# WILDLIFE CRIME AND RURAL LIVELIHOODS IN DEVELOPING COUNTRIES

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**ABSTRACT:** This paper reviews wildlife crime in developing countries, its effects on rural livelihoods and the measures taken to curb it. The key question is whether the efforts made by the Convention on International Trade in Endangered Species of Fauna and Flora (CITES) and other organizations in conjunction with various nations is paying off. While efforts by CITES are being lauded, individuals and governments have violated the laws that regulate exports, imports and re-exports of wild. Thus, this crime has pushed such species, especially the endangered species to the brink of extinction, hence impacting on the livelihoods of the rural poor. Rural poverty, food insecurity, corruption, lack of law enforcement, corporate crime, lack of legislation, conflicts, and increasing demand have been identified as the main drivers of this crime. Trade suspensions of non-compliance nations by the Convention on International Trade in Endangered Species of Fauna and Flora, seizures of wildlife species and products as well as strengthening of law enforcement, coordination between nations, and raising public awareness through workshops, conferences and the media have been some of the solutions embarked on to solve this crime. To achieve a more sustainable economic growth in developing nations, tackling the crime suggest priority attention be given to this resource and tougher sanctions be carried out by CITES and other international and national organizations.

**Keywords:** Wildlife, Wildlife crime, Livelihood, Rural livelihood, Convention on International Trade in Endangered Species of Fauna and Flora.

## 1 INTRODUCTION

There has been increasing consciousness and interest among policymakers, development practitioners, conservation scientists and academic scholars, about the importance and value of environmental resources in the livelihoods of poor rural communities (e.g., [1], [2], [3]). Wildlife, as a natural resource, is of no difference as researches (e.g. [4], [5], [6], [7], [8], [9]) have pointed out the importance of wildlife in rural livelihoods across the world. Many, if not all rural households in developing countries, depend on wildlife resources for subsistence purposes, as well as income generation. In fact, many of the rural households derive a significant part of their cash from the sales of the wildlife products. That notwithstanding, some wildlife populations have seriously dwindled because a significant number of the species and the products traded are for foreign markets. This has pushed such species, especially endangered ones, to the brink of extinction.

To curb this, governments of the world have tried to implement control measures towards access to and trade in the species within and outside their countries. Their emphases have always been on conservation as the driving force behind such measures. A UNEP's publication by [10] stated thus 'sustainable use and trade of natural resources is at the interphase of conservation and development, intricately linked with the economic, social and environmental dimensions of sustainable development.....' To ensure that international trade in the products of wild animals and plants does not threaten the survival of the species in the wild, the Convention on International Trade in Endangered Species of Fauna and Flora (CITES), which currently is made up of 182 countries, called Parties, has an international agreement that prohibits or regulates international trade on these species and their products.

Though there have been concerns about trade controls and the resulting changes in the wildlife trade having a negative impact on the livelihoods of those earning an income as a result of wildlife harvest, specifically the rural poor, wildlife crime has continued to rob local people of their livelihoods.

## 2 WILDLIFE CRIME AND RURAL LIVELIFOODS

The definition of 'wildlife' is overshadowed by the diversity of wildlife concepts adopted by various authors, organizations and institutions. According to some of the available sources, wildlife means:

- non-domesticated vertebrates, especially mammals, birds, and fish;
- animals living in the wilderness without human intervention;
- any animal that is not tamed or domesticated;
- animals that are not tamed or domesticated; may be small organisms only visible to humans if seen through a microscope, or animals as large as a dinosaur (wildlife includes, but is not limited to, insects, spiders, birds, reptiles, fish, amphibians, and mammals, if non-domesticated);
- any species of the animal kingdom, except fish, which is wild by nature, whether or not bred or reared in captivity, and includes any part, egg or offspring thereof, or the dead body or parts thereof...;
- undomesticated species of plants and animals including insects and reptiles;
- all living things (except people) that are undomesticated.

These variations of wildlife concepts available in websites and documents indicate the difficulty of defining wildlife precisely. This obviously means that, there is no consensus on any universally accepted definition of wildlife.

Perhaps, wildlife is best defined by the objectives of the institutions and organizations concerned with wildlife management. Looking at the definitions above, three broad categories come up: those that consider animals; those that include all animals except fishes; and those that include plants and animals. Overwhelming research and management efforts, as well as public attention, has caused the definition of wildlife to focus on all fauna and flora that are undomesticated. This will be our working definition of wildlife for this paper.

#### 2.1 WILDLIFE CRIME

Historically, abundance of wildlife has been an important factor affecting humans' ability to meet the basic goal of survival. But as civilizations developed through the acquisition of knowledge, such as that which led to the development of a livestock industry, interest shifted from hunting to farming and ranching; thus, interest in wildlife declined. This decline continued in most developing societies until social and economic technological advances provided more leisure time and economic opportunities for pursuing such secondary goals as tranquillity. Evidence of this increased interest is reflected in the relatively recent establishment of numerous wildlife reserves, game ranches, and fee hunting institutions. There have equally been renewed interests in its trade the world over. Annually, the international wildlife trade is estimated by CITES to include hundreds of millions of plant and animal specimens. The trade is diverse, ranging from live animals and plants to a vast array of wildlife products derived from them, including food products, exotic leather goods, wooden musical instruments, timber, tourist curios and medicines. This has given rise to illegal trade. Not all wildlife trade is illegal as many wild plant and animal species are caught or harvested from the wild and sold legitimately as food, ornamental plants, leather, medicine, etc. Wildlife trade escalates into a crisis when an increasing proportion is illegal and unsustainable – directly threatening of many species in the wild.

The International Consortium on Combating Wildlife Crime (ICCWC) view crime as any act committed contrary to national laws and regulations intended to protect natural resources and to administer their management and use. At the international level, crime also involves violations of the Convention on International Trade in Endangered Species of Fauna and Flora (CITES), which regulates exports, imports and re-exports of wildlife. The Partnership for Action Against Wildlife Crime (PAW) defined wildlife crime as an act of people buying, selling, harming or disturbing wild animals or plants that are protected by law. It covers a wide range of activities from high profile international trade in endangered species to activities such as entering a protected area to collect firewood and other products. In the view of CITES, wildlife crime is not different from many other forms of illegal activities. A UNEP's study by [10] summarized that though wildlife crime is not defined in any treaty, it is understood to refer to any environmental-related crime that involves the poaching, capture, collecting or processing of animals and plants taken in contravention of national laws, and any subsequent trade in such animals and plants, including their derivatives or products. Thus, it includes crime associated with fisheries and timber products, the wildlife commodities that account for the greatest portion of global trade.

CITES establishes a worldwide system of controls on international trade in threatened animals and plants and specimens derived from them. It does this by requiring such trade to be authorized and restricted by government-issued permits or certificates. The aim is to ensure that commercial international trade in specimens of species threatened with extinction is prohibited except in special cases and that such trade in species whose survival might be threatened by it is controlled and monitored to ensure that it is sustainable. The status of CITES-listed species is drafted in the lists of species for Appendices I, II and III. Any signatory country may suggest additions of species to the appendices. These suggestions must be supported by strong empirical evidence of endangerment and then approved by a two-thirds majority of the voting parties.

Appendix I of CITES contains a list of "all species threatened with extinction which are or may be affected by trade. CITES effectively prohibits international commercial trade in Appendix I species (permitted only in exceptional licensed circumstances) [11]. Examples include the great apes, tigers, sperm whales, many parrots and macaws and Brazilian rosewood.

Appendix II contains species which are not sufficiently endangered by international trade to warrant their inclusion in Appendix I. Nevertheless, these species are in sufficient danger to warrant some control of trade. These species include those which are heavily traded but have relatively stable populations. The Appendix also lists species which are not threatened, but are similar in appearance and "look-like" threatened species. Examples include the African lion, hippopotamus, many parrots and birds of prey, seahorses, corals and the majority of orchids and cacti.

Appendix III contains species protected or regulated by at least one country and assistance by other Parties is required in order to control international trade. For example, Peru, Colombia and Guatemala have all listed Spanish cedar and Botswana listed African civet on Appendix III.

CITES regulates international trade in specimens listed on Appendices I-III based on a system of permits. Each Party is required to designate a Management Authority competent to grant CITES permits and certificates, and a Scientific Authority responsible for advising the Management Authority on scientific aspects of implementation and monitoring of national trade. States that do not take measures to protect endangered species are subject to escalating international pressure, which can ultimately result in trade sanctions.

#### 2.2 THE CONCEPT OF LIVELIHOOD

It is a known fact that in almost every domain of human life, change is accelerating. This change, according to [12] is not just fast; it is getting faster and faster. To them, this is due to the fact that human aspirations are growing at an accelerating rate and because of future uncertainty, man's concepts, values, methods and behaviour especially for most of the rural people is likely to change to make a living in terms of capabilities, equity and sustainability. Livelihood, basically, is a means of living, and the capabilities, assets and activities required for it. The work of [12] built on participatory research practices of and ideas put forward by the World Commission on Environment and Development developed a definition of livelihoods and the factors that make them sustainable as thus:

A livelihood comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living: a livelihood is sustainable which can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; and which contributes net benefits to other livelihoods at the local and global levels and in the short and long term.

Even though the authors stressed that it is used most commonly at the household level, its origin in the assets, capabilities and activities framework, many definitions and frameworks concerned with poverty reduction, sustainability and livelihoods strategies (e.g. [13], [14] [15], [16], [17] ) are built on this. This household triangle of assets, capabilities and activities lies inside a triangle which represents earth, natural resources, and the range of other on- and off-farm resources that people can draw from.

Households use their assets and capabilities to engage in many different strategies to try to secure their livelihoods. The more diversification there is in the livelihood strategies of a household, the more secure it is likely to be [18]. Livelihood diversification refers to a household's attempt to reduce its vulnerability by having more than one livelihood activity. In a diversified household, if one productive activity does not provide enough, or fails completely, there are other sources of livelihood that the household can fall back on.

Rural households utilize wildlife as one asset for livelihood diversification, development of non-farm economy and rural growth. This is because many of the rural households in developing countries depend heavily on wildlife resources for subsistence purposes and income generation as a variety of species are traded in many forms in order to produce a variety of products which include: food, medicines, clothing, pets and collector items, ornamental plants, manufacturing and

construction materials. Studies such as [19] observed that, the rural people around the Cross River National Park of Nigeria exploit wild plants for medicinal purposes and as a way of diversifying their livelihoods, commercialization of a number of these species is carried out. The study also revealed that because of habitat destruction, unsustainable methods of exploitation, and overexploitation coupled with ignorance. If commercialization is unchecked, there is the possibility of these species being degraded and as such the people's livelihoods will be at stake in the long run.

A study by [20] noted that the impacts of the various wildlife developments on local livelihoods are diverse, positive and negative, differ substantially between villages and individuals, and are mediated through important institutions. It has been reiterated by [5] that the general direction of international wildlife trade flows is from developing to developed countries. According to the UN Food and Agriculture Organization, cited in [5], major exporters of NWFPs include China, India, Indonesia, Malaysia, Thailand and Brazil while the European Union, United States and Japan account for the imports. China is equally an important importer of wildlife products. This implies that abundance of wildlife will uplift rural livelihoods as it will generate a significant part of their cash income from sales of the wildlife products as they complement their on-farm income especially if these activities are done in a more sustainable way. On the other hand, when these activities are carried out unsustainably, the natural resource base will be destroyed and thus undermine the livelihoods of many people.

#### 2.3 IMPACT OF WILDLIFE CRIME ON LIVELIHOODS

Because of the nature of the crime run by dangerous international networks, it is almost difficult to obtain reliable figures for the value of this illegal trade. Experts at TRAFFIC estimate that it runs into hundreds of dollars. The global value in all the products, including timber and fisheries, is estimated to be a minimum of \$19 billion annually [21]. According to [22] the illegal trade in wildlife excluding timber and fisheries has been estimated by different sources to be worth 7–23 billion dollars annually. Since it is a rapidly rising threat to the environment, revenues from natural resources, state security, and sustainable development [23], individual estimates from the Organisation for Economic Co-operation and Development (OECD), United Nations Environment Programme (UNEP), International Crime Police Organization (INTERPOL) and United Nations Office on Drugs and Crime (UNODC) place the monetary value of different forms of transnational organized environmental crimes to between USD 70–213 billion annually [22]. This compares to a 2013 global ODA of ca. USD 135 billion [24].

Wildlife crime has negative side effects on human livelihoods, the local community, wildlife populations and the environment. It affects the individual directly. According to [25] the wildlife crime affects livelihood in that local people are often the ones that are contracted by the trafficking networks to poach, provide food, accommodation, information and acts as guides. This acts as incentives for them to drop out of formal economy and join this illegal trade.

This trade harms local people who depend on wildlife for food. Rural people of tropical Africa forests consume over a million metric tons of wild meat annually [25]. The World Wide Fund (WWF) [26] in its newsletter also stated that while many people in developed countries are cushioned from any effect caused by a reduced supply of a particular household item, many people in the developing world depend entirely on the continued availability of local wildlife resources.

This trade also undercuts the livelihoods of many people whose occupations depend on the presence of wildlife, e.g. trophy hunting, employment in hotels and lodges, transportation, and cultural performances provided by wildlife tourism. For example, experts believe that elephants will go into extinct within the next decade if the killing continues at this rate. The extinction of one species can have a negative economic effect on a local community's tourism industry.

In addition to the impact on human livelihoods caused by the over-harvesting of the wildlife, is the harm caused by overexploitation of species to the living planet in a wider way. For example with no predators, the herbivores will eat up the trees to extinction which will further lead to serious disturbances to the complex web of life.

Wildlife crime also has positive impact on rural livelihoods. In the short term, communities or individuals may benefit from illicit income-earning opportunities associated with harvest and trade. These can make a significant contribution to local livelihoods where few alternatives are available. According to [27] indigenous people in Kalimantan, Indonesia, are highly dependent on forest resources (some of which are illegally harvested) to meet income and other livelihood needs. However, these benefits are likely to be short-lived where vulnerable species are overexploited, which is often the case when harvesters have no legal long-term stake in the resource.

#### **3** OVERVIEW OF WILDLIFE CRIME IN DEVELOPING COUNTRIES

The illegal exploitation of endangered species to feed the illicit global trade is rising at an alarming rate. It has been viewed by many authors (e.g. [28], [29], [10]) that wildlife crime is a transnational organized crime and one of the five most

lucrative illegal trades alongside trafficking in drugs, arms and humans, and money laundering which undermines governance frameworks and the potential to achieve sustainable development objectives. Majority of wildlife crime which is multifaceted involves trafficking from Africa and South-East Asia to other areas in Asia, and trafficking from South-East Asia to the Western world.

#### 3.1 CAUSES OF WILDLIFE CRIME

The drivers of wildlife crime are likely to vary, according to the type of crime and the type of resources or commodities involved. The International Consortium for Combating Wildlife Crime (ICCWC) (a partnership between five intergovernmental organizations – CITES Secretariat, INTERPOL, UNODC, the World Bank, and World Customs) lists rural poverty, food insecurity, unequal distribution of available agricultural lands, economic interests, legal markets of timber and non-timber products, as well as social upheavals such as war and famine as potential drivers of wildlife crime [30]. Drivers of wildlife crime, increasing demand, lack of legislation, conflicts, and mafias at the center of them all. As an example, the MIKE report to CITES CoP16 [31] and CITES news [32] list poverty, poor law enforcement, weak governance and the demand for illegal ivory as the key factors associated with elephant poaching. The report suggests that the first three of these probably reflect 'background levels' of poaching, while increasing demand accounts for much of the recent escalation.

The conference on illegal wildlife trade hosted by HRH Prince Charles and the UK government in May 2013 suggested that poverty was a key driver of illegal wildlife trade [33]. The UN Environment Programme (UNEP) [35] report 'Elephants in the Dust' highlights that poaching is exacerbated by poverty and food insecurity. The report also states that poachers may be driven by poverty, or are exploited by criminal organizations seeking to recruit hunters with knowledge of the local terrain. Poverty and inadequate bureaucracy also enable criminal groups to corrupt poorly paid enforcement authorities. Poverty and lack of alternative sources of income were also cited as primary reasons motivating illegal hunting of elephants in the Central African region but again noting that demand from wealthier people was a key stimulus for illegal hunting [35].

Poor people's motivation to poach may not be just to earn income or reduce food insecurity. The illegal wildlife trade, however, is ultimately driven by economic wealth among consumers, not poverty. Indeed, a report commissioned by the UK Department for International Development (DFID) highlighted that poaching and trafficking of elephant ivory and rhino horn are ultimately driven by wealth and not by poverty per se [36]. Rhino horn, elephant ivory and tiger products have continued to command high prices among consumers, especially in Asia. According to [28] China is the largest consumer of ivory products. It is also noted by [37] that, the surging demand for rhino horn in Vietnam has contributed to the dramatic escalation in rhino poaching in Southern Africa.

Corruption, insufficient law enforcements and light sentences allow criminal networks to keep plundering wildlife. These factors make the trade a low risk business with high returns. In situations where arrests are made, it is often the poor locals who are usually caught, leaving the real masterminds and their networks safe and operational. A study by [38] observed that "one of the striking features of sub-Saharan Africa is a weak ability of states to impose their legislation, even if governments are aware of the need to protect their natural environment." Transparency International [39] notes "Corruption is not the only means used by criminal groups to poach and trade wildlife. These groups also take advantage of the economic situation in source countries to pay villagers to poach animals, or of the lack of technical knowledge of custom officials."

Wildlife crime can also be as a result of conflicts where arms remain in possession of people who later use them commit this crime. For example, ivory poaching in Uganda is arguably enabled by the availability of weapons, remaining from the civil war or loaned or stolen from security officials [40].

#### 3.2 WILDLIFE CRIME AND DEVELOPING COUNTRIES

The impact of wildlife crime is both on the wildlife populations and the biodiversity in general. The impacts which are both positive and negative are broader on rural poor and poor countries. According to [41] illegal trade in some high value wildlife species and products – including elephant ivory, rhino horn, timber, fisheries – can be a lucrative business, forming a source of significant income for some people. One horn or tusk may be worth more than some poor people can expect to earn in years. We are reminded by [27] that wildlife crime provides different levels of economic benefit to different individuals, households and communities: a source of regular income for some, a safety net for many, a profitable business for a few.

Wildlife crime can undermine the long-term sustainability of the natural resource base on which the majority of the rural poor depend, sometimes with unexpected social consequences. For example, children may be forced to leave school to earn

money which will have further negative impacts to the society in the future. Wildlife crime also has a net negative long-term impact on the communities and the environment as a whole. Rangers are sometimes put at risk. Incidences have shown that, in every four days, a wildlife ranger is killed in the line of duty and commercially driven criminals are often engaged in other crimes.

The longer-term negative impact of wildlife crime is loss of biodiversity and environmental degradation. A decline in the fauna and flora or quality of the environment may deter tourists from visiting and significantly reduce national income and development. The effect of illicit wildlife trafficking on the environment is direct and potentially irreversible. Recently there has been a drastic decline in the populations of many wildlife species with high commercial value, many of which are now rare, endangered or locally extinct – for example, forest elephants in certain parts of the Congo basin, the Sumatran rhinoceros, the Javan rhinoceros and the Asian elephant. CITES' report [42] noted that hundreds of elephants were killed in February 2012 when heavily armed poachers invaded the Cameroon's Bouba N'Djida National Park. A report by [43] also noted that about 100,000 elephants were killed by poachers within three years and that Central Africa has lost over 64% of its elephants in just a decade. The entire elephant populations could be wiped out from Central Africa if ivory poaching and wildlife trade continue unabated.

## 4 SOLVING THE PROBLEM OF WILDLIFE CRIME

The rate and extent of wildlife crime impact has called for interventions to tackle the trade of these threatened and endangered species. This has focused on reducing the supply through enhancing law enforcement efforts, increasing seizures and prosecutions and strengthening the suite of penalties and other deterrents aimed at poachers. The International Consortium for Combating Wildlife Crime (ICCWC) in conjunction with various organizations e.g. IUCN, CIFOR, WWF, UNEP, UNDP, TRAFFIC, IFAW, EUROPOL, NWLCU, PAW, etc. and nations have tried to use the above preventive and remedial measures to curb the crime as the impacts go far beyond the wildlife species but also human lives and the environment.

CITES have used its established compliance system with a number of mechanisms that have evolved from several treaty articles elaborated on by successive resolutions and decisions of the Conference of Parties (CoP) as well as practice over the years. The CITES system includes mechanisms to:

- Address serious generalized non-compliance by parties;
- Enhance and improve party self-supporting
- Induce parties to enact national implementing legislation;
- Evaluate species traded in significant numbers; and
- Address problems with high-profile species such as rhinos, tigers and elephants.

A key non-compliance tool common to these mechanisms is the suspension of trade in CITES-listed species. The first blanket trade suspensions were used in 1985 against Bolivia and the United Arab Emirates and by November 2002, a total of 15 countries and territories have been subjected to such a measure, 10 for generalized non-compliance and 5 for failing to enact implementing legislation [44], [45]. The largest number of parties to fall subject to a recommended blanket trade suspension at any one time since the use of non-compliance came in December 2002. All were developing countries – Afghanistan, Bangladesh, Djibouti, Dominica Republic, Liberia, Rwanda, Somalia and Vanuatu. Four of the eight were for lack of implementing legislation. CITES role to prevent illegal trade recently have been geared more towards tigers, rhinos and elephants. According to WWF wildlife scorecard by [46], the approach to each of these species includes national measures to control not only international, but also internal trade in the species' parts, derivatives and products as follows:

- For tigers, it is recommended that internal trade be "prohibited"
- For rhinos, it is recommended that such trade be "restricted"
- For elephants, "unregulated domestic sale of ivory [is to] to be prohibited" under the Action Plan for the Control of Trade in Elephant Ivory Decision 13.26

Other common themes include strengthening law enforcement; coordination with other countries; improved data collection; enacting deterrent legal penalties for illegal trade; and raising public awareness, especially among user groups. Tigers, and elephants were the subject of renewed and substantial concern at the 15<sup>th</sup> meeting of the Conference of the Parties to CITES (CoP15) in 2010 and the 61st meeting of the CITES Standing Committee (SC61) in 2011, specifically in regard to the scale of illegal trade.

Recent reports have shown that these species are being poached at a faster rate than ever. For example, [47] reported that the number of rhinos poached from South Africa rose from 13 in 2007 to 1004 in 2013. A newsletter by [43] also reported that about 100,000 elephants have been killed by poachers in just three years.

According to [48] the first crucial steps towards a stronger response to illicit wildlife trafficking have been the recent creation of the International Consortium on Combating Wildlife Crime (ICCWC) which has been an important step to ensure collaboration and alignment of initiatives amongst all actors. Recent suspensions especially of African countries and specifically Nigeria's in and out of suspension (for generalized non-compliance) have been related with illegal trade on elephant ivory. International trade in ivory was banned in 1989 through CITES and the African elephant listed as endangered though the treaty afforded limited trade of the ivory from existing stockpiles of Botswana, Namibia and South Africa. No such sales were allowed in Nigeria, Ivory Coast and Senegal.

Apart from trade suspensions, large-scale seizures have been carried out in countries of origins, transits and destination points. For example, in March 2004 CITES SC50 recommended trade restrictions against Cameroon and the Democratic Republic of Congo (DRC) for possessing readily available worked ivory for sale. Several shipments of ivory from Cameroon had been seized in Europe, while DRC was suspected of being the source of illegal ivory en route Asia. To effectively do this, [49] suggest that, in order to break down the illegal wildlife trade chain, transnational links in organized crime need to be evaluated along the entire chain as much as the analysis on the illegal wildlife trade does not focus on one end of the chain. For example, [50] reported that though tiger parts and rhino horns have been traditionally used in South Korea for medicinal purposes, the demand declined substantially because of its ban as the practitioners cited a development of alternative substitutes that are equally effective.

A more recent action is that carried by the Kenya government on Saturday 30, April 2016. About 105 tons of confiscated ivory were burnt in Nairobi National Park representing more than 6000 elephants. Also included in the pyre were 1.35 tons of rhino horns, exotic animal skin, monkey skins, sandalwood and medicinal plants extracts.

Apart from suspensions and seizures, so many conferences, workshops and other enlightenment programmes have been carried out. The most recent are the Anti-poaching campaign launched in Nairobi at the Second Session of the United Nations Environment Assembly in May 25, 2016. With Africa's animals most hit, this year's World Environment Day will be hosted by Angola with a theme 'Zero Tolerance for Illegal Wildlife Trade.'

#### 5 SUMMARY AND CONCLUSION

The exploitation of wild living resources, under appropriate governance and management, can provide livelihoods for many, in particular rural people. If done well, the sustainable use of wildlife provides an incentive to conserve natural ecosystems. The problem arises when the level of exploitation is capable of heavily depleting wildlife populations and even bringing some species close to extinction.

The illegal trade in wildlife involves a wide range of flora and fauna, across all continents. The consequences of the trade span environmental, societal (including security), and economic impacts – including affecting the resource base for local communities (affecting their livelihoods) and resulting in the theft of natural capital at national levels. Wildlife crime is now the greatest threat to three of the world's best loved species – elephants, rhinos and tigers. Wildlife crime is therefore a barrier to sustainable development, involving a complex combination of weak environmental governance, unregulated trade, loopholes and laundering systems used to conduct serious transnational crime, and undermining government institutions and legitimate business. Tackling wildlife trafficking is essential to secure sustainable economic growth especially in developing nations. It is then of paramount importance that national governments – and regional institutions do everything they can to tackle illicit wildlife trafficking. Current trends suggest priority attention and tougher sanctions by CITES and other international organizations in addition to conferences and workshops to curb the situation.

#### REFERENCES

- [1] W. Cavendish, "Empirical regularities in the poverty-environment relationship in rural households: Evidence from Zimbabwe." *World Development*, vol. 28, no. 11, pp. 1979-2003, 2000.
- [2] M. Fisher, "Household welfare and forest dependence in Southern Malawi", *Environment and Development Economics*, vol. 9, no. 3, pp. 548-557, 2004.
- [3] W.M. Fonta and E. T. Ayuk, "Measuring the role of forest income in mitigating poverty and inequality Evidence from south-eastern Nigeria." *Forests, Trees and Livelihoods,* vol.22, no. 2, pp. 86-105, 2013.

- [4] K. Clendon, The role of forest food resources in village livelihood systems: a study of three villages in Salavan Province. Vientiane, IUCN, 2001.
- [5] D. Roe, T. Mulliken, S. Milledge, J. Mremi, S. Mosha, and M. Grieg-Gran, "Making a killing or making a living? Wildlife trade, trade controls and rural livelihoods." *Biodiversity and Livelihoods* Issues No. 6, TRAFFIC/IIED, 2002.
- [6] A. Johnson, S. Singh, M. Duongdala, and V. Vongsa, "Wildlife Hunting and Use in the Nam Ha National Protected Area: Implications for Rural Livelihoods and Biodiversity Conservation," Wildlife Conservation Society, Vientiane, Loa DPR, 2003.
- [7] Johnson, A., Singh, S and Duongdala, M., "Wildlife Hunting and use in Luang Namtha Province: Implications for Rural Livelihoods and Biodiversity Conservation in the Uplands of the Lao PDR," In: B. Bouahom, A. Glendinning, S. Nilsson, and M. Victor, (Eds), Poverty Reduction and Shifting Cultivation Stabilisation in the Uplands of Lao PDR: Technologies, Approaches and Methods for Improving Livelihoods – Proceedings of a Workshop held in Luang Prabang, Lao PDR, January 27-30, 2004, Vientiane, Lao DPR, National Agriculture and Forestry Research Institute, pp. 195-208, 2004. [Online] Available:

http://www.researchgate.net/profile/Arlyne\_Johnson/publication/43498477\_Wildlife\_hunting\_and\_use\_in\_Luang\_Na mtha\_Province\_.....

- [8] M. G. Lewis, (2009). "CITES and Rural Livelihoods: The Role of CITES in Making Wildlife Conservation and Poverty Reduction Mutually Supportive" *Journal of International Wildlife Law & Policy.* Vol. 12, PP. 248 -275, 2009.
- [9] M. Roa, T. Zaw, S. Htun, and T. Myint, "Hunting for a living: wildlife trade, rural livelihoods and declining wildlife in the Hkakaborazi National Park, North Myanmar" *Environmental Management* Jul: vol. 48, no. 1, pp. 158 167, 2011.
- [10] E. McLellan, R. Parry-Jones, R. Thomas, C. O'Criodain, and S. Zain, (2014). "Illicit Wildlife Trafficking: An Environmental, Economic and Social Issue," UNEP Issue 14, 2014
- [11] CITES, "The CITES Appendices", 1973. [Online] Available: www.cites.org/eng/
- [12] R. Chambers and G. R. Conway, "Sustainable Rural Livelihoods: Practical Concepts for the 21<sup>st</sup> Century", IDS Discussion Paper 296, 1991.
- [13] UNDP, "Promoting Sustainable Livelihoods," A briefing Note Submitted to the Executive Committee. June 4, 1997.
- [14] D. Carney, "Implementing the Sustainable Rural Livelihoods Approach, Paper presented to the DFID Natural Resources Advisers' Conference, London, DFID, 1998.
- [15] I. Scoones, "Sustainable Livelihoods: A Framework for Analysis," IDS Working Paper 72, 1998.
- [16] DFID, "Sustainable Livelihoods Guidance Sheets," London, Department for International Development (DFID), 1999.
- [17] L. Krantz, "The Sustainable Livelihood Approach to Poverty Reduction: An Introduction," Sweden: Swedish International Development Cooperation Agency (SIDA), 2001.
- [18] F. Ellis, Rural Livelihood Diversity in Developing Countries: Evidence and Policy Implications. ODI. *Natural Resource Perspectives*, Number 40, 1999.
- [19] Obasi, M. T., Species Depletion Model and its Application in the Sustainable Wild Harvesting and Conservation of Medicinal Plants in the Cross River National Park, In: B. Dogo, A. L. Turkur, J. G. La'ah, and A. A Tarhule (Eds.), Studies in Climate Change, Physical and Human Resource Utilisation and Development in Nigeria, Festschrift in Honour of Prof. A. A. Adepetu, Dept. Geography, KASU, PP. 148 – 167, 2015.
- [20] C. Ashley, N. Mdoe, and L. Reynolds, "Rethinking wildlife for livelihoods and diversification in rural Tanzania: a case study from Northern Selous," Working Paper 15, LADDER, 2002.
- [21] J. Haken, Transnational Crime in the Developing World, Global Financial Integrity Washington, DC, USA, 2011.
- [22] OECD, "Illegal trade in environmentally sensitive goods," Executive summary, 2012.
- [23] C. Nellemann, R. Henriksen, P. Raxter, N. Ash, and E. Mrema, (eds), "The Environmental Crime Crisis: Threats to Sustainable Development from Illegal Exploitation and Trade in Wildlife and Forest Resources," A UNEP Response Assessment. UNEP – GRID – Arendal, Nairobi & Arendal, 2014.
- [24] OECD, International Development Statistics (IDS), 2014.[Online] Available: http://www.oecd.org/dac/stats/ idsonline.htm.
- [25] J. G. Robinson, "Livelihoods, Jobs, and the Illegal Wildlife Trade," Wildlife Conservation Society National Geographic Voices, 2015.
- [26] WWF, "Illegal and Unsustainable Wildlife Trade," 2006. [Online] Available: Wilflife\_trade\_factsheet2006.pdf
- [27] TRAFFIC, "What's driving the wildlife trade? A review of expert opinion on economic and social drivers of the wildlife trade and trade control efforts in Cambodia, Indonesia, Lao PDR and Vietnam. East Asia and Pacific Region," Sustainable Development Discussion, World Bank, 2008.
- [28] R. Ellis, "Poaching for Traditional Chinese Medicine, save the rhino," 2005. [Online] Available:

http://www.savetherhino.org/rhino\_info/threats\_to\_rhino/poaching\_for\_traditional\_chinese\_medicine

[29] C. Nellemann, "Green Carbon, Black Trade: Illegal Logging, Tax Fraud and Laundering in the World's Tropical Forests: A Rapid Response Assessment," 2012, UNEP/INTERPOL

- [30] UNODC, "Wildlife Crime Analytic Toolkit," United Nations Office on Drugs and Crime, Vienna, 2012
- [31] CITES, Monitoring of illegal trade in ivory and other elephant specimens, 2013. CITES. [Online] Available: http://www.cites.org/eng/cop/16/doc/E-CoP16-53-02-02.pdf
- [32] CITES, "New figures reveal poaching for the illegal ivory trade could wipe out a fifth of Africa's Elephants over next decade," 2013. CITES. [Online] Available:
  - http://www.cites.org/eng/news/pr/2013/20131202\_elephantfigures.php?\_ga=1.7329010.151031434 0.1386245222
- [33] R. Benyon, "Illegal Wildlife Trade (IWT)", Meeting of Governments, Clarence House, London Tuesday 21st May 2013: Chair's Summary, 2013. [Online] Available: https://www.gov.uk/government/uploads/system/uploads/attachment\_data/file/207710/Illegal-wildlifetraffickingchairs-summary.pdf
- [34] UNEP/CITES/IUCN/TRAFFIC, "Elephants in the Dust The African Elephant Crisis. A Rapid Response Assessment," United Nations Environment Programme, GRID-Arendal, 2013.

[Online] Available: http://www.unep.org/pdf/RRAivory\_draft7.pdf

- [35] D. Stiles, *The Elephant Meat Trade in Central Africa*, IUCN, Gland, Switzerland, 2011.
- [36] Duffy, R. and St John, F.A.V., "Poverty, Poaching and Trafficking: What are the links? Evidence on Demand", 2013
- [37] T. Milliken and J. Shaw, "The South Africa Vietnam Rhino Horn Trade Nexus: A deadly combination of institutional lapses, corrupt wildlife industry professionals and Asian crime syndicates," TRAFFIC. Johannesburg, South Africa, 2012.
- [38] K. Peh and O. Drori, (2010). "Fighting Corruption to Save the Environment: Cameroon's Experience," Ambio, vol. 39, pp. 336–339
- [39] Transparency International, "Wildlife Crime and Corruption," 2013.[Online] Available: http://www.transparency.org/files/corruptionqua/367\_Wildlife\_Crimes\_and\_Corruption.pdf.
- [40] W. D. Moreto, "To Conserve and Protect: Examining Law Enforcement Ranger Culture and Operations in Queen Elizabeth National Park, Uganda," Ph.D Thesis, 2013. [Online] Available: http://rucore.libraries.rutgers.edu/../1
- [41] M. Harrison, D. Roe, J. Baker, G. Mwedde, H. Travers, A. Plumptre, A. Rwetsiba and E. J. Milner-Gulland, "Wildlife Crime: a review of the evidence on drivers and impacts in Uganda," IIED Research Report, London, 2015.
- [42] CITES, "Elephant Conservation. Illegal Killing and Ivory Trade," Sc62.Doc.46.1(Rev.1) 2012. [Online] Available: www.cites.org/eng/com/sc/62/E62 - 46 - 01.pdf
- [43] B. Scribe, 2014). National Geographic Voice newsletter, 2014.
- [44] R. Reeve, "Policing International Trade in Endangered Species: The CITES Treaty and Compliance," Royal Institute of International Affairs/Earthscan, 2002.
- [45] R. Reeve, "The CITES Treaty and Compliance: progress or jeopardy?" Sustainable Development Programme, BP 04/01. Royal Institute of International Affairs, Chatham House, London, 2004.
- [46] K. Nowell, "Wildlife Crime Scorecard: Assessing Compliance with Enforcement of CITES Commitments for Tigers, Rhinos and Elephants," WWF, Gland, Switzerland, 2012.
- [47] T. Milliken, "Illegal Trade in Ivory and Horn: An Assessment to Improve Law Enforcement under the Wildlife Traps Project," TRAFFIC, Cambridge, 2014.
- [48] WWF Dalberg, "Fighting Illicit Wildlife Trafficking: A Consultation with Governments," WWF, Gland, Switzerland, 2012.
- [49] K. Lawson and A. Vines, "Global Impacts of the Illegal Wildlife Trade: The Costs of Crime, Insecurity and Institutional Erosion", Royal Institute of International Affairs. Chatham House, London, 2014. [Online] Available: http://www.chathamhouse.org/sites/files/chathamhouse/public/Research/Africa/0214Wildlife.pdf
- [50] K. Sue and P. Marcus, "A Question of Attitude: South Korea's Traditional Medicine Practitioners and Wildlife Conservation, TRAFFIC, East Asia, 2003.