

**MONROVIA - LIBERIA AS THE TRANSPORT  
HUB FOR THE BUSHMEAT TRADE**

**BUSHMEAT SURVEY REPORT  
CONDUCTED IN MONROVIA – LIBERIA**



**BY THE  
CONCERNED ENVIRONMENTALISTS FOR THE  
ENHANCEMENT OF BIODIVERSITY (CEEb)  
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## BUSHMEAT SURVEY REPORT

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## **I INTRODUCTION:**

The project “Monrovia, Liberia as a Transport Hub for The Bushmeat Trade” received a small grant from the Critical Ecosystem Partnership Fund (CEPF) through Conservation International (CI) to conduct a survey investigating the bushmeat trade in Monrovia. The project commenced October 6, 2003 right after the hostilities in Monrovia drew to an end. Many businesses including chop shops and bushmeat markets were just recovering from the devastation of the war. Security situation was far from being improved. There were still many areas held by faction forces in Monrovia that disallowed data collectors from conducting the study. This therefore affected the parameters of the survey exercise. The survey documented information on protected wildlife species that were declared by FDA during pre-war time.

Until UNMIL established its control throughout Monrovia, much of the data collection was done in central Monrovia. This lasted for a period of three months when the situation improved for reaching other areas in Monrovia. The entire data collection exercise was collected over a ten-month period commencing from October 6 2003 to July 31 2004.

There is a high degree of speculation regarding the bushmeat trade in Monrovia, such as, huge foreign currencies generated from the trade and Monrovia being the central point for the bushmeat trade were those things the project, “Monrovia, Liberia as the Transport Hub for the Bushmeat Trade attempts to allay by undertaking a one-year intensive study to explore the bushmeat trade in Monrovia.

## **II. METHODOLOGY**

This study constituted a review of government policy on bushmeat trade and some personal interviews with important government personnel, households and participants in the trade. These interviews carried out in homes were conducted by using survey questionnaires that had undergone relevance test prior to implementation. Monrovia was divided into six zones from which all the responses were obtained. These zones covered Monrovia in its entirety. This means, for each zone visited, surveyors were expected to conduct studies on all the relevant information sources found in that zone.

The Liberian Forestry Law of 2000, the most recent, was the authority that provided the project with details regarding government's policy on trade of wildlife both local and international. For other information, key government personnel directly linked to the trade, for example, the finance Ministry was visited for verification purposes during the period under review. This sort of interview was not formal as pertaining to a documented request for information. It was obtained through informal discussions. Information on bushmeat trade regarding oversea shipment was thought to be correctly obtained from families and friends of Liberians abroad. The reason is that there is no professional ethics to violate in releasing said information unlike the courier services. Therefore, this information was obtained by the use of a survey questionnaire.

The bushmeat market survey was a bi-weekly monitoring exercise. Surveyors initially were taken to the field for familiarization. This was the time when surveyors sampled various quantities of bushmeat for species identification, determining weight samples, specific information on supplies, and many relevant details that were needed to enhance the exercise. Once all of these were fulfilled, it was easy for surveyors to develop their survey tool for collecting the necessary information on the trade. The survey tool consisted of several questions prepared into a questionnaire. The surveyors undertook this exercise as a part time job spending only two hours a day. At the end of the day, they reported the entire completed questionnaire to the office. These questionnaires were compiled each day by data compilers in the order so designed for compiling.

In order to have a complete understanding of the supply mechanism, other factors that were thought to be affecting the price of bushmeat were considered, such as, the price for gunshots, gasoline, domestic meat weather condition, prices of domestic meat, etc.

Sources of information included courier services, the Roberts International Airport and the Monrovia Freeport, Marketing Associations, surveys on markets, chop shops, households and individuals.

The results from the one-year study of the Monrovia bushmeat trade have been compiled and analyzed using tables, charts and graphs for public review and analysis. This report also contains observations, discussions and recommendations.

## **BASIS FOR CALCULATING DATA**

Information sources targeted for providing relevant data on the Monrovia bushmeat trade could not provide documented information on the trade besides observation accounts. Therefore, information obtained in this study is basically an observation account of individuals and institutions associated with the trade.

The packaging unit of bushmeat for the markets is widely varied in size and quantities. The unit for packaging bushmeat is called kin jars. This variation ranges from ten bodies\* of bushmeat to one hundred and sixty-six bodies contained in a kin jar. Therefore, when a trader says four kin jars arrived on the market, unless you ask for further details, you have no definite idea regarding the species and quantities of the bodies contained in that kin jar.

The survey also gathered that the number of kin jars arriving to the markets is not fixed and there is no registry of what comes in. Unless you obtained details information from various sellers of what quantities individual sellers observed for the day, you can never be sure. With such an intricate situation, some means that seemed logical were employed for calculating the collected information.

Considering all the above, the average quantity of bushmeat per kin jar supplied to the market was obtained by adding the least and the highest quantity and divided the sum by two (88 bodies per kin jar). This now becomes our working unit for calculating bushmeat quantities brought to the markets.

For determining species, a sample population on market stalls per day was observed each time per visit. This determination was on a ratio and proportion basis represented on sampled market stalls.

## **II. GOAL/OBJECTIVES:**

The project goal for this study aims at stabilizing the Liberian Bushmeat crisis through a collaborative effort on the part of the Liberian bushmeat working group. Many local and international organizations in Liberia constitute the working team and are all directing their efforts at different levels using various strategies in order to attain this goal. The result of this work attempts to provide a clear picture of the trade and provide recommendations that can assist in reducing the damage being done on wildlife in Liberia.

### **OBJECTIVES:**

The following are the objectives adopted for this study:

- Explore or investigate the consumption of bushmeat brought to and from Monrovia markets.
- Assess the economic magnitude in terms of US\$ value incurred by the Monrovia bushmeat trade.

\*Two hind legs and two fore legs.

### **III. HYPOTHESES:**

The interest to conduct this study was based on several assumptions or hypotheses. These assumptions are the prime focus of the study and therefore the acquired results bore the weight for either proving or disproving these assumptions. They are as follow:

- A. The forestry regulations of April 2000 on protected wildlife in Liberia are not being enforced and therefore leading to a bushmeat crisis in Liberia.
- B. Much of the bushmeat brought to Monrovia is exported.
- C. Huge revenues are realized from the Monrovia bushmeat trade each year.
- D. There is a direct interaction with the prices of bushmeat and prices of other factors, such as, gasoline and gun shot prices.
- E. Many persons in Monrovia consume bushmeat because of taste preference.

### **IV. RESULTS/DISCUSSIONS:**

#### **A. Local Trade Links:**

Local trade links are the pathways and those active in the trade at local levels. A review of the Monrovia markets indicates that most of the bushmeat sold on the Monrovia markets are the carcasses of Liberia wildlife endangered species listed by the Forestry Development Authority (FDA). Up to date, the Forestry Development Authority has not conducted recent studies or carried an inventory on the forests of Liberia for coming up with updated endangered species. Table (#) comprises some of the list that was obtained in prewar era. They are all the Liberian species observed during the period under review except those indicated as unprotected species, which could not be listed because of space limitation.

There are regulations regarding local trade in wildlife in Liberia. The relevant regulations pertaining to local trade in Liberian wildlife is being cited in the addendum of this survey report, particularly section (9.3b of the 2000 Forestry Law of Liberia. It becomes difficult at this point to raise an argument with a hunter regarding the hunting of endangered wildlife species because FDA, since prewar time, is yet to conduct a population survey for determining new endangered species and re-qualifying the status of old ones. Some hunters have stated during the survey that because of the prolong civil crisis in Liberia many of the animals have over multiplied, particularly, in the Lofa area. Territories were heavily contested, for about four years, since the LURD Rebel incursion in 1999 brought in a large Muslim population to Monrovia this could be a factor for increasing the non-bushmeat eaters' number high as 20%.

Table 1

**Volume / Income**

<b><u>Month</u></b>	<b><u>Volume (Body)</u></b>	<b><u>Body Price (LD)</u></b>	<b><u>Total (LD)</u></b>	<b><u>Total (USD)</u></b>
October (03)	12,341	1,500	18511500	330562.5
November	24,262	1,040	25232480	450580
December	110,865	760	84257400	1504596.429
January (04)	87,342	700	61139400	1091775
February	57,528	680	39119040	698554.2857
March	36,283	580	21044140	375788.2143
April	51,468	740	38086320	680112.8571
May	48,154	680	32744720	584727.1429
June	46,280	680	31470400	561971.4286
July	135,328	740	100142720	1788262.857
<b>Total</b>	<b>609,851</b>		<b>451748120</b>	<b>8066930.714</b>



*Bushmeat sale at the Rally Town Market in Monrovia*

**Bushmeat Supplies to Monrovia markets**

Table 2:

**MONTHLY DISTRIBUTION ON MARKET STALLS**

ANIMALS	MONTHS						FREQUENCIES (%)			
	Oct. (03)	Nov. (03)	Dec. (03)	Jan. (04)	Feb. (04)	Mar (04)	Apr. (04)	May (04)	Jun. (04)	July (04)
Maxwell Duiker	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Zebra Duiker	30	35	55	40	15	0	50	35	10	85
Black Duiker	30	35	60	50	35	60	70	90	90	98
Oglibv's Duiker	5	40	65	75	60	80	85	90	85	56
Bushbuck	10	30	45	65	75	40	30	60	75	87
Red River Hog	2	20	40	25	30	20	40	55	40	30
Large Cane Rat	40	45	35	5	0	15	5	0	5	57
Water Chevrotain	2	5	0	0	10	5	15	0	25	35
Red Colobus	5	5	10	0	15	0	5	0	15	27
Black Colobus	10	10	25	10	30	15	10	15	25	
Pangolin	15	25	10	5	0	10	0	25	10	
Forest Elephant	0	0	0	0	0.40	0	0	10	0	
Nonprotected	60	35	51	34	17	75	43	21	39	

**Table 3**

The information contained in this table is arranged to show a particular bushmeat species that has been observed on the various market stalls each month. The frequencies refer to the number of data forms that reported of a particular species during a month against the overall collected for that month. For example, Maxwell duiker has always appeared on all of the returned forms each month reported. This is why it has a frequency of 100% each month.

**Table 3**

No.	Name of Markets	Location	Number of vendors	Average Bodies of Bushmeat/Vendor
1	Airfield Market	Airfield Sinkor	6	Piles*
2	Barnersville “	Barnersville Estate	2	“
3	Congo Town “	Township of Congo Town	1	“
4	Duala Main Market	Duala	20	3 bodies
5	Duala Bushmeat “	“	5	6 “
6	ELWA “	ELWA	5	2 “
7	Freeport “	Freeport	1	Piles
8	Freeway “	Gardnersville	2	“
9	General “	Waterside	2	1 body*
10	Gorbachev “	Paynesville	75	12 “
11	Jorkpent Town “	8 <sup>th</sup> Street Sinkor	3	Piles
12	Logan Town “	Logan Town	1	“
13	New Georgia “	New Georgia Estate	1	1 body
14	New Kru Town “	New Kru Town	1	Piles
15	Red Light “	Paynesville	13	4 bodies
16	Rally Time “	Sekou Toure Avenue	25	6 “
17	Sinkor Old Road “	Sinkor, Old Road	10	2 bodies

Piles\* are crumbs of bushmeat piled together weighing about one or two grams and is usually sold for LD 25.00.

Body\* is both the two forearms and two hind legs of the bushmeat sold at the market for an average price of LD 175.00.

Bushmeat supply to Monrovia markets is a daily transaction. Many vehicles bring huge supplies in kin jars to the Monrovia markets from many regions in Liberia. Bushmeat sellers tell us that the volume of meat we see is not collection from one area. There are middlemen who move from one place to another in search of processed bushmeat. These meats are sometime processed for up to a month or two and are sold only when hunters need money for festivities or urgent demand. Until the deployment of UNMIL throughout Liberia, much of the supplies came from western and the northern parts of Liberia. Since the South East

became accessible, there has been an increase. This increase has almost double the total supplies from other areas in the northern and western parts of Liberia.

The packaging of bushmeat is done in units known as bodies and placed in sacs or cribs known as kin jars. There are wide variations in the sizes. Most commercial kin jars contain an average quantity of 115 bodies. A body here refers to the two hind legs and two fore arms. Sample weights of dry bushmeat revealed that a quarter of a matured dried bushmeat weighs between 1.0kg-1.4kgs while an immature animal weighs between 0.4-0.8kg.

**Sales arrangement**

Suppliers enter an arrangement with sellers on a basis of sell and pay. This means sellers do not necessarily need a capital to engage into the business order than a recommendation from an old seller in the business. This is primarily the reason while the trade is expanding. Sellers, who find it difficult to sell all of their stock, further go into another arrangement with some chop shop (Restaurant) owners. At this stage, most of the meat have become depreciated and produce the scent that stimulates the appetite of customers. When the meat is tinted, it becomes palatable for most Liberian dishes, such as Torbor-gee. The meat flavors the soup and gives the nice smell that many Liberians enjoy.

**II Bushmeat Supplies to Chop Shops (Restaurants)**

**(Table 4) RESPONSES TO QUESTION REGARDING REASONS WHY CHOP SHOPS COOK BUSHMEAT**

<b>Question</b>	<b>Number of Chop Shops</b>	<b>Cheap cost (%)</b>	<b>Taste Preference (%)</b>	<b>Flavor (%)</b>
Why do you cook bushmeat?	444	1.9	66.5	31.6

**(Table 5) RESPONSES TO QUESTION REGARDING DAILY AVERAGE PURCHASE OF BUSHMEAT BY CHOP SHOPS**

<b>Question</b>	<b>Chop Shops Surveyed</b>	<b>Piles* up to two quarters (%)</b>	<b>3 to 5 quarters (%)</b>	<b>Above 6 quarters (%)</b>	<b>Don't know (%)</b>
What Average quantity of bushmeat do you buy?	444	51.0	8.0	2.0	38.0

**Table (6) RESPONSES TO QUESTION BY A POPULATION SAMPLE OF BUSHMEAT CHOP SHOPS IN MONROVIA**

<b>Question</b>	<b>Surveyed</b>	<b>Yes (%)</b>	<b>No (%)</b>
<b>Do you cook Bushmeat?</b>	567	78.2	21.7

The recent civil crisis had many chop shops closed and left not many opened. It was realized that after surveying a little more 500 chop shops, it became difficult to identify new ones. It then became clear that this number represented the highest number of chop shops that could be found for the survey exercise. Regular monitoring began as soon as this was determined.

It was also observed during the survey that there existed mobile chop sellers who also were involved in preparing bushmeat. But this was difficult to keep a track due to their high level of mobility. This means that the number of bushmeat chop sellers far exceed the five hundred that was recorded during the survey.

The survey results show that 66.5% of those identified cook bushmeat because of taste preference and 31.6% are attracted by the scent the meat adds to the soup. 1.9% of the population alluded to cost. The Urban Public Opinion and Bushmeat Survey 2002 and the Monrovia Protein Survey of 2003 by the Philadelphia Zoo point out that bushmeat ranks second to fish in terms of preference over other protein products in Monrovia.

The average consumption of bushmeat by chop shops on a daily basis ranges from 51% for those cooking few piles of bushmeat up to two quarters, 8% for those cooking three to five quarters and 2% for those cooking more than five quarters. 38% have no real account of what their daily consumption is and refused to even give an estimate. It can logically be said here that right at the cessation of hostilities in Liberia, many persons were very security minded and could not release information of any sort very easily, especially when they actually don't know who you are and for what basic reasons the information is being obtained.

**(1) Bushmeat supplies to households**

**(Table 7) RESPONSES TO QUESTION ON BUSHMEAT HOUSEHOLD CONSUMPTION SURVEY**

<b>Questions</b>	<b>Surveyed</b>	<b>Yes (%)</b>	<b>No (%)</b>
<b>Do you cook bushmeat?</b>	<b>1,013</b>	<b>80.0</b>	<b>20.0</b>

**(Table 8) RESPONSES TO QUESTION REGARDING HOUSEHOLD AVERAGE QUANTITY OF BUSHMEAT PURCHASED**

<b>Questions</b>	<b>Surveyed</b>	<b>Few Piles (%)</b>	<b>A quarter (%)</b>	<b>Above a quarter (%)</b>
What quantity of bushmeat do you buy when you go to the market?	<b>810</b>	<b>77.0</b>	<b>20.0</b>	<b>3.0</b>

The household survey was the most challenging because many homes refused to disclose their actual consumption of bushmeat. During 1990, many Mandingos who were mostly Muslims fled to Guinea and other neighboring countries. The LURD invasion brought back

those Mandingos that fled in 1990 with most of them resettling in Monrovia. Muslims don't eat bushmeat as many reported.

Reception was not encouraging at most homes. At most time household would ask surveyors to show up on other times. This became the major factor for documenting a small population size.

The total number of households that were receptive and allowed for conducting the survey was 1,013. 80% of this amount acknowledged that they do cook bushmeat. The 20% reported not eating bushmeat and some of the reasons for not eating bushmeat was either religious or economic.

The household average consumption ranges from 77% of those who cook few piles, 20% for a quarter and 3% for over a quarter. The frequency over which these consumptions ranged are not directly linked. What was understood from the survey was that whenever a household decides to buy bushmeat there is always a definite quantity that his family buys. Categorically no household was cleared to say we consume (X) quantity in two weeks, three months, etc. What they normally said was that their incomes vary so indefinitely and whenever they received it they buy bushmeat..

The frequencies for cooking bushmeat is shown as 7% for those who cook everyday, 13% for those who once a week and 80% for those who cook once a while. The Urban Public Opinion and Bushmeat Survey of 2002 and the Monrovia Protein Survey of 2003 by the Philadelphia Zoo confirm that a very low number of individuals in Monrovia actually cook bushmeat everyday. Most homes cook fish and other imported meat and domestic meat products mostly during the week.

**B. INTERNATIONAL TRADE LINKS**

**INTERNATIONAL TRADE**

<b>Institutions</b>	<b>Population</b>	<b>Acknowledged Export (%)</b>	<b>Denied Export (%)</b>
Government	3.0	0.0	100.0
Courier Services	5.0	40.0	60.0
Households	1013.0	6.7	93.3

The survey results gathered on international trade of bushmeat from Liberia via the Freeport of Monrovia and Roberts International Airport, Courier Services operating in Liberia and sample households show that all of the three government agencies responsible for issuing permits on Liberia Wildlife abroad denied any export of bushmeat to other countries, particularly America.

Data obtained from the five courier services operating in Liberia show that 40% acknowledged that some shipment of bushmeat was done over the year while 60% denied any shipment.

The 1,013 households that were surveyed show that 6.7% of household acknowledged some shipment while 93.3% denied any shipment through ports.

## **V. CONCLUSIONS/RECOMMENDATIONS:**

The results gathered from this survey conclude the hypotheses as follows:

Hypothesis (A): The Forestry Regulations of April 2000 on protected wildlife in Liberia are not being enforced therefore it is leading to a bushmeat crisis in Liberia. The distribution table (Table 2) on bushmeat at the various markets in Monrovia is all protected species except the ones listed as unprotected at the bottom of the table. This violates section 9.3d (i) of the Forestry law of April 2000. Sellers enter the trade through trusted friends already involved in the trade rather than obtaining permission from relevant authority.

Survey reports gathered from market sellers indicated that fighters of faction forces also used automatic raffles to hunt wildlife that were also brought to the Monrovia markets.

Bushmeat transport to Monrovia market is unhindered. This means, there is smooth passage by traders.

### **Conclusion:**

A strong enforcement of the Forestry regulations on local trade of bushmeat will not allow for an open trade in Liberia protected wildlife species at such large scale. The way one enters the trade will not be possible under a regulated system. This implies that the number of bushmeat sellers will reduce significantly.

A fighter involved in the trade by the use of automatic raffles is a serious violation since he does not possess a license for hunting (9.3f).

Based upon the above, this study accepts the hypothesis regarding the enforcement of Forestry regulations act of April 2000.

### **Recommendation:**

It is recommended that the Forestry Development Authority (FDA) be engaged by concerned conservation groups as to inquire about the lack of a strong enforcement of the Forestry Laws of April 2000 in order to build capacity where possible.

### **Hypothesis (B): Much of the bushmeat brought to Monrovia is exported.**

In order to determine export of any Liberia protected wildlife species, there are three main sources of information that were accessible during this survey in Liberia that seem expedient. Usually Liberians means of transshipment to oversea countries are the ports of Liberia, particularly, via the Roberts International Airport and the Freeport of Monrovia when a friend or member of a family is traveling overseas. At these ports are three agencies of government concerned with travel operations. They include the Custom Officers from the division of customs at the Ministry of Finance, the health Officers from Ministry of Health and the Quarantine division from the Ministry of Agriculture. The survey conducted included these agencies of government so as to verify the exportation of bushmeat. Other

entities like the courier services also were contacted in during the Survey for verification purpose of oversea shipment of bushmeat. Results reveal that all of the agencies of government concerned denied that any export of bushmeat was made during the period under review. Individuals residing in Monrovia, up to 93% denied sending bushmeat to any relative abroad either for personal consumption or commercial purpose.

What sources of information available to this survey work at the time and place in order to determine export of any Liberia protected wildlife species, were the local bushmeat markets in Monrovia, Monrovia Transport Union, The Ministry of Post and Telecommunication, chop shops, Freeport of Monrovia, Roberts International Airport, courier services, Ministry of Agriculture, Forestry Development Authority (FDA), Finance Ministry and Ministry of Health.

There are presently five courier services operating in Liberia that send and receive packages. Sixty percent (60%) of this number denied ever-packaging bushmeat for overseas shipment while 40% acknowledged that during the period under review, some amounts of bushmeat were sent but not in commercial quantities. It was not exactly established as to what actual quantities were shipped through the courier services.

#### **CONCLUSION:**

The high level of denial in all cycles shows that transshipment of bushmeat during the period under review may not be significant by means investigated (See table on International Trade). This implies that residents in Monrovia consume a large proportion of the volume of bushmeat coming to Monrovia over a period of time. Bushmeat can be process to last a very long period of time, say about two months. It can even be consumed in its worst state.

From the above findings, this study rejects hypothesis (B) and accepts that bushmeat brought to the Monrovia markets is highly consumed by residents in Monrovia or otherwise smuggled through border points that did not form part of the survey parameters.

#### **RECOMMENDATION:**

A more comprehensive study is carried out as a joint project for the bushmeat-working group in Liberia to cover all ports of entries including border points.

#### **HYPOTHESIS (C): Huge revenues are realized from the Monrovia bushmeat trade each year.**

The table on volume and income indicates that a total estimated volume of 609,851 bodies of bushmeat generated revenue of up to 451, 748,120.00 (LD) and 8,066,930.71 (USD) during the period under review. For a ten-month data collection period during a crisis, these estimated figures do seem very significant and could be higher if accessibility to all areas in Liberia was possible.

If situation were normal, meaning no war and no regulations being enforced, this figure would probably have multiplied ten fold. There is a high affinity for bushmeat in Liberia (Chop Shop Table on affinity).

**CONCLUSION:**

**Under the existing situation, it is fair to say that revenues generated for the ten-month are truly significant and substantial for losing our wildlife resources in an unregulated situation.**

With the given situation, this survey accepts hypothesis (C) that points out a huge generation of revenue from the Monrovia bushmeat trade is realized.

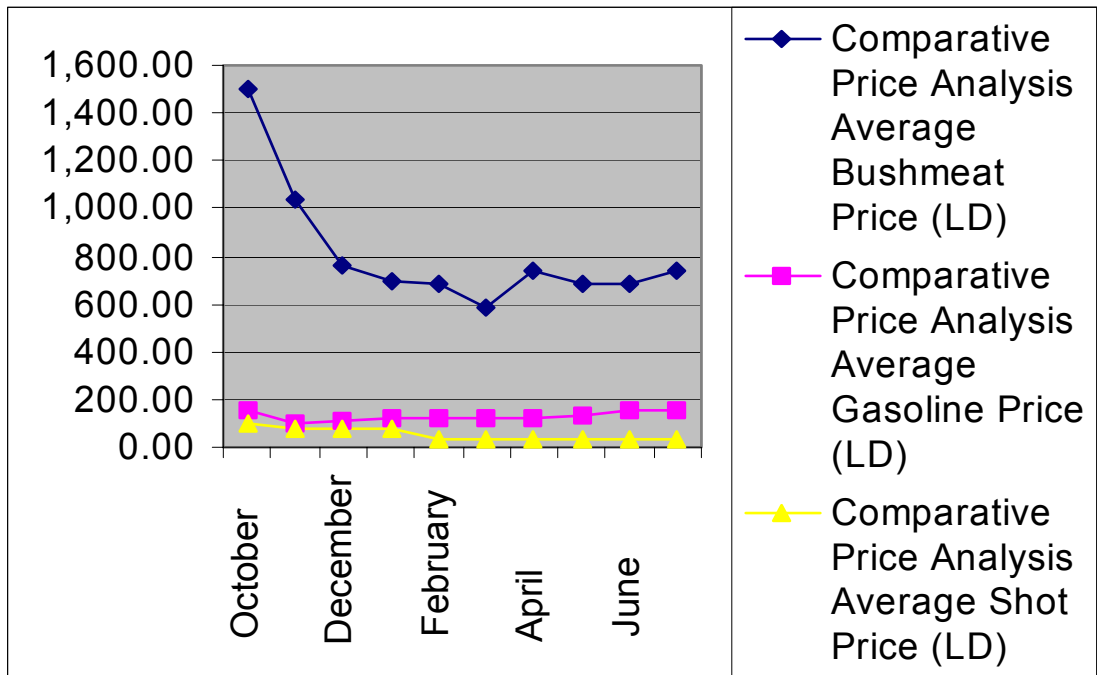
**RECOMMENDATION:**

Much needs to be done now to strengthen the Forestry Development Authority for enforcing regulations that aim at protecting the Liberia wildlife. This means providing training and logistics. If policies are not enforced during a normal situation like having access to every part of the country, we stand to run into serious bushmeat crisis for the next two to three years. There should continue to be an independent monitoring of the bushmeat market over the next three years.

**HYPOTHESIS (D): THERE IS DIRECT INTERACTION WITH PRICES OF BUSHMEAT AND PRICES OF OTHER FACTORS, SUCH AS, GASOLINE AND GUN SHOTS.**

**CONCLUSION:**

It can be seen from the below graph that bushmeat price interaction with gasoline and shot prices is an independent relationship. The increase in one price does not affect the prices of the others. Even while one price is being stable, others are varying. This study rejects hypothesis (D) based on an observed independent relationship.



**HYPOTHESIS (E): Many persons in Monrovia consume bushmeat because of taste preference.**

**CONCLUSION:**

Survey results show 66.5% of customers at chop shops (restaurants) admitting that they eat bushmeat because of taste and 31.6% say that the scent or smell of the bushmeat stimulate their appetite for it. A small number (1.9%) alluded to buying bushmeat because of cost. The Philadelphia Zoo Urban Survey reports of 2002/03 show that even if cost of bushmeat and all other sources of protein were the same cost, bushmeat came second to fish in preference. By this it is accepted that hypothesis (E) is correct.

**RECOMMENDATION:**

In order to protect endangered protected wildlife species of Liberia, alternative can be found within other wildlife species that are not endangered and have a high proliferation rate, such as cane rats. The Maxwell duiker seems prolific and widely distributed in Liberian forest. A study needs to be conducted to also see how they, like large cane rats can be bred for consumption.

## **VI. GENERAL CONCLUSIONS/RECOMMENDATIONS**

It is true that a large volume of bushmeat arrives each day on the Monrovia markets, but consumption data (Tables 5 and 7) from both household and chop shops do not suggest a large consumption by the Monrovia populace. This should mean that there are extra volumes brought to Monrovia that are not consumed by the Monrovia populace. These extra volumes are what we believe to be transit volumes. This volume is transported out of Monrovia elsewhere. Due to the limitation of the survey scope, it was not possible to determine cross-border shipment.

The report further revealed that the revenue accrued from the trade is substantial and provides a livelihood for many persons, particularly, women. Based on consumption estimates, the huge revenue was generated, not only by Monrovia populace, but also, by transit traders.

Transit traders in this survey imply those traders of bushmeat who see Monrovia as a transport hub for the trade to other locations. This means, traders that would like to transport bushmeat from Cape Mount and Bomi Counties to the Ivorian Border would need to bring this supply to Monrovia first in order to arrange transportation to the Ivorian Border or Guinean Border. There is no commercial transportation link from Cape Mount and Bomi direct to the Ivorian and Guinean Borders unless via Monrovia. This is also true for bushmeat coming from the South East or Central Liberia to the Sierra Leonean Border. This therefore suggests that Monrovia is the transport hub for the bushmeat trade.

### **RECOMMENDATIONS**

- **The Forestry Development Authority of Liberia (FDA) carries out an immediate inventory on forest resources, particularly wildlife.**
- **FDA should train more wardens and inspectors and provide incentives for performing their required duties at checkpoints along the highways and borders and in National Forest areas.**
- **The Government should establish more sanctuaries for wildlife under strong regulations.**
- **There should be independent monitoring of the forest resources by individuals and Non-Governmental Organizations (NGOs) for balanced accounts of the forest resources.**
- **There is a need for more awareness to help minimize the high consumption of bushmeat.**
- **There is a need to support bushmeat sellers in other businesses through micro-credits.**
- **Provide other skills and seed capital to hunters in forest communities to involve in other businesses.**

## **APPENDICES**

### **(I) RELEVANT FORESTRY REGULATIONS OF 2000 REGARDING TRADE IN WILDLIFE IN LIBERIA**

#### **LOCAL TRADE IN WILDLIFE**

Section 9.3 (b) of an act adopting the new National Forestry Law (April 6, 2000) regarding:

##### ***a) Survey: The Authority shall:***

- (i) Review the population, distribution and status of wildlife in Liberia and identify animals threatened by or in danger of extinction.
- (ii) Maintain and update a list of animals threatened by or in danger of extinction in Liberia under subsection 9.3a (i)

##### ***b) Hunting of protected animals:***

- (i) No person shall hunt, capture or trade any species as contained in the list provided by the Authority from time to time.
- (ii) Any person who hunts or captures or attempts to hunt or capture any species listed under section 9.3a (i)

##### ***c) Hunting or capturing of protected animals for scientific purposes:***

The Authority may authorize the capture, removal and transfer of any species contained in the list in subsection 9.3 (ii) above, if such activity is for the purpose of captive breeding, propagation of the species, its safety the safety of humans or scientific research.

##### ***d) Possession of protected Animals:***

- i) Within six (6) months of the entry into force of this law, no person shall possess any protected animal, whether live or dead, or any part thereof, without the burden of proving lawful possession of any protected animal or any part thereof.
- ii) The Authority shall issue a certificate of legal ownership for any protected animal where it is satisfied that such animal was lawfully obtained under the authority of a valid license or permit or by other lawful means or was raised in captivity.

##### ***e) Professional Hunting License:***

The Minister of Finance shall issue a hunters' license, which shall be valid for six (6) months each year.

## **INTERNATIONAL TRADE IN WILDLIFE**

Government policy on international trade of wild animal species can be cited from an act adopting the new Forestry Law of April 6, 2000. Under this law are the following provisions:

Chapter 12.1 (a), states that export of any wild animal, excluding those specifically mentioned in sub-section below, may be exported from the country upon the authority of a valid permit issued by the Authority.

- b) (i) States that no person shall export or attempt to export or re-export any protected animal in Liberia, or as listed in appendix I or II of the Convention on International Trade in Endangered Species (CITES), except for purposes of scientific research, including breeding in captivity.
- (ii) No export permit shall be issued for any protected animal unless the Authority is satisfied:
  - a. that such wildlife has been lawfully obtained;
  - b. that such export will not be detrimental to the survival of the species;
  - c. that an import permit has been granted by the competent authority of the country;
  - d. that such animal will be prepared and shipped as to minimize any risk of injury, to health and prevent cruel treatment.
- (iii) No person shall import or attempt to import into Liberia any wildlife, except under valid export permit issued by the competent authority of the country of export.
- (iv) Any domesticated animal may be exported from the country, provided that exporter shall obtain an export permit from the Authority and a certificate from the Ministry of Agriculture or the Ministry of Health and Social Welfare certifying that the animal is in good health and free of all communicable diseases.

**(II) SURVEY QUESTIONNAIRE**

**CEEB Liberia**  
**Community Bushmeat Survey**

**Date:** \_\_\_\_\_  
**Zone:** \_\_\_\_\_  
**Time:** \_\_\_\_\_  
**Location:** \_\_\_\_\_

1. Do you eat bushmeat? Yes  No
2. What quantity of bushmeat you buy from the market each time you go to buy?  
A few piles  A quarter  Over a quarter
3. How often do you cook bushmeat? Everyday  Once a week  Once a while
4. Do you see more bushmeat on the market now than three months ago?  
Yes  No  It's the same
5. (a) Do you have a relative abroad that you export bushmeat to? Yes  No   
(b) If yes, when was the last time you exported bushmeat and which country?  
Few days ago  Few weeks ago  Over a month  Country \_\_\_\_\_
6. What means do you export? Courier service  Airport/sea port, when a friend is traveling  Other means  \_\_\_\_\_
7. What quantity do you send? A quarter  Two quarters  More than two quarters
8. Do you know a friend who is engaged in the business of exporting bushmeat?  
Yes  No

