Wildlife management and this is reflected in the mode of operation of the law enforcement organs. Some UWA employees get involved in commission of wildlife crimes and while prosecuting, the same employees interfere with the process; leading to loss of evidence and connivance with the Police and the wildlife traffickers. We also find that proper planning and control of wildlife trade activities has a predictive force into proper management of wildlife trade. Moreover, we find that management tools for example of planning and control operationalized by budgets, coordination for example to ensure communities' buy-in act as a conduit by which efficacious institutional frameworks impact on proper management of wildlife trade. The study delineates efficacious institutional framework as institutional and legal frameworks.

Overall, the findings reported in this paper have important implications to academia and policy makers. The results contribute to existing literature (Kent, et al., 1980; Idran, 2014; Kalumba, 2014; Meden, 2013) in that it creates a nexus between the earlier works and this study by examining trade in wildlife products without special focus on a particular field of wildlife. Indeed the study validates the relevancy of institutional theory and the broken windows theory in explicating management of wildlife trade. The results answer the pertinent question of whether the management of wildlife in Uganda in the propensity to use and patronize wildlife trade is efficient and whether both institutional framework and management tools have a predictive force onto proper management of wildlife trade. The paper thus contributes to a better understanding of the measures that ought to be taken into account when a country is adopting legal trade in wildlife products. In particular the findings are useful to wildlife agencies and such other similar bodies and the partners in Uganda when handling trade in wildlife products.

There are institutional lapses given that Uganda Wildlife Authority is not represented at the border points. Poor coordination among law enforcement agencies has affected the fight against Illegal Wildlife trade. Lapses within the institutional systems have contributed to the increase in poaching and trade in illegal wildlife products. Customs/URA office is disabled because illegal wildlife trade is highly organised cartel with highly connected people (gangs). One of the practical implications of this study is that managers in UWA should enhance goal congruence by designing effective programmes that build trust within the institution. Furthermore, there is need for a national goal congruence policy that is geared towards promoting wildlife trade. Institutional capacity to curb illegal wildlife trade is limited, therefore urgent need for capacity building through training staff of UWA partnering agencies.

There is urgent need to deploy UWA personnel at all the border points of Uganda in order to offer technical expertise in identifying wildlife products and guiding the customs officials. UWA must strengthen the research arm of the institution by upgrading the research docket into a directorate in order to carry out research in collaboration with research institutions like Universities, Uganda Wildlife Research and Training Institute especially to carry out Non detrimental findings of species to be offered for trade by UWA and carrying out population studies before setting trade quotas.

Research should be done to establish the economic value of the most traded wildlife products in order to determine a deterrent punishment commensurate to the value of the illegally traded wildlife product. There is urgent need to set up a coordination centre or mechanisms for coordinating illegal wildlife trade among all law enforcement agencies and the judiciary. There must be one central place where illegal wildlife trade exhibits are centrally stored for purposes of accountability. There is need for dedicated training and building institutional capacity to achieve institutional goals. Conservation Area Managers, Middle Managers, rangers law enforcement officers and the judicial officers should undergo training in order to appreciate the challenge of wildlife trade. At the end of the training, the participants must identify a way forward to improve the investigation, prosecution and adjudication of wildlife crimes. The key outcome of this training is to strengthen the judicial, prosecutorial and investigative sectors in the fight against wildlife crime. Enhanced capacity in the judiciary and law enforcement sectors will ensure effective investigations, prosecutions, and sentences that are deterrent enough to discourage criminals from committing wildlife crimes.

Wildlife management is a multi-stakeholder industry. Efforts must be made to set up a Wildlife Forum within the Management structures of Wildlife in Uganda to meet bi annually as a way of bringing all stakeholders in the Wildlife sector on board to facilitate sharing of information regarding wildlife conservation and management. This should be institutionalized and anchored in the office of the commissioner for wildlife conservation in Uganda.

As with any study, the results of this study may be treated with caution. The respondents were actors in the management of wildlife and it is possible some bias could have cropped in. Future research may need to involve the real offenders in illegal wildlife trade to establish the real drivers into this vice. Moreover, the conceptualization of management of wildlife trade is very much in its infancy. Still the results offer some valuable insights.

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