Local People perceptions toward wildlife and its Conservation at the Periphery of the Dja Biosphere Reserve

EPANDA MANFRED AIME
AWF, Cameroon Country Coordinator

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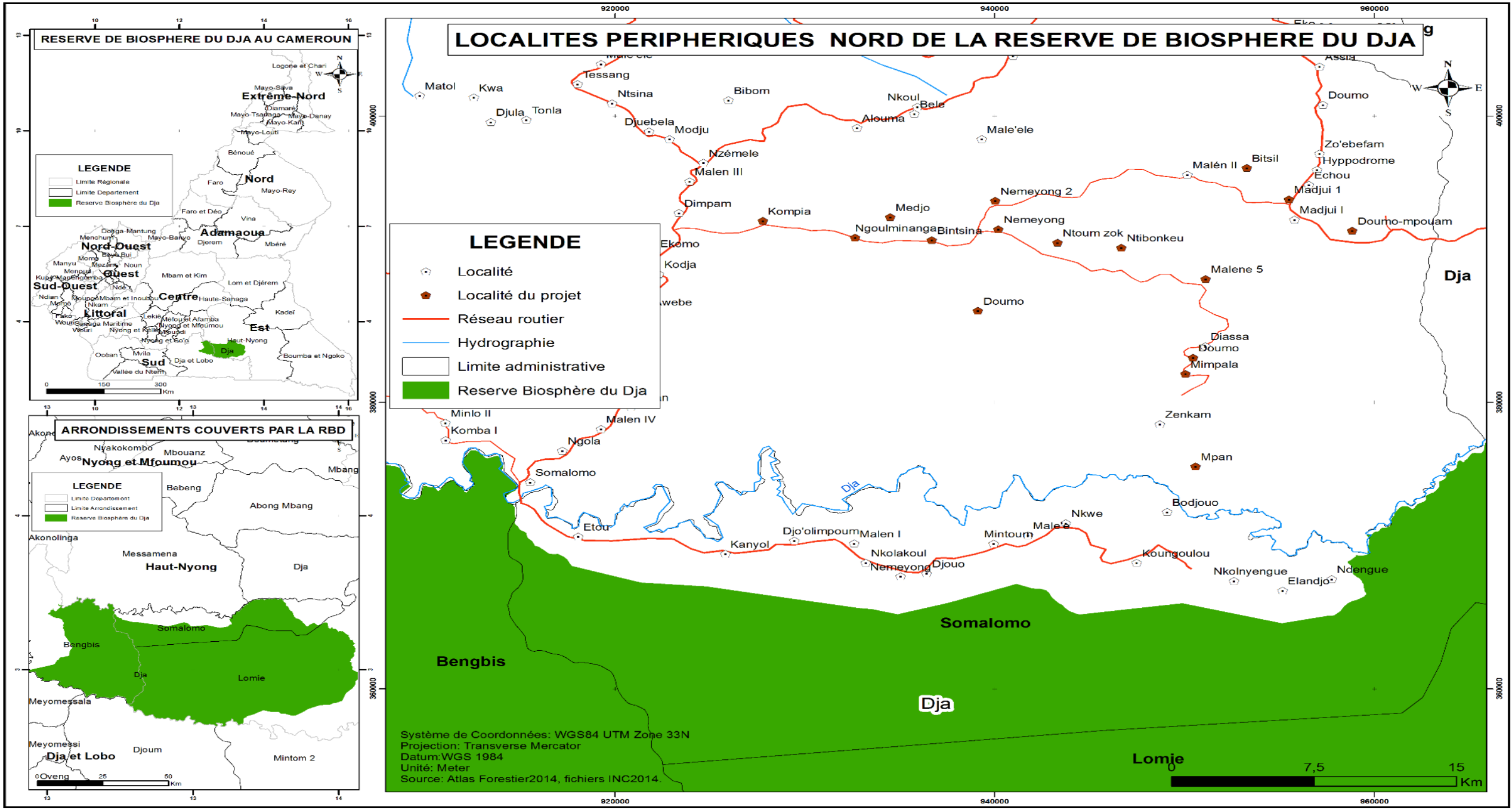
LOCALITES PERIPHERIQUES NORD DE LA RESERVE DE BIOSPHERE DU DJA
RESERVE DE BIOSPHERE DU DJA AU CAMEROUN
ARRONDISSEMENTS COUVERTS PAR LA RBD
LEGENDE
Localité
Localité du projet
Réseau routier
Hydrographie
Limite administrative
Reserve Biosphère du Dja
Limite Régionale
Limite Departement
Limite Arrondissement
Extrême-Nord
Nord
Adamaoua
Nord-Ouest
Ouest
Sud-Ouest
Centre
Littoral
Est
Sud
Nyong et Mfoumou
Haut-Nyong
Dja
Somalomo
Bengbis
Lomie
Dja et Lobo
Meyomessala
Abong Mbang
Akonolinga
Messamena
Mintom 2
Djoum
Meyomessi
Oveng
Matol
Kwa
Djula
Tonla
Tessang
Ntsina
Djuebela
Modju
Bibom
Nkoul
Bele
Alouma
Male'ele
Nzémele
Malen III
Dimpam
Kompia
Medjo
Ngoulminanga
Bintsina
Nemeyong 2
Nemeyong
Ntoum zok
Ntibonkeu
Malén II
Bitsil
Zo'ebefam
Hyppodrome
Echou
Madjui 1
Madjui I
Doumo-mpouam
Assia
Doumo
Ekomo
Kodja
Malene 5
Diassa
Doumo
Mimpala
Zenkam
Mpan
Bodjouo
Nkwe
Male'e
Mintoum
Kounoulou
Nkolnyengue
Elandjo
Ndengue
Minlo II
Malen IV
Komba I
Ngola
Somalomo
Etou
Kanyol
Djo'olimpoum
Malen I
Nkolakoul
Nemeyong
Djouo
Dja
Somalomo
Bengbis
Dja
Lomie
Système de Coordonnées: WGS84 UTM Zone 33N
Projection: Transverse Mercator
Datum:WGS 1984
Unité: Meter
Source: Atlas Forestier2014, fichiers INC2014.
0 7,5 15 Km
920000
940000
960000
400000
380000
360000

NEW PARTNERS TO LOCAL PEOPLE

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THREATHS

BUSHMEAT CRISIS

WILDLIFE TRAFICKING

WILDLIFE CRIME

LAND CONVERSION AND HABITAT LOSS

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Objectives of the study

Main Objective:

- To evaluate the perceptions of local people toward wildlife and conservation in the Northern periphery of Dja Reserve

Specific Objectives

1. To examine to what extend education, sensitization and attitude of the local people through community involvement influences their perceptions toward wildlife and its conservation.
2. To examine to what extend does intention and attitude of local people through community involvement influences local people perceptions toward Conservation.
3. To investigate the impact of local people perceptions on community Discipline toward wildlife and its conservation.
4. To construct –validate the psychometric properties of the measurement scale on the perceptions of local people toward wildlife and its conservation.

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Research Questions

Main Research Question

- What do the local people think about wildlife and its Conservation in the Northern periphery of Dja reserve?

Specific Research Questions

1. How do educational level, sensitization and attitude through community involvement influence local people perceptions toward wildlife and conservation?
2. To what extend does intention and attitude of local people influences their perceptions toward wildlife and its conservation?
3. What is the impact of local people perceptions on community Discipline of local people towards wildlife and it's Conservation?
4. Is perception of the local people index toward wildlife and its conservation a uni-dimensional construct?

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Research Methods

- **Research Design**: Qualitative data (interviews, information recorded was transcript) and quantitative data subjected to statistical analysis.
- **Study Population** of 3700 inhabitants living in 18 villages of the north of the Reserve including local inhabitants, leaders, government officers, and members of cooperative.
- **Sample Techniques** was the non-probabilistic technique as it is easy and convenient to use.
- **Sampling Procedure:** Population divided into clusters of villages and a purposive sample technique used in selecting element in the sample frame.
- **Sample Size** of 400, and sample frame comprised the inhabitants of the villages
- **Data sources:** Primary data (administration of questionnaires and interviews) and secondary data (text books, articles, reports, internet, etc.).

Statistics Methods

- The exploratory factor analysis is used at this early stage of this research to permit gather information about the interrelationships among a set of variables.
- Confirmatory factor analysis is used later in the research process to permit testing the specific hypothesis or theories concerning the structure underlining the set of variables.
- The 49 items of the questionnaires on perceptions of local towards wildlife and its conservation scale (PELWIL) were subjected principle component analysis (PCA) using SPSS version 21.
- Prior to performing PCA, the suitability of the data for factor analysis was assessed by inspecting the correlation matrix, Bartlett's test of sphericity and Kaiser- Meyer – Oklin (KMO).

THEORITICAL REVIEW

- This study rely upon the Theory of Reasoned Action (Ajzen & Fishbein, 1969, 1980). It provides a model that has potential benefits for predicting the intention to perform a behaviour based on an individual's attitude and normative beliefs.
- If attitudes are to guide actions, they must be freely accessible and appropriate to the intended behavior.

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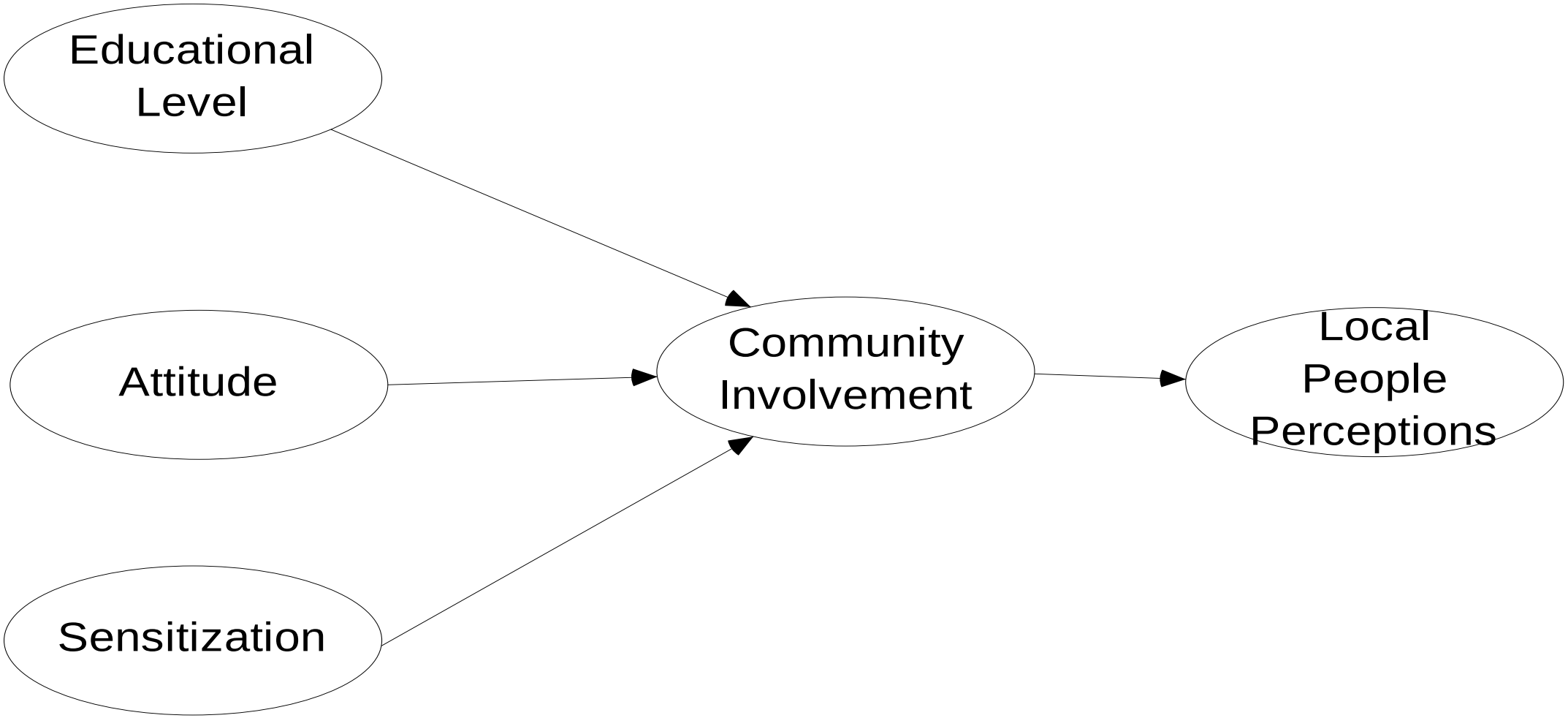
HYPOTHSIZED CONCEPTUAL MODEL: This model intend to examine the impact of education level, attitude and sensitization indirectly through community involvement on local people perception towards wildlife and it conservation



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DATA ANALYSIS AND PRESENTATION OF RESULTS

1. How Education, sensitization and attitude of local people by community involvement influences perceptions toward wildlife and its conservation

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics (|O/STERR|)
Community Involvement -> Local People Perception	0,267116	0,270507***	0,011971	0,011971	22,313786
Local People Attitude -> Community Involvement	0,146514	0,148397***	0,009621	0,009621	15,228777
Wildlife Sensitization -> Community Involvement	0,189280	0,190536***	0,010493	0,010493	18,038105
Wildlife knowledge -> Community Involvement	0,148333	0,148537***	0,013009	0,013009	11,402364

The result reveal that there is a positive significant relationship between:

- Educational level proxy by wildlife knowledge, community wildlife sensitization and local people attitude on wildlife and its conservation on community involvement.

The t-value for the measurement and structural model estimates of EASC- LPP

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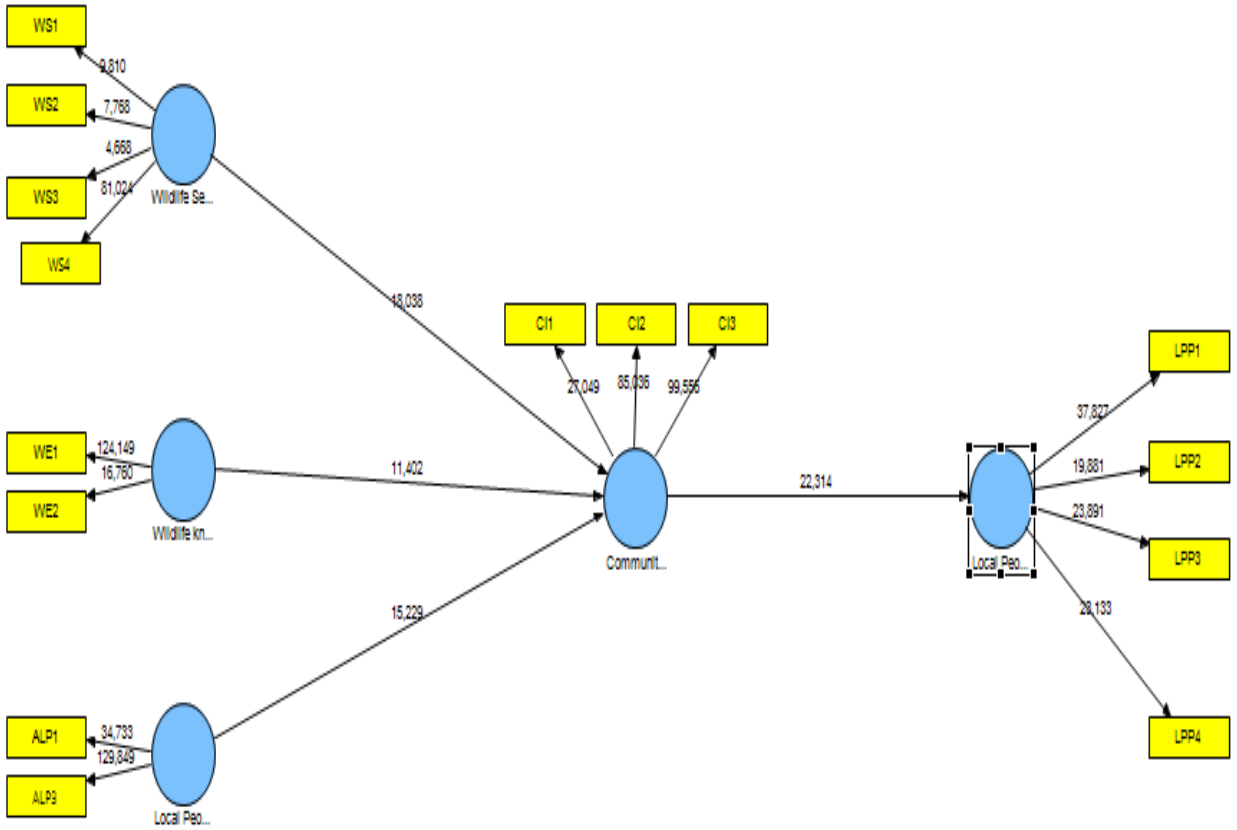
1’. How Education, sensitization and attitude of local people by community involvement influences perceptions toward wildlife and its conservation



Hypothesized model of relations among Education level, Attitude, Sensitization, Involvement and Local people perception (EASC –LPP)

- In order word, a percent improvement on **wildlife knowledge**, **wildlife sensitization** and **attitude** of local people toward wildlife and its conservation, **community involvement** will enhanced by 11.40 %, 18.03 % and 15.22 % respectively.
- The results reveal that community involvement has a strong and positive significant impact on the perception of the local people towards wildlife and its conservation.

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2. How intention and attitude of local people influences perceptions toward wildlife and conservation

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics (|O/STERR|)
ATTITUDE -> LPP	0,359593	0,361866	0,015278	0,015278	23,537270
INTENTION -> ATTITUDE	0,501843	0,501952	0,009504	0,009504	52,803345
INTENTION -> LPP	0,146901	0,144316	0,016431	0,016431	8,940275

The t – value of the measurement model: Intention, Attitude and local people perceptions

- The results of the t-value of the structural model reveal that attitude of the local people toward wildlife and its conservation and local people intention has a positive and significant impact on how the local people think about wildlife and its conservation.

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2’. How intention and attitude of local people influences perceptions toward wildlife and conservation

Model 1: Local People Perception = 0.36Attitude (ALP) + 0.15Intention (ILP)

SE	(0.0152)	(0.0164)
t	(23.53)	(8.94)

R - Square = 0.204

- Model 1: shows that a unit of positive reinforcement on local people attitudes toward wildlife and its conservation will influence positively the way the local people think about wildlife and its conservation by 36 % (t = 23.53, P = 0.000)
- While change in intention towards wildlife will contribute only 15 percent to change in the local people perception (t = 8.94, P =0 .000).
- This result indicate global fit of the model, that is, both intention and attitude are highly significant in explaining the perception of local people toward wildlife and its conservation.

- This finding confirm to theoretical expectation. The theory of Reasoned Action suggests that a person's behaviour is determined by his/her intention to perform the behaviour and that this intention is, in turn, a function of his/her attitude toward the behaviour.

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3. The impact of local people perceptions on community Discipline towards wildlife and it's Conservation

- The result in the table means that, with a unit positive change in the measure of perception, the level of discipline toward wildlife will improved by 29 percent (t = 28, p = 0.000) .

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics (|O/STERR|)
LPP -> Community Discipline	0,292934	0,294829	0,010402	0,010402	28,161522

$$CD = 0.29*\text{LPP}$$

$$\text{SE} \quad (0.010),$$

$$\text{t} - (28.16)$$

THE T- VALUES FOR THE MEASUREMENT AND STRUCTURAL MODEL ESTIMATES OF LPP - DISCIPLINE

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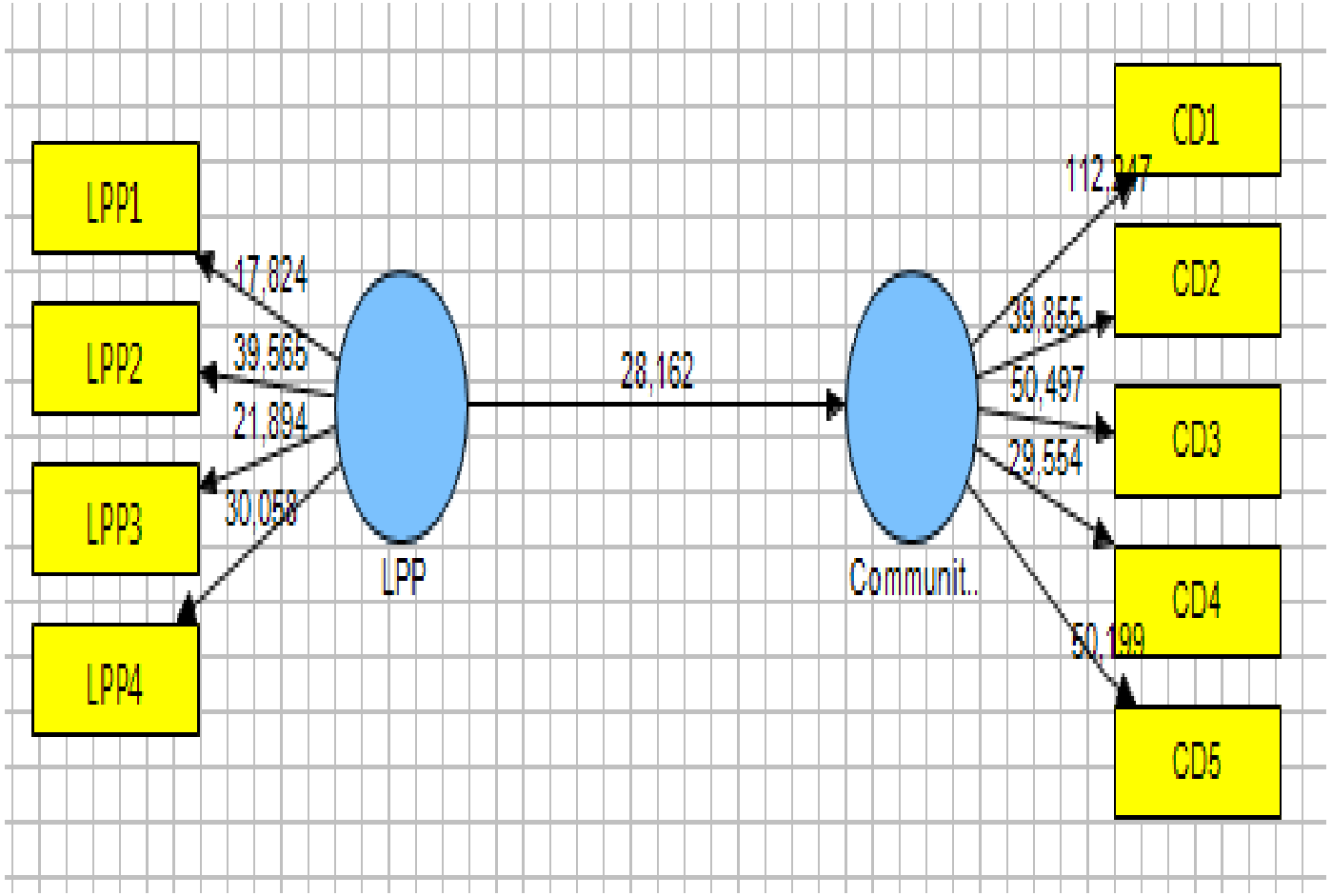
3’. The impact of local people perceptions on community Discipline towards wildlife and it’s Conservation

- The result shows that people perception has a strong positive significant impact on the level of discipline towards wildlife and its conservation.
- The entire indicators that proxy perceptions and discipline is significant



Hypothesized model of relations between Local people perception and level of discipline towards wildlife LPPD)

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4. Perception of the people's index toward wildlife and conservation as a uni-dimensional construct. Are respondents' responses influenced by one factor?

Second order factor Confirmatory Analysis		Measurement Model	Recommended Value (Author (s))	Decision
Model fits Statistics	Result	Result		
CMIN	46.65	46.65		
DF	24	24		
P	0.004	0.004	> 0.05	
RMSEA (rms)	0.053 (0.030 - 0.076)	0.053 (0.030 - 0.076)	RMSEA < 0.08, (Byrne 2001) Hu &Bentler, 1999 (rms <0.05	Accepted
GFI	0.97	0.97	Chau (1997) > 0.90	Accepted
AGFI	0.95	0.95	Hoelter (1983), >0.90	Accepted
CFI	0.94	0.94	Hatcher(1994) >0.90	Accepted
NFI	0.89	0.89	Bentler & Bonett (1980) >0.90	Rejected

The research question above was answer by subjecting the factors extracted using PCA into second order confirmatory factor analysis and measurement model.

The table above summarized the results, recommended value and decision of the goodness of fit indices use in this study.

- The result shows that all measures of absolute fit indices are significant, meaning that the measurement model proposed fit the data. All the measures of incremental indices were also found to be significant except normed fit index which fall to meet up with the cut-off criteria suggested by Bentler and Bonett (1980).

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4’. Perception of the people’s index toward wildlife and conservation as a uni-dimensional construct. Are respondents’ responses influenced by one factor?

			Estimate	S.E.	C.R.	P
Perceived Wildlife threat	<---	LPP_Index	0,299	0,066	4,54	0.000
Intention	<---	LPP_Index	0,667	0,097	6,859	0.000
Community Involvement	<---	LPP_Index	0,717	0,109	6,584	0.000
ILP1	<---	Intention	0,92	0,12	7,685	0.000
ILP2	<---	Intention	1			
ILP3	<---	Intention	0,747	0,097	7,732	0.000
CI2	<---	Community Involvement	0,936	0,16	5,859	0.000
CI3	<---	Community Involvement	1			
LPP2	<---	PWLT	1			
LPP3	<---	WLT	1,154	0,261	4,418	0.000
Q32	<---	WLT	0,49	0,172	2,849	0,004
Q34	<---	WLT	0,347	0,105	3,314	0.000

- The table shows that regression weight of local people perception index in the prediction of perceived wildlife threats, intention and community involvement are significantly different from zero at 0.001 significant levels (two tails).
- To verify if the local people perception index is one-dimensional suffice at this stage to test the constructs of evident of discriminant validity.

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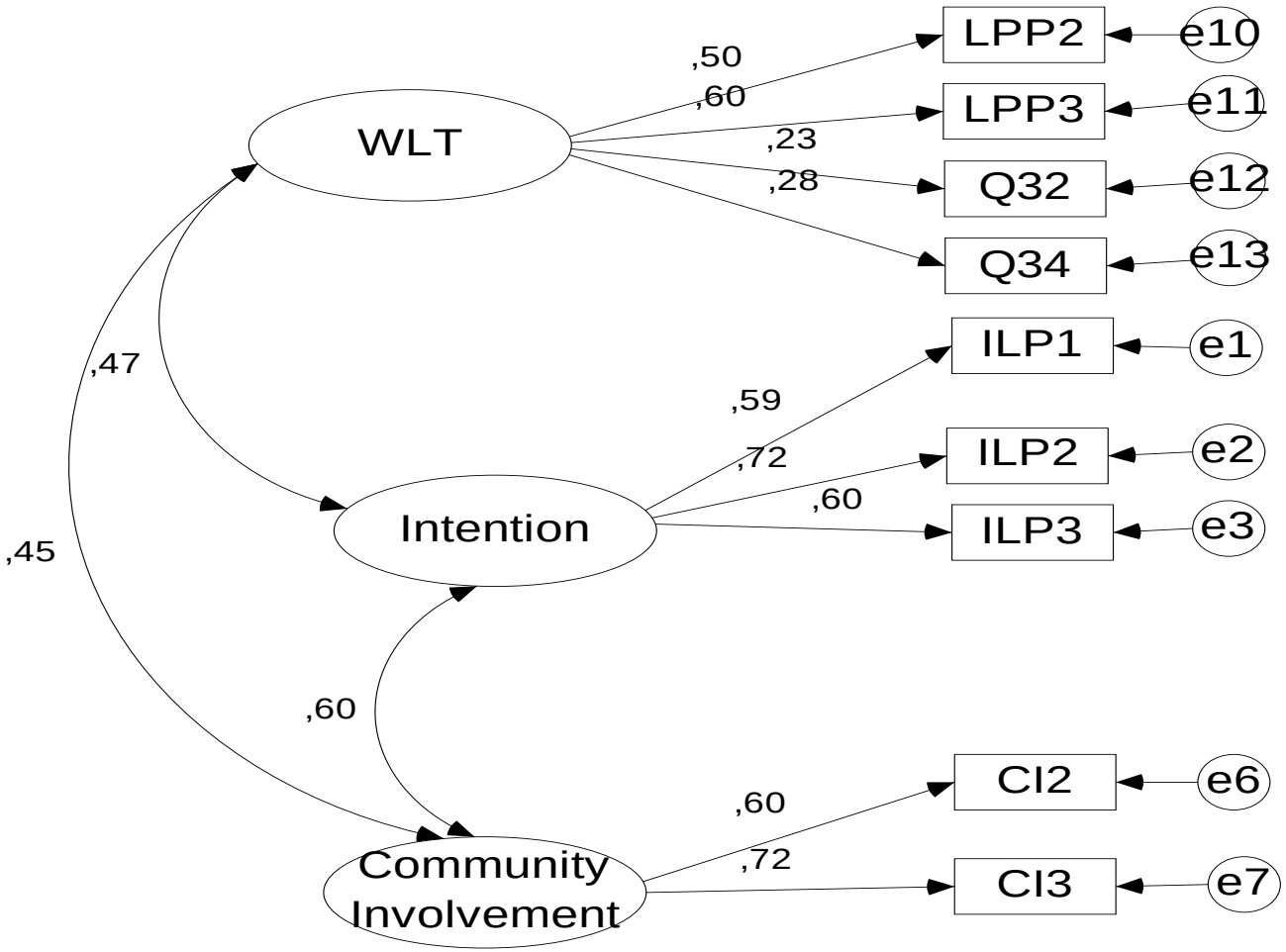
4”. Perception of the people’s index toward wildlife and conservation as a uni-dimensional construct. Are respondents’ responses influenced by one factor?



Test of Discriminant Validity

Although two out of the 4 indicators predicting wildlife threat had a low and insignificant factors loading. Both Average Variance Extracted of intention and community involvement are greater than the correlation coefficient between them (r^2=0.36).

There is evidence of discriminant validity between this two constructs as well. This is interpreted to mean that Local people perception index is not one-dimensional constructs but rather can be considered as three dimensional constructs.

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Conclusion 1

- The wildlife knowledge, attitude, and community sensitization on wildlife has a positive impact on how and what the people think about wildlife and its conservation. A percent improvement on **wildlife knowledge**, **wildlife sensitization** and **attitude** of local people toward wildlife and its conservation, **community involvement** will enhanced by 11.40 %, 18.03 % and 15.22 % respectively

- IC: **We can save money and wildlife by considering this. We always intervene when animals are death.**

- In this study, we also realized that attitude is a strong predictor of intention, and both attitude and intention can explain local people perception by 20 percent. A unit of positive reinforcement on local people attitudes toward wildlife and its conservation will influence positively the way the local people think about wildlife and its conservation by 36 %

IC: **Implication of local people in the wildlife management is crucial**

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Conclusion 2

- What the local people think about wildlife will make them to be more discipline toward wildlife and its conservation

A unit positive change in the measure of perception, the level of discipline toward wildlife will improved by 29 percent

IC: **Anti-poaching strategy will be more easier if local people has a good perception towards wildlife and its conservation.**

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Conclusion 3

Local people perception towards wildlife and its conservation is not a uni-dimensional constructs, meaning that issues as Human Wildlife conflicts management need an integrated response.

- If local people think that:

- Wildlife is meat given by GOD and there is no alternative meat available – The government care on wildlife more than the wellbeing of the local people - Wildlife attack livestock and destroy farms – The main threat to wildlife is poaching – Wildlife extinction is bad for ecosystem and for future generation…

IC: **Multi-dimensional with strong relationship: An integrated approach**

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If you are help local people to do farming building their capacities, you are building good Attitude that will produce good intention and Good perception of wildlife and its conservation.

AKIBA

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