journals.unizik.edu.ng/index-php/jcpl ISSN: 2736-0342
NNAMDI AZIKIWE UNIVERSITY, AWKA
JOURNAL OF COMMERCIAL AND PROPERTY LAW

Analysis of Legal Protection of Endangered Animal Species in Nigeria

Gaga Wilson Ekakitie Ph.D*

Abstract
This paper attempts to consider legal protection afforded endangered animal species. In order to achieve this we shall attempt a definition of the pertinent concept viz: endangered animal specie, from dictionary and statutory sources. We shall of necessity draw a distinction between this concept and the other very and closely related concept of "threatened". This paper shall also be concerned with the causes of' animal species endangerment and what qualifies a particular specie to be considered as endangered i.e. the indices used to measure endangerment, a look at legal protection of' endangered animal species in Nigeria and elsewhere and how successful they have been in ensuring protection of endangered animal species.

Keywords: *Legal protection, endangered, animal and species*

1.0 Introduction

Every technological advancement brings potential benefits and risks, some of which are not easy to predict. "Bt Corn, for example introduced a genetically modified plant to eliminate or at least greatly reduce the need for pesticides to control stem borers. However, subsequent tests found that it could also kill monarch butterflies[1].

"Threatened", "endangered" and "extinct" are words that have become all too common, especially in our 21st century vocabulary. It is true that the natural process of specie evolution has accelerated rapidly since the turn of the century. It is also very true that due to man's activity, causing pollution and bringing about depletion through indiscriminate hunting of the world's flora and fauna resource, many plant and wildlife species are on the brink of extinction.[2]

Indeed in the absence of prompt action, many of the world's plant and animal species, creatures with which we share this planet will vanish in our lifetime. In fact by the end of the century, it is predicted that at least twenty percent of existing species will have disappeared unless something urgent is done.[3]

2.1 Definition of Terms

(a). Endangered

The American Heritage Dictionary of the English Language[4] defines endangered thus:

(i) to expose to harm or danger, or imperil

* **Dr. Gaga Wilson Ekakitie Ph.D,** Lecturer, Department of Jurisprudent and International Law, College of Law, Western Delta University, Oghara, Delta State, Nigeria. Tel: 08033862973, ogagaomajuwa@gmail.com

[1] Saving the Environment- How successful have we been? Awake Magazine, November 22, 2003 Issue p.6

[2] Endangered Species in Everglades National Park- 'The Amencan Park Network http:www.nps.gov/ever/eco/danger.htm

[3] M.T. Okorodudu- Fubara, law of Environmental Protection, Materials and Text (Ibadan: Caltop Publications (Nig) Ltd; 1998) p332.

[4] 4th ed. (Houghton: Houghton Mifflin Coy. 2000)

(ii) to threaten with extinction or to subject to danger, loss or destruction.

Again endangered has been defined by the World Net to mean "Imminent danger of extinction".

Furthermore, the United States Centre of' Reptile and Amphibian Conservation and Management has also afforded a state by state status description of species considered to be either "endangered", "threatened'' or of ''special concern" in the United States based on their various Endangered Species Act[5]. For example in the State of' Michigan a "federally threatened" specie is defined as "any specie that is likely to become endangered within the foreseeable future throughout all or a significant portion of its range". While "endangered" is defined as "any specie that is in danger of' extinction throughout all or a significant portion of its range within Michigan". "Threatened" has been defined as "any species which is likely to become endangered specie within the foreseeable future throughout all or a significant portion of its range within Michigan". ''Special concern" under the same statute entails thus: "while as` the various habitats become fragmented into 'islands', the remaining animal population crowd into smaller areas, causing further habitat destruction. Species so caught up loose contact with other populations of their kind, thereby reducing their genetic variations, making them less adaptable to environmental change. Such small populations are highly susceptible to extinction; for some species, the fragmented habitat become too small to support viable population. [6]

Since as early as the 17th century, commercial taking of animals has caused many species to either become extinct or at least endangered, for example the great whale was slaughtered for meat and oil, thereby bringing it to near extinction. The African rhinoceros also suffered a similar fate for its priced horn.

Introduced diseases, parasites and predators against which animal and plant species have no defences have either completely exterminated some species or at least greatly reduced their population.

Pollution is another important factor in specie endangerment and extinction. Toxic chemical, notably chlorinated hydrocarbons, such as dichlorodiphenyltrichloroethane (DDE) and polychlorinated biphenyls (PCBs) have become concentrated in food webs, affecting rather strongly those species at the end of the chain. Both DDT and PCBs for example, interfere with the calcium metabolism of birds, causing soft shelled eggs and malformed young. PCBs also impair reproduction in some carnivorous animals. Water pollution and increased water temperatures have also wiped out endemic races of fish in several habitats.[7]

In summary causes of Specie endangerment would include:

- Habitat destruction, which is believed to be the primary cause of specie endangerment.[8]
- Overexploitation, which has brought many animal species to an extremely low population size. Notably several whale species, the rhinoceros and tiger. Due to the trade in animal parts, many species have continued to suffer high rates of exploitation.

[5] See http://herpcenter.ipfis.edu/outreach/misc/stat_discrpt.htm
[6] See website (Supra note 7) Ibid
[7] Ibid
[8] Reports of Arab Academy for Science and Technology and Maritime Transport. IGCSE Program. Alexandra, Egypt

- Disease, pollution and limited distribution, whereby species are denied the natural genetic protection against particular pathogens to the extent that an introduced disease can have severe effects on such species.

3.0 Criteria for Determining Animal Specie Endangerment

Determination of Endangered and/or threatened specie appears to be statutory. For example Section 4 of the United States Endangered Specie Act 1973[9] addresses this issue most comprehensively. The Act provides generally that the Secretary (of the interior or of Commerce or of Agriculture) shall by regulation promulgated in accordance with subsection (b) of the same Act determine whether any species is an endangered or a threatened specie because of any of the following factors:

(a) The present or threatened destruction, modification, or curtailment of its habitat or range;

(b) Over utilization for commercial, recreational, scientific, or educational purposes;

(c) Disease or predation

(d) The inadequacy of existing regulatory mechanisms

(e) Other natural or man-made factors affecting its continued existence[10].

Section 4(b) further provides that the Secretary shall determine whether a specie is threatened or endangered solely on the basis of the host scientific and commercial data available to him after conducting a review of the status of the species and after taking into account those efforts, if any, being made by any state or foreign nation, or any political subdivision of a state or foreign nation to protect such species, whether by predator control, protection of habitat and food supply, or other conservation practices, within any area under its jurisdiction, or on the high seas, taking into consideration species that have been designated as requiring protection from unrestricted commerce by any foreign nation, or pursuant to any international agreement, or at least identified as in danger of extinction, or likely to become so within the foreseeable future, by any state agency or by any agency of a foreign nation that is responsible for the conservation of fish, or wildlife or plants[11].

It appears from the foregoing therefore that the exercise of determining what species are endangered or threatened, as the case may be would involve the Secretary taking into cognisance a number of factors like scientific and commercial data available to him, as well as certain conservation efforts towards those species within and outside jurisdiction, and also those species designated as in need of protection by any foreign nation or in furtherance of any international agreement, etc.

Curiously though the Nigerian model, The Endangered Species Act[12] is lacking in such provision as regards the criteria for determining animal specie endangerment. The Act merely lists certain species in its first and second schedules and prohibits their exploitation either absolutely or upon certain conditions respectively [13].

[9] 4(a) (1) (4)—(E)
[10] 4(a) (1) (4)—(E)
[11] 4(b)(I)(l3)
[12] Cap 108 LFN 1990
[13] There is absolute prohibition against hunting. capture or trade in any specie specified in Schedule 1 of the Act (being species threatened with extinction) while a license issued under the Act is required for exploitation of species listed

Again the Federal Environmental Protection Agency Act[14] which came into being on the 30th of December 1988, as an "Act to establish the Federal Environmental Protection Agency with its functions and powers for the effective implementation of such functions[15]" does not make any specific provisions relating to endangered species. However the Agency shall function among others, to protect and develop the environment in general and environmental technology, including initiation of policy in relation to environmental research and technology[16].

However we may infer that endangered fauna species may be covered by the Act, by its responsibility over the environment aforesaid, because the same Act has defined "environment"[17] to include water, air, land and all plants and human beings or animals living therein, as well as the interrelationship which exists among these or any of them, obviously deriving its validity from the Constitution of the Federal Republic of Nigeria 1999, where it is provided[18] that the "State shall protect and improve the environment, safeguard the water, air and land, forest and wildlife of Nigeria".

Furthermore, under the American model, the Secretary is empowered to designate certain areas as critical habitat and make revisions thereto, on the basis of the best scientific data available while taking into consideration also the economic impact and any other relevant impact of specifying any particular area as critical habitat. He also has discretion to exclude any area from critical habitat, if he discovers that the benefits of such exclusion would outweigh designating such as critical habitat, unless of course best scientific and commercial data at his disposal would show that such failure to so designate will result in the extinction of the specie[19]. To this end too, the Secretary of the Interior shall publish in the Federal Register, a list of all species determined by him, or the Secretary of Commerce to be threatened species. Each list shall also refer to species listed therein by their scientific and common name(s) as well as specify with respect to these species over what portion, of its range it is endangered or threatened, and specify any critical habitat within such range. The Secretary shall also from time to time review the lists with a view to determining whether any specie or species be either removed completely from either list or to change their status from endangered to threatened, or vice versa[20].

In all these the Secretary shall make his determinations and reviews in the manner aforesaid. He also has an obligation under the Act [24] to receive petitions from interested persons by virtue of Section 553 (c) of title 5, United States code to either add or remove any specie from the list of threatened or endangered species and shall make a finding as to whether the petition presents substantial scientific or commercial information supporting the need for the petition. If such a petition is found to present such information, the Secretary is mandated to immediately commence a review of the status concerned and publish promptly each finding thereby made in the Federal Register. Furthermore, by virtue of 4(b)(3)(B) following, within 12 months after receipt of the petition found to present scientific and commercial evidence warranting the petition he may make any of the following findings:

---

under Schedule 2 of the Act (being species not necessarily now threatened with extinction, but may become so threatened unless trade in peel of them is controlled.

[14] Cap (3) LFN 1990

[15] See generally the Preamble to the Act

[16] Sec 4

[17] Sec. 38

[18] Sec 20

[19] Section 4 (b) (2)

[20] Section(1) &(2)

1. the petitioned action is not warranted, in which case the Secretary shall promptly publish such finding in the Federal Register.
2. the petitioned action is warranted in which case the Secretary shall publish promptly in the Federal Register a general notice and the complete text of a proposed regulation to implement such action in accordance with Paragraph (5) following.
3. the petitioned action is warranted but that:

    (a) the immediate proposal and timely promulgation of a final regulation implementing the petitioned action in accordance with paragraphs (5) and (6) is precluded by pending proposals to determine whether any species is an endangered species or a threatened species.

    (b) expeditious progress is being made to add qualified species to either of the lists published under subsection (c) and to remove from such lists species for which the protection of the Act are no longer necessary, in which case the Secretary shall promptly publish such findings in the Federal Register, together with the description and evaluation of reasons and data on which the finding is based[21].

Curiously though, the Act did not define "interested person" for the purpose of the Act though it defined a person as "an individual, corporation, partnership, trust, association, or any other private entity, or any officer, employee, agent, department, or instrumentality of the Federal Government, of any state, municipality or political sub-division of a state; or any other entity subject to the jurisdiction of the United States[22]. To this end it is unclear who may bring a petition under Section '4(b)(3)(a) for specie to be listed as endangered or threatened. This is a very important issue for consideration listing is actually the first step in the protection of imperiled species.

4.0 Issues of Listing

Under the procedure for listing, plants and animals are classified according to the degree of risk to the species. Based on this classification the specie is then given varying degrees of protection. It is on record that over the years since 1975 when the American Endangered Species Act was enacted, the list of animals and plants threatened with extinction has grown to more than 1,000, including such obscure species as the shivwits milk herb in the Utah and the Tumbling Creek Cavesnail in Missouri. As at the last count in the year 2002, 244 plant and animal species had been listed as either endangered or threatened, and another 236 'candidate species' awaited listing [23].

The U.S Fish and Wildlife Service maintains the 'list of Endangered and Threatened Wildlife and Plants' which identifies species protected under the ESA. As at 1988, the number of species on the list was 1,177 of which 475 are animals and 702 are plants[24].

The Klamath River and surrounding basin in Oregon are home to 1,000 bald eagles three species of fish that local farmers say were protected at the expense of their livelihood[25]. Again once an

[21] Section 4(b) (3) (A)
[22] Section 3 (12)
[23] State Endangered Species Acts: past, Present Future Defenders of Wildlife (Section 3 part II the Present Reality contd.) culled from the Internet. However, see Bennet V Spear 117 SQ. 1154(1977), where the petitioners were irrigation districts and ranchers who received water from the Klamath irrigation projects, which the Bureau of Reclamation opined adversely affected two endangered species of fish.
[24] Knickerbocker B, Battle looms over a Noah's Ark Law. The Christian Science Monitor, February 22, 2002 edition p.2
[25] Ibid at p 1

organism makes the list, federal, officials must design and implement a recovery plan, which is not only expensive, but also capable of devastating economic effect on private property on the one hand, and on the other so tedious that in instances several dozen have gone extinct while awaiting rescue. However, there have been calls for a reform of the law to bring it nearer to being a sound science rather than political ideology[26].

The crux of this issue is the Act's requirement to use the 'best available [27] science in determining listings and recovery programs. Best available science may be difficult to ascertain in the face of conflicting scientific views on the same subject matter giving this, findings may not be entirely satisfactory[28]. The Klamath Basin case presents a good example[29] At the same time controversies brought about by the listing issue in the ESA escalated into a lot of political and legal maneuvering. On the one hand, while conservative groups and developers are preparing lawsuits challenging other endangered species listing, environmentalists are suing federal agencies for failure to properly protect, "rare and sensitive" plants and animal species in the Pacific North West old-growth Forests. The Bush administration, on its part is re-evaluating the designation of "critical habitat in California and other parts of the West. Such designation can serve to limit development, while adding a crucial ingredient to species survival[30]. Critics have continued to hammer on the fact that the several dozen bills before the United States Senate dealing with endangered species converge at a consensus providing for the need for "sound science" in deterring ESA listings as well as a greater say for property owners, developers, and other economics and commercial interests[31]. In fact, a bill introduced by Senator Gorden Smith, representing Oregon, would serve to give greater weight to commercial or scientific empirical and field tested data in deterring what species make the various lists in the ESA[32]. It is obvious that these days there appears to be a tilt in the scale towards commercials considerations in the issue of listings, rather than merely the survival of affected species.

The Nigerian Endangered Species Act listed certain species as in schedules 1 and 2 to the Act. The Act also provides that the Minister can alter the list aforesaid by addition, substitution or deletion[33]. The Act does not state the grounds by which we may alter the lists. It rather appears that the Minister enjoys a sole prerogative in that regard. The issue regards the efficiency of the present Nigerian legislative superstructure in the area of protecting endangered animal species.

5.0 Legal Protection of Endangered Animal Species

Ever since the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) as ratified by 51 states, signatories, apart from meeting regularly to review and amend the list of species where necessary, have enacted laws seeking to protect endangered species. To this end technical terms such as "vulnerable", "threatened", "endangered", and "extinct" have been

[26] Ibid at p 2
[27] 4 (b) (1) (A) Endangered Species Act 1973
[28] Knickerbocker B, Battle looms over Noah's Ark law... The Christian Science Monitor (Supra note 27)
[29] Ibid The Klamath Indian tribes have had water rights dating back to 19th century treaties with Washington. Many experts held that the water has been over allocated during the last century, leading to a steep decline in fish and water flow. The same group of experts gathered by the National Academy of Sciences Academy of Sciences further held that lowering lake water levels would pose an "unknown risk" to protected fish. Kiamath is located in Oregon, Northwest U.S.A; Bennct V Spear 117 S.Ct. 1154 (1977)
[30] Ibid
[31] Ibid
[32] Ibid. See also the Nigerian Wildlife Act Cap 559, LFN 1990
[33] S.43

used to describe various degrees of' specie endangerment. The purpose of' the Convention was to restrict exploitation of' wildlife and plants by regulations and regulating trade in species. These laws operate basically to provide mechanisms by the conservation of' ecosystems on which endangered species depend. The West has spearheaded this campaign. United States of America for example apart from the Endangered Species Act of 1973, and its coordinate state legislations, there are also a number of other Federal legislations which deal with specie protection. These include:

(a) Bald and Golden Eagle Protection Act (16 USC 668-668C)

This Act makes it illegal to import, export, or take bald or golden eagles, or to sell, purchase, or barter, their parts, or products made them, including their nests or eggs.

(b) Migratory Bird Treaty Act (16 USC 703-712)

Save as allowed by implementing regulations the Act makes it unlawful to hunt, kill, capture, possess, buy, sell, purchase, or barter any migratory bird products

(c) Laccy Act (18 USC 42; 16 USC 3371-3378)

This Act empowers the Secretary of the Interior to designate injurious wildlife and ensure humane treatment of wildlife shipped to the United States. It also prohibits the importation, exportation, transportation, sale, or purchase of fish and wildlife taken or possessed in violation of State, Federal, Indian tribal and foreign laws.

(d) Marine Mammal Protection Act (16 1 ISC 1361—1407)

This Act establishes a moratorium on the taking and importation of marine mammals, including parts and products, and defines Federal responsibility for conservation of marine mammals with management rested in the Department of Interior for the sea oyster, walrus, polar bear, dugong and manatee.

Others include:

(e) Airborne Hunting Act (16 USC 742 j - 1)

(f) National Wildlife Refuge System Administration Act of 1966 (16 USC 669dd-668ee)

(g) Antarctic Conservation Act (16 USC 2401)

(h) African Elephant Conservation Act (16 USC 420 1-4245)

(i) Wild Bird Conservation Act of 1992 (USC 4901) [34]

In Nigeria also we have:

(I) Endangered Species Act Cap 108 LFN 1990

(k) Wildlife Act Cap 559 LFN 1990

(l) Federal Environmental Protection Agency Act Cap 134 LFN 1998

It is also on record that the former Soviet Republic, which at the time covered 116th of the land surface of the earth, and a signatory to the CITES maintained a system of approximately 160 reserves, totaling 22.5 trillion hectares of preserved lands and established a legal structure forbidden exploitation of endangered species[35], even though today, increased poaching of wildlife against legal norms, breakdown of reserved lands system established under the former Republic

[34] Reports of IGCSE Program (Supra note 13)

[35] Braden K, Endangered Species Protection and Economic Change in the former USSR, 1996: Earth Works Website.

and the decline in scientific establishment to argue for wildlife protection, among other factors have greatly undermined these conservation efforts in recent times.

In Nigeria the situation is even more worrisome. The endangered species Act is grossly ill equipped to handle the very complex and scientific nature of species protection; while the Federal Environmental Protection Agency Act is rather too general to be of much practical assistance.

Both statutes have failed woefully to zero in the specie endangerment problem, taking into cognisance other peripheral issues and concepts that form an integral and important part of the endangered species issue. The American models talk of "critical habitats", "best scientific data", "threatened species", etc. which have more or less provided for near full proof system of situation evaluation, listing and specie protection. Specie protection is of such serious concern in the West, to the extent that states in America have adopted their own endangered species laws, and can list as endangered those animals, which are not in the federal list.

In *Nettleton co. v Diamond*[36]?, a New York court found that because scientific uncertainty may exist as to whether an animal should be classified at a federal level as threatened or endangered, states can step in and list species that the Federal government has decided not in the list. The court further held that this did not only apply to species indigenous to the state, but also those not indigenous as well.

Another interesting feature of the American Endangered Species Act is the Citizens suit provision[37] which provides in pertinent part that "any person may commence a civil suit on his own behalf" against any person, including the United States or another government agency who violates the Act, or against the Secretary of the Interior if he has failed to perform a non-discretionary act or duty". The court held in *Bennet V Spear* 117S. Ct. 1154 (1977) that this provision does not only apply to those alleging an interest in preserving endangered species but all persons, evidenced by the phrase "any person".

The court held that because the subject matter was that of environment, it was a matter in which every person should have an interest, which would even extend to those seeking to prevent the application of environmental restrictions and not restricted to pro environmentalists[38].

Again little or no solace can be found in the Nigerian Wild Animals Act[39]. The Act provides for the better control, conservation and management of wild animals. The Act categorizes animals as either prohibited, specially protected, and merely protected respectively.

Schedule 1 In the Act contains a list of prohibited animals, while schedules 2 and 3 respectively list specially protected and protected animals. The Act forbids the hunting of protected animals save for the purpose of important scientific needs. In which case, the Minister charged with the responsibility for animal and forest resources may give his permission in writing[40]. Sec 7 provides for powers of the Minister to grant hunting licence for animals listed in schedules 2 and 3 thereof. The Act does not deal with endangered species and does not even define or mention the concept. However, it is under the Act that the President is empowered to constitute an area as a game

[36] Cited in State Endangered Species Acts: Past, Present and Future… (Supra note 26).
[37] 16 USC, 1540 (g)
[38] Ibid
[39] Cap 559, LFN, 1990
[40] S. and S. 54. However just like in Endangered Species Act, S.11 of the act allows for killing of animals listed in any of the categories in defence of life and property.

reserve/wildlife sanctuary and vice-versa[41]. Sec 27 and 30 thereof prohibits the hunting, taking and possession of wild animals kept in the game reserve, as well as other acts that may endanger the animals and even the trees and greenery within the sanctuary[42].The Act provides for an elaborate procedure for creating a wildlife reserve.

Sec 31 empowers the Minister to declare a closed season during which period, none of the categories of wildlife under the Act may be hunted. Sec 33-35. Further prohibit the hunting of fish and wild animals by poisons, dynamite, explosives, aircrafts and motor vehicles, etc while Section 36, prohibits the unlawful possession of trophies, which usually constitute body parts of certain wild animals. The main thrust or focus of the Act seems to be the conservation for tourism purpose, even though peripherally certain species are protected from wanton hunting, or otherwise taking. The part relating to taking of trophies in general and from the carcasses of dead elephants and rhinoceros appears to focus more on revenue for government. Just like the Nigerian version ofthe Endangered Species Act, it does not make any elaborate provision for listing wild animals in the 3 categories created by the Act. The Act is more or less a sleeping legislation, even though advantage had been taken of it to establish certain wildlife parks and sanctuaries, like the Yankari Game Reserve, Okomu Wildlife Park and the Obodo Cattle Ranch. Little or nothing was known about the efficacy of the Act and the Endangered Specie one until two years ago, a couple of Cameroonian Gorillas were passed through the Nigerian borders to a Malaysian zoo. The Gorillas were believed to have been illegally captured, an action conservationist have termed "one of the most troubling cases yet in an international smuggling trade threatening Africa's great apes with extinction.' That incident sparked up a chain of events, which got critics wondering about the countries readiness to participate in the animal conservation frenzy that has gripped most of the western world in recent times forbidden the illicit traffic in priced fauna; the main thrust of CITES, to which both countries are signatories. Wildlife experts are of the view that smuggled gorilla case appears to highlight a growing trafficking market, when Egyptian authorities were reported to have drowned an allegedly smuggled baby gorilla from Nigeria in a vat of chemicals, claiming that it had arrived without proper import or export papers[43].

Similarly, Hong Kong recently enacted the Animals and Plants (Protection of Endangered Species) Ordinance (Amendment of Schedules) Notice 2004 as well as the Animals and Plants (Protection of Endangered Species) (Exemption) (Amendment) Order 2004 to further enhance its obligation under the latest revision of the list of controlled species of CITES.

6.0 Proffered Reasons why Endangered Species must be Saved and Preserved

6.1 Medicinal Reasons:

A number of use flu medications today are gotten from plants and animals. One study showed that about 40% of prescriptions made out nowadays are derivable from different species of plants and animals[44] for example, the Pacific yew a slow growing tree found in the ancient forests of the Pacific Northwest, has been found to contain compounds which may assist in the treatment of ovarian and breast cancer, centuries after it was treated as a mere "trash" tree.

[41] S. 12 and ors ff

[42] the Act under S. 28 excludes the operation of S. 27 as regards the Federal Games Warden and Game Protection Officer.

[43] "Smuggling trade threatens Africa's apes" C.news 1st June, 2022, culled from the Internet.

[44] Reports of the Arab Academy for Science and Technology and Maritime Transport IGCSE Program (Ibid note 13)

Again digitalis, a drug derived from the purple foxglove has brought a lot of solace to many sufferers of heart disease[45]. Other examples abound. So important have these discoveries been that, a specialty area in policy is dedicated completely to the study of derivation of drugs and other agents of therapy from plants[46].

6.2 Agricultural Reasons:

Studies have shown that there are an estimated 80,000 edible plants in the world, and humans depend on a mere 20 species of these to provide a whooping 90% of the world's food, such as wheat and corn. However wild relative of these common crops contain essential disease—resistant materials, which provide humans with means to develop new crops that can survive in poorly nourished soils and drought stricken areas with a view to solving the world hunger issue. In the 1970's genetic material from a wild corn specie found in Mexico was used to stop a leaf, fungus that had hitherto wiped 1 5% of' the U.S. corn crop[47].

6.3 Ecological Reasons:

The U.S. Fish and Wildlife Service estimated that losing one plant specie in an ecosystem can trigger the loss of up to 30 other insect, plant and higher animal species[48]. This is understandable because plant and animal species forms the foundation of healthy ecosystems. The totality of the ecosystem contributes to the sustenance of life of participants in that system for example, humans depend on ecosystems, such as coastal estuaries, prairie grasslands, as well as ancient forests to purify their air, clean their water and supply needed food. In the event that species become endangered, it is a clear indicative that the health of these vital ecosystems is beginning to fall apart[49]

6.4 Commercial Reasons

Various wild species are commercially raised, directly enhancing local and regional economies. In the U.S. commercial and recreational salmon fishing in the Pacific Northwest has accounted for 60,000 jobs and I billion dollars in personal income, as well as being centre to Pacific Northwest Native American culture. However time industry amid way of life is dwindling because of decline in time specie as a direct consequence of habitat degradation from dams, clear cutting, and overgrazing along streams[50]. In Nigeria illicit taking of certain animals notably the elephant, rhinoceros, hippopotamus, and gorillas in defiance of the Endangered Species Act and Wild Animals Act respectively have caused the government considerable income. A welcome development though, has been the designation of certain wildlife compartment as either games reserve, wildlife parks/sanctuaries where some of these species can be protected.

6.5 Aesthetic/Recreational Reasons

In the United States of America for example plant and animal species and their ecosystems form the bases of the countries multi—billion dollar, job—intensive tourism industry. They have also been found to supply recreational, spiritual, and quality of life values as well. Furthermore one source has it that each year over 108 million people in the U.S. participate in wildlife related recreational activities, including observing, feeding and photographing wildlife, accounting also

[45] Ibid
[46] This branch of Pharmacy is called Pharmacognosi
[47] Ibid
[48] Ibid. The US Fish and Wildlife service is the custodian of the list fo endangered and threatened species protected under the ESA
[49] Ibid
[50] Ibid

or over 59 billion dollars annually in travel expenses, lodging, equipment and food to engage in these non-consumptive wildlife recreation[51].

It is not in doubt that modern trends worldwide appear to be in favour of constructive preservation of the world's flora and fauna resources, especially those that are being threatened with extinction as a result of overexploitation, although not at the blind expense of other economic and commercial consideration. Advancements in Science and Technology, as well as the astronomical growth of the human society have been implicated as the foundation cause of specie endangerment, to the extent that it is almost a case of' killing the goose that lays the golden egg.

The same technological advancement that has pushed many species over the borderline of extinction is being looked unto for a correction, if not a complete reversal of this trend. This is not any easy feat, by any means standard, but mans acceptance to be bound by certain laws and regulations aimed at generally regulating his social intercourse has been of immense assistance here. Since Convention on Trade in Endangered Species (CITIES) many nations have codified the aspirations of the Convention for the Conservation and Protection of Endangered Species. The Initiative is being spearheaded by the West and has flowed further down to the developing world.

To this end, a lot has been done, but a lot still needs to be done for example, the complex nature of the regime of saving endangered species will require a constant review of lists and legislation to be of any real significance. As has been seen this can only be done in the face of real and reliable scientific data, which is just available on this side of the world. A curious look at our laws on the subject for example: to wit, the Endangered Species Act, Wildlife Act and Federal Environment Protection Agency Act is surely a testimony to this, and leaves much to be desired about our commitment to animal species conservation for other considerations outside commercial and economical ones.

To this end relevant legislation must be real and dependable, addressing the pertinent issue involved. Non-governmental organizations have been doing a lot in the area of direct intervention at conservation as well as raising the level of awareness among the populace. Recently for example, the Nigerian Conservation Foundation in collaboration with the World Wide Fund for Nature undertook a biological diversity conservation project tagged "Participating sustainable Management of Renewable National Resources" (PSMRNR) with the Buri Community in Kurmi Local Government Area of Taraba State. After 4 years, the project recently came to an end, and interestingly the community has appealed for a continuation of the project[52]. This is commendable, but a lot still needs to be done by way of legislation. This is so because without precise and adequate legislation to regulate the exploitation of the environment, all these efforts will amount to nothing but idealistic gusto, without more, failing to achieve any real purpose.

[51] Ibid. This is neither here nor there because conservation has to consider a balance between specie protection and economic needs of people affected. See Klamath Basin case (Supra note 32) ie Bennet V Spear (Supra)

[52] Punch Newspapers 9th August 2004, p. 40