Institutional Capacity of Custom Checkpoints:
Implication for Assessing Wildlife Trafficking Monitoring Units
within Custom Organogram in Four Checkpoints of Northeastern Ethiopia

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Abstract: Wildlife trade is any sale or exchange of wild animal and plant resources by people. The study was conducted from October to December, 2016 with the aim to assess the institutional capacity of custom checkpoints on wildlife trafficking monitoring units within the custom organizational charts in four checkpoints of northeastern Ethiopia. The data was collected by preparing both open and close-ended questionnaire for interview. Furthermore, the data was collected taking individual custom checkpoints as a cluster and hence cluster sampling was used. Final sampling units from each cluster were taken using systematic sampling. The data was analyzed using descriptive statistics to understand the nature of the data for institutional capacity of the custom checkpoints on illegal wildlife trafficking. All 100% of the custom staffs of the surveyed checkpoints responded that, there is no canine unit, which helps to sniff out wildlife products and track illegal wildlife offenders. Moreover, 100% of the custom staffs replied that, there is no horse unit to ease movement in mountainous terrains during patrolling efforts. About 15% of the custom staffs in Galafi checkpoint replied that, there is a prosecution unit to handle illegal wildlife trafficking related offences. About 15% of the custom staffs in both Galafi & Awash custom checkpoints replied that, there is an intelligence unit, which gather information, intended to prevent wildlife trafficking. About 100% of the custom staffs of Galafi, Mille and Ashaita custom checkpoints are not trained with anti-poaching of wildlife trafficking practices. As well, 15% of the custom staffs in Awash checkpoint uses wildlife trade monitoring network with the local communities. All 100% of the custom staffs in Awash, Mille and Ashaita checkpoints reported that, there is no anti-poaching plan in the custom checkpoints. Hence, capacitating custom checkpoints with monitoring units is a vital tool to address the emerging trends of wildlife genetic resource trafficking through northeastern Ethiopia.

Key words: Cites · Smuggling · Transit · Awash · Monitoring

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INTRODUCTION

Illegal wildlife trade is any sale or exchange of wild animal and plant resources by people in contrary to international and state laws [1]. This can involve live animals and plants or a diverse range of products needed or prized by humans including skins, medicinal ingredients, tourist curios, timber, fish and other food products [1].

Global trade in illegal wildlife is potentially vast illicit economy, estimated to be worth billions of dollars each year impeding international efforts to conserve rare and endangered plants and animals [2]. Wildlife trafficking is a transit crime that has wide-ranging implications for society. Not only does it severely affects the environment by impacting biodiversity, it also hampers social and economic development in many communities [3, 4]. Wildlife trafficking is also linked to other serious crimes such as drug trafficking, arms trafficking, human smuggling and document counterfeiting. The huge profits made from illicit wildlife trade act as incentives to organized criminals [5]. Ivory provides income to groups such as the Lord's Resistance Army [6]. There is also growing evidence that militia groups in Africa use profits from the illegal sales of wildlife and there derivatives to fund terrorist activities [6].

Zimmerman [7] has identified three main types of criminals involved in wildlife trafficking: local farmers trying to supplement their incomes, mafia-style groups operating in developing countries and international smuggling rings. Wildlife crimes typically occur in remote rural regions characterized by low population density and diverse geographical features [8]. These factors make it difficult for law enforcement authorities to solve wildlife trafficking crimes and bring the executors of these offenses to justice [8]. Wildlife crime is also associated with corruption at local, regional and international levels [9]. Poor detection of transboundary good by customs service's play a key role in facilitating the illicit trade of wildlife [9]. Markets for protected plants, animals and animal materials include Belgium, China, the Czech Republic, France, Hong Kong, Israel, Japan, Netherlands, Romania, Spain, the United Kingdom and Vietnam [9]. Without the commitment of customs and enforcement bodies in these countries and in the countries from which trafficking originates the illegal trade in endangered species will continue [9]. The great concern for Africa is loss of security, revenue from tourism, which creates jobs and contributes resources for national development [9]. All the while, some species are pressed towards extinction at 1000 times the natural rate [10]. Ethiopia has a relatively short history of dealing with environmental crimes [11]. Currently, there are prominent encouraging efforts to reduce illegal trade of wildlife by signing international conservation and law enforcement conventions [11]. Nevertheless, Ethiopia is identified both as a source and a key trade hub for illegal ivory trafficking [11].

According to the Ethiopian wildlife protection proclamation getting involved in illegal wildlife poaching and trading could result in one year prison sentence and a fine between 5, 000 and 30, 000 birr [12]. Between 2011 and 2014, nearly 560 foreign wildlife traffickers were caught engaged in illegal transite of ivory and live animals including birds [12, 13]. The authority also caught 87 foreigners and five Ethiopians for poaching ivory, skin and other game animals between January and November 2015 [13]. Under the new rules, a person who tries to tame, poach or traffic wildlife or their products illegally without the consultation of the authority shall be fined between $250 and $1500 or given a five-year prison term [12].

The proclamation is being implemented in collaboration with the federal police, customs authority, the national intelligence service and the public at large [12].

According to the Ethiopian wildlife conservation authority, fines amounting to $ 300, 000 were collected from illegal poachers and traffickers between 2011 and 2015 [12]. According to the criminal justice programs and wildlife charities, a kilogram of ivory poached from elephants can be sold in Asia for around USD 850 (€650) [11]. In 2011, over 31 million worth of ivory tusks were smuggled from Eastern Africa to Asia [12; 13]. Recently, the government of Ethiopia has burned to ash six tons of ivory to discourage poaching and wildlife trafficking [12]. Northeastern part of Ethiopia is the most suspected land based transboundary location for wildlife trafficking through the border points. Owing this, there is a need for research on institutional capacity of custom checkpoints towards wildlife trafficking monitoring Units within the custom organizational charts in four custom checkpoints of northeastern Ethiopia.

MATERIALS AND METHODS

Description of the Study Area: The study was conducted in four custom checkpoints of northeastern Ethiopia. Afar national regional state is administratively subdivided into five zones, which in turn are divided into a total of 29 woredas. The people of Afar are predominately pastoralists; hence, their economy heavily relies on livestock and their products. The regional state is found along the Ethio-Dijbuti highway with a total of four

Fig. 1: Map of the study area (Afar national regional state, northeastern Ethiopia) [14]

custom checkpoints. Mille custom checkpoint is found 162 km away from the capital city of Afar national regional state. It is also found within the catchment flowing from southern Tigray, southern Wello and the extended segment of Addis Abeba-Awash highway. Awash custom checkpoint is also found in Afar national regional state. Awash transit route is found at the busiest roads in the country, which head to the port of Somalia (The "Addis-Somalia transport corridor") and the port of Djibouti via Harar and Logia towns (The Addis-Djibouti transport corridor) and thus link the major part of eastern Ethiopia with the country's center [14]. Due to the town's location, there is a lot of business activity [14]. Galafi custom checkpoint is found in Afar national regional state at 140 km away from the capital city of the region. Asaita satellite custom checkpoint is administered under Ethiopian custom and revenue authority Mille custom branch office. The checkpoint is found along the illicit animal genetic resource trafficking lines border points of northeastern Ethiopia.

Methods

Methods of Data Collection: The target population of the study was custom staffs who are working in the checkpoints administrations of northeastern Ethiopia. The researchers use primary data for the study. The data was collected by preparing both open and close ended questionnaire for interview. Enumerators, with continuous supervision, was contacted each and every respondents

face- to- face to get questionnaires filled. Furthermore, the consent of wildlife trafficking for law enforcement personnel's was confirmed being fully informed of the study objectives prior to the interview. In order to avoid communication discrepancies between the data collectors and the respondents, the questions were translated to Amharic. The response variable of the study was institutional status of custom checkpoints towards illegal wildlife trafficking practice that are sampled from the population.

Study Design: Sampling procedure was designed to collect primary data. The northeastern parts of Ethiopia do have four custom checkpoints, so the data was collected taking individual custom checkpoint as a cluster and hence cluster sampling were used. After determining the total sample size (n), proportional allocation to each cluster (i.e. checkpoint) was done by further considering the amount of custom checkpoint personnel's on wildlife trafficking from each custom checkpoint. Final sampling units from each cluster were taken using systematic sampling technique.

Methods of Statistical Analysis: The study uses descriptive statistics to understand the nature of the data for institutional capacity of custom checkpoints towards illegal wildlife trafficking practices. Inferential methods for detail analysis of the variables were used. Mean values were calculated for the selected variables.

RESULTS

Socio- Demographic Characteristics of the Custom Checkpoint Staffs of Northeastern Ethiopia: The educational background of the interviewed custom checkpoint staffs were bachelor of Art (BA) (65%, 60% and 70%), in Galafi, Awash and Mille custom checkpoints respectively (Table 1). All (100%) of the respondents in Ashaita custom checkpoint administration were completed grade 10th.

Institutional Capacity of Custom Checkpoints on Wildlife Trafficking in Northeastern Ethiopia
Patrolling Units Within the Custom Organogram of Northeastern Ethiopia: All 100% of the custom staffs in all the surveyed custom checkpoints responded that, there is no security unit to monitor and detect illegal wild animals, plants and their derivatives. All 100% of the custom staffs in the custom checkpoints responded that, there is no canine unit, which helps to sniff out wildlife products and track illicit wildlife offenders. All 100% of the custom staffs responded that, there is no horse unit to ease movement in mountainous terrains during patrolling efforts in all the surveyed custom checkpoints administration of northeastern Ethiopia.

Law Enforcement Units Within the Custom Organogram of Northeastern Ethiopia: About 15% of the custom staffs in Galafi checkpoint replied that, there is a prosecution unit for handling illicit wildlife related offences. About, 10% of the custom staffs in Awash checkpoint responded that, there is a prosecution unit to handle illegal wildlife related offences. About 10% of the custom staffs of Galafi checkpoint responded that, there is a wildlife investigation unit, which responds to wildlife criminal practices. About 5% of the custom staffs of Awash checkpoint responded that, the checkpoint have illicit wildlife trafficking investigation units. 15% of the custom staffs in both Galafi & Awash checkpoints replied that, the- checkpoint have intelligence unit, which gathers information intended to preempt wildlife related crimes in the checkpoint administrations.

Human Resources Within the Custom Organogram of Northeastern Ethiopia: About 15%, 20% each of the custom staffs in Galafi, Awash and Mille custom checkpoints reported that, there is enough human resource to effectively patrol in and around the custom checkpoints physical geography. All (100%) of the custom staffs of Galafi, Mille and Ashaita custom checkpoint are not trained with anti-poaching plan of wildlife trafficking practices. About 25% of the custom staffs in Awash checkpoint responded that, there are staffs trained in all aspect of anti-poaching and follow up. In the checkpoint administration.

Material Resources Within the Custom Organogram of Northeastern Ethiopia: All 100% of the custom staffs in Galafi, Mille and Ashaita custom checkpoint reported that, the federal police staffs are not well- trained to examine illegal wildlife trafficking offences in the custom checkpoints administration. 5% of the custom staffs of Awash checkpoint replied that, the federal police staffs are well- trained to examine illegal wildlife trafficking offences in the custom checkpoint administration. Based on the information obtained from the custom staffs of northeastern Ethiopia 10% in Galafi and 15% in Awash checkpoint, have sufficient number of vehicle for patrolling and inspection of illicit wildlife trafficking. All (100%) of the custom staffs in Mille and Ashiata custom checkpoint responded that, they don't have sufficient number of vehicles to patrol and inspect illicit wildlife trafficking and their derivatives.

Priority of the Enforcement Targets Towards Wildlife Trafficking in Custom Checkpoints of Northeastern Ethiopia: All 100% of the custom personnel's in the checkpoints administration responded that, priority of the enforcement targets was not on illicit trade in wildlife rather it was on contraband goods (Table 4). The custom checkpoints located at the border points of northeastern Ethiopia least importantly target illicit wildlife trafficking in the enforcement priority of the checkpoint administration.

Challenges of Monitoring Wildlife Trafficking in the Custom Checkpoints of Northeastern Ethiopia: All (100%) of the interviewed custom staffs of northeastern Ethiopia, responded that, lack of interagency cooperation is the most important challenge while managing illegal wildlife trafficking practices in the custom checkpoints administration (Table 5). Lack of interagency cooperation, lack of monitoring performances and lack of transparency were ranked 1st, 2nd and 3rd enforcement challenges respectively.

Table 1: Socio-demographic characteristics of the custom checkpoint staffs of northeastern Ethiopia

		Selected checkpoints								
		Galafi (n=20)		Awash (n=20)		Mille (n=10)		Asaita (n=4)		Total (n=54)	
No	Variables	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
1.	Age of the Personnel (yr)	28.50	3.086	28.10	4.610	32	4.372	48.75	8.139	30.5	6.876
2.	Work Experience (yr)	5.57	2.932	5.9	2.511	6.55	4.524	13.25	11.587	6.44	4.507

Table 2: Educational background of the custom checkpoint staffs of northeastern Ethiopia

			Selected checkpoints (%)				
No	Variables	Categories	Galafi (n=20)	Awash (n=20)	Mille (n=10)	Asaita (n=4)	Total (n=54)
1.	Educational Background	10th	30	30	0	100	29.6
		11th	0	5	0	0	1.9
		12th	5	5	0	0	3.7
		BA	65	60	70	0	59.3
		LLB	0	0	20	0	3.7
		MA	0	0	10	0	1.9

Table 3: Institutional capacity of the custom checkpoints on wildlife trafficking practices in northeastern Ethiopia

			Selected custom checkpoints (%)				
No	Questions	Categories	Galafi (n=20)	Awash (n=20)	Mille (n=10)	Asaita (n=4)	Total (n=54)
1.	Are their specialized security units, to monitor and detect wild animals, plants and their derivatives?	Yes	0.0	0.0	0.0	0.0	0.0
		No	100.0	100.0	100.0	100.0	100.0
2.	Is there a canine unit, which helps to sniff out wildlife products and track wildlife offenders?	Yes	0.0	0.0	0.0	0.0	0.0
		No	100.0	100.0	100.0	100.0	100.0
3.	Is there horse unit, to ease movement in mountainous terrains during patrolling efforts?	Yes	0.0	0.0	0.0	0.0	0.0
		No	100.0	100.0	100.0	100.0	100.0
4.	Is there prosecution unit for handling wildlife related offences?	Yes	15.0	10.0	0.0	0.0	9.3
		No	85.0	90.0	100.0	100.0	90.7
5.	Is there security research and analysis unit, to study emerging trends and recommend appropriate solutions?	Yes	10.0	5.0	-	-	5.6
		No	90.0	95.0	100.0	100.0	94.4
6.	Is there wildlife investigation unit, which responds to wildlife crime?	Yes	10.0	5.0	0.0	0.0	5.6
		No	90.0	95.0	100.0	100.0	94.4
7.	Is there intelligence unit, which gathers information intended to preempt wildlife crime?	Yes	15.0	15.0	-	-	11.1
		No	85.0	85.0	100.0	100.0	88.9
8.	Is there emergency management unit to deal with urgent situations?	Yes	20.0	10.0	0.0	0.0	11.1
		No	80.0	90.0	100.0	100.0	88.9
9.	Is there security data management unit for conservation crime data management?	Yes	20.0	-	-	-	7.4
		No	80.0	100.0	100.0	100.0	92.6
10.	Is there an anti-poaching plan in the custom checkpoint administration routes?	Yes	15.0	0.0	0.0	0.0	5.6
		No	85.0	100.0	100.0	100.0	94.4
11.	Is there enough human resource to effectively patrol in and around the custom checkpoint area?	Yes	15.0	20.0	20.0	-	16.7
		No	85.0	80.0	80.0	100.0	83.3
12.	Are the staffs well-armed to examine wildlife trafficking offences in the custom checkpoint?	Yes	-	5.0	0.0	0.0	1.9
		No	100.0	95.0	100.0	100.0	98.1
13.	Are the staffs trained in all aspect of anti-poaching and follow up in the custom checkpoint?	Yes	-	25.0	-	-	9.3
		No	100.0	75.0	100.0	100.0	90.7
14.	Is the existing communication system adequate to monitor wildlife trafficking in the custom checkpoint?	Yes	30.0	25.0	20.0	-	24.1
		No	70.0	75.0	80.0	100.0	75.9
15.	Are vehicle numbers sufficient for patrolling and inspection of illicit wildlife trafficking?	Yes	10.0	15.0	0.0	0.0	9.3
		No	90.0	85.0	100.0	100.0	90.7
16.	Is there patrol book to record inspection result of wildlife trafficking in the custom checkpoint?	Yes	20.0	5.0	-	-	9.3
		No	80.0	95.0	100.0	100.0	90.7
17.	Is their wildlife trade monitoring network with the local communities in the custom checkpoint?	Yes	20.0	15.0	0.0	0.0	13.0
		No	80.0	85.0	100.0	100.0	87.0

Table 4: Priority of the enforcement targets on custom checkpoints of northeastern Ethiopia

No	Contraband goods	Illicit trade in wildlife	Money laundering	Smuggling of counterfeit goods	Smuggling of illegal drugs	Smuggling of tobacco goods	Smuggling of weapons
Galafi	7.0	1.7	3.7	3.45	4.15	4.2	4.1
Awash	7.0	1.45	3.2	3.15	3.55	4.35	5.3
Mille	7.0	1.5	3.2	4.1	3.6	4.1	4.6
Ashaita	7.0	1.25	3.75	2.75	3.25	4.75	3.5

* 7: The most important target, 1: the least important target

Table 5: Challenges of monitoring wildlife trafficking in in checkpoints of northeastern Ethiopia

Enforcement challenges	Selected custom checkpoints			
	Galafi (n=20)	Awash (n=20)	Mille (n=10)	Ranking
Lack of monitoring performance	3.5	3.8	1.4	2
Lack of resources	2.35	2.6	0.6	5
Lack of capacity	2.9	2.7	1.1	4
Lack of interagency cooperation	3.75	3.95	1.8	1
Lack of transparency	2.95	2.3	1.4	3

* 5: The most important challenge, 1: the least important challenge

DISCUSSION

Patrolling Units Within the Custom Organogram of Northeastern Ethiopia: All 100% of the custom staffs of the surveyed checkpoints responded that, there is no security unit to monitor and detect illegal wild animals, plants and their derivatives. This might be associated with the less efforts to mobilize the security personnel towards illegal wildlife trafficking. Moreover, it might be related to the lack of systematic departmentalization of the human resources in a manner to fight illegal wildlife trafficking practices.

All 100% of the custom staffs of the surveyed custom checkpoints responded that, there is no canine unit, which helps to sniff out illegal wildlife products and tackle wildlife offenders. In contrary, studies reported that, customs administrations tend to deploy canine units to detect stashed goods in luggage and concealed goods inside clothes as a vital enforcement tool [15]. Compared to those for the detection of illegal drugs, a small number of customs checkpoint administrations have canine units for the detection of wildlife smuggling practices [15].

About 100% of the custom staffs of northeastern Ethiopia responded that, there is no horse unit to ease movement in mountainous terrains during patrolling activities. In an effort, such practices makes the patrolling groups to experience the tertian physical geography of the custom checkpoint administration

Law enforcement units within the custom organogram of northeastern Ethiopia

About 15% of the custom staffs in Galafi custom checkpoint replied that, there is a prosecution unit for handling wildlife related offences. 10% of the custom staffs of Awash checkpoint responded that, is the checkpoint have a prosecution unit. This might be related with the partial integration of the structural frames towards fighting illicit trade of wildlife and their derivatives. This is in agreement with the study conducted by Chang-Ryung Han [15], which noted, custom checkpoints administration approaches to protect illegal wildlife trade activities are encapsulated in the customs enforcement practices.

About 10% of the custom staffs of Galafi custom checkpoint responded that, there is illegal wildlife trafficking investigation unit which responds to illicit wildlife crimes. Around 5% of the Awash custom checkpoint staffs have also wildlife illegal wildlife trafficking investigation unit. This is consistent with the study done by Chang, 2014 which noted, even if they mobilize the investigation forces, they tend to use general investigation forces rather than establishing a special investigation unit. In contrary, 100% of the custom staffs in Mille and Ashita custom checkpoints responded that, the checkpoints have no wildlife investigation units. This might happen due to the institutional inconsistency to fight against illegal wildlife trafficking among custom branches of northeastern Ethiopia.

About 15% of the custom staffs in both Galafi & Awash custom checkpoints replied that, there are intelligence unit, which gathers information intended to preempt illicit wildlife crime in the checkpoint

administration. Despite the fact that, the intelligence unit of the surveyed custom checkpoint is engaged on contraband goods than illicit wildlife trafficking. Our finding is in agreement with the study carried out in West Malaysia which noted, all custom staffs reflected that, insufficient institutional capacity is the primary challenge to enforce wildlife trafficking laws [16].

Human Resources Within the Custom Organogram of Northeastern Ethiopia: About 15%, 20% in each of the custom staffs of Galafi, Awash and Mille custom checkpoint respectively reported that, there is enough human resource to effectively patrol in and around the custom checkpoint administration of northeastern Ethiopia. However, the human capitals administration is poorly mobilized in fighting against illegal wildlife trafficking practices. About 100% of the custom staffs of Galafi, Mille and Ashaita custom checkpoints responded that, the staffs are not trained on anti-poaching basics of wildlife trafficking practices. About 25% of the custom staffs in Awash custom checkpoint administration responded that, there are custom staffs trained in all aspect of anti-poaching and follow up in the checkpoint administration. The findings of the current study are consistent with similar studies conducted in west Malaysia which shown, insufficient institutional capacity in terms of man power, skills and equipment is the main challenge to tackle illegal wildlife trafficking practices [16].

Material Resources Within the Custom Organogram of Northeastern Ethiopia: All 100% of the custom staffs in Galafi, Mille and Ashita custom checkpoints reported that, the federal police staffs are not well- trained to examine illegal wildlife trafficking offences in the custom checkpoints of northeastern Ethiopia. About 5% of the interviewed custom staffs responded that, the federal police staffs are well- trained to examine illegal wildlife trafficking offences in the custom checkpoint administration. About 10% of the custom staffs in Galafi and 15% in Awash checkpoints administration responded that, there are sufficient number of vehicles for patrolling and inspections of illicit wildlife trafficking practices. All100% of the custom staffs in Mille and Ashiata custom checkpoints replied that, the checkpoint don't have sufficient number of vehicles for patrolling and inspection of illicit wildlife trafficking practices. The findings of the current study are consistent with similar studies conducted in western Malaysia which shown,

communication tool, number of vehicle are not enough to undertake law enforcement practices on illicit wildlife trafficking practices [16].

Information Networking Within the Custom Organogram of Northeastern Ethiopia: About 20% of the custom staffs in Galafi custom checkpoint replied that, there is a security data management unit for wildlife conservation crime data management practices. However, 100 % of the custom staffs in Awash, Mille and Ashaita custom checkpoints reported that, there is a security data management unit for conservation crime data management in the checkpoint administration

About 10% of the custom staffs in Galafi and 5% in Awash custom checkpoint reported that, there is a security research and analysis unit, to study the emerging trends and recommend appropriate solutions towards illicit wildlife trafficking crimes.within the physical geography of the checkpoint administration.

About 30%, 25% and 20% of Galafi, Awash and Mille custom checkpoints replied that, there is an existing adequate communication system to monitor illicit wildlife trafficking in the custom checkpoints administrations

Information Management and Social Interfaces Within the Custom Organogram of Northeastern Ethiopia: About 20% of the custom staffs in Galafi checkpoint responded that, there is a patrol book to record inspection results of the illegal wildlife trafficking practices in the checkpoint administration. Around 5% of the custom staffs of Galafi checkpoint administration responded that, there is a patrol book to record inspection results of illegal wildlife trafficking. About 20% of the custom staffs in Galafi custom checkpoint reported that, there administration have illegal wildlife trade monitoring network with the local communities in the custom checkpoint administration. As well, 15 % the custom checkpoint staffs of Awash use wildlife trade monitoring network with the local communities. The findings of the current study are in contrary with the similar study conducted in west Malaysia which shown, lack of cooperation from the public to convey information about wildlife crime activities is the challenge of enforcement practices [16]. All 100 % of the custom staffs in Awash, Mille and Ashaita checkpoints responded that, there is no an anti- poaching plan in the custom checkpoint administrations. About 15% of the custom staffs in Galafi checkpoint reflected that, there is an anti- poaching plan

in the checkpoint administration. All 100% of the custom staffs in Galafi checkpoint reported that, there is an emergency management unit to deal with urgent situations of illegal wildlife trafficking practices. Around 20 % of Galafi and 10% of Awash custom checkpoint staffs reported that, there is no emergency management unit to deal with urgent situations Of illicit wildlife practices within the custom checkpoint administration of northeastern Ethiopia.

Priority of the Enforcement Targets on Wildlife Trafficking in Custom Checkpoints of Northeastern Ethiopia: All 100% of the custom personnel's in the surveyed checkpoints responded that, priority of the enforcement targets was not an illicit trade in wildlife rather it was on contraband goods. This is in agreement with the study done by Chang-Ryung Han [15] which noted; customs checkpoint administrations' priority to the fight against wildlife crime is lower than other types of smuggling practices. in central and southern Africa.

Challenges of Monitoring Wildlife Trafficking in the Custom Checkpoints of Northeastern Ethiopia: All 100% of the interviewed custom staffs of northeastern Ethiopia responded that, lack of interagency cooperation is the most important challenge while managing wildlife trafficking in the checkpoint administration. The findings of the current study are consistent with the similar study conducted in western Malaysia which shown, the major challenges of wildlife crime law enforcement activities are poor interagency cooperation and coordination [16].

Institutional Implication of Illicit Wildlife Trafficking Practices in Northeastern Ethiopia: All of the surveyed custom checkpoints of northeastern Ethiopia are found in the state highest national economic corridor of Ethio-Djibouti highway. Furthermore, the custom checkpoints are located at the border point interfaces of Djibouti. Some of the checkpoints are situated at the interface of Awash national park, Haladagi Asebot proposed national park, Yangdui Rassa national park and Mille Serdo wildlife reserve. In an effort to halt the multifaceted problems facing the wildlife potentials there is a need to rearrange the staffing structure of the custom checkpoints administration of northeastern Ethiopia. The surveyed border point custom checkpoints should have a patrolling department with specialized security units, canine unit and horse unit. Such units will ease the detection process and help to address multiple tasks of wildlife conservation and economic aspects. Likewise, based on the standards developed by world custom organization a large assembly of law enforcement departments should be enlightened with prosecution unit, wildlife investigation unit and intelligence units. Custom checkpoints need to have a good human capital department, staffs trained in all aspect of anti-poaching and follow ups. Material resources of each custom checkpoint should possess sufficient vehicle numbers for patrolling and inspection of illegal wildlife trafficking. Moreover, wildlife trafficking information networking departments with security research and analysis unit, emergency management unit, security data management unit should be integrated to the custom organizational charts.

Community interfaces should possess anti- poaching plan in an effort to halt wildlife trafficking problems within the physical geography of northeastern Ethiopia. Inaddtion to this, the communication system of the field patrol units and law enforcements officers should be supported with a data kept in patrol book and improved wildlife trade monitoring network with the local communities adjacent to the checkpoint administration. Generally, the northeastern part of Ethiopia custom checkpoints should be capacitated and institutionally arranged in an effort to address cross border illegal wildlife trafficking crimes in northeastern Ethiopia

Way Forwards:

- The staff capacity and professional composition of northeastern Ethiopia custom checkpoints should be refreshed by continuous training programs. Furthermore, there should be illicit wildlife trafficking monitoring personnel responsible in issues pertinent to wildlife trafficking in all the surveyed custom checkpoints– of northeastern Ethiopia.
- The Ethiopian biodiversity institute should work on arranging the least enforcement priority given by custom staffs towards illegal wildlife trafficking through community campaigns or other communication and devising research based national legal frameworks.
- The listed enforcement challenges should be addressed via harmonization and secotral forum on illegal wildlife trafficking practices.

- The poor institutional synchronization to halt illegal wildlife trafficking is leading to have less institutional collaboration between and among enforcement authorities. Hence, stakeholder engagement and integration should be taken as a means to enhance the enforcement process of illicit wildlife trafficking in custom checkpoints of northeastern Ethiopia.

ACKNOWLEDGMENTS

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