International Journal of Fauna and Biological Studies

Available online at www.faunajournal.com

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Sanam Naz
Department of Zoology,
University of Gujrat, Hafiz
Hayat Campus, Gujrat Pakistan

Mubashar Hussain
Department of Zoology,
University of Gujrat, Hafiz
Hayat Campus, Gujrat Pakistan

Current trends in wildlife conservation; A review

Sanam Naz and Mubashar Hussain

Abstract
This review highlights the major issues about wildlife life extinction, endangerment and conservation. It is necessary to know Current scenario about wildlife protection and conservation at national and international level. Habitat conservation is the key solution to conserve biodiversity. Lot of efforts has been done to encourage forestation and decrease deforestation and practices has been done in many areas. Similarly by discouraging the pet trades, over shooting as well as hunting by applying different banes, marine pollution by different laws and regulations, and public awareness are the main concerns.

Keywords: Current trends, wildlife, conservation, biodiversity, habitat

Introduction
In current scenario conservation of biodiversity is a great challenge. It requires collaborative Global efforts for success in modern changing world. There is a great need of different planning strategies for protection, conservation, and minimizing the loss of natural resources. Indication of conservation targets or endpoints and warning with site-specific greatly enhance the success rate of conservation (Romañach *et al.,* 2016) [19].

Objectives
➢ To evaluate the current threats to wildlife
➢ What are the recent attempts has been done for conservation of wildlife?
➢ Highlight the possible efforts should be done for saving wildlife in next future.

Main causes of extinction and endangerment
1) Loss of Habitat and fragmentation
2) Wildlife Trades by National and international concern
➢ Coral reef Trade
➢ Pets Trade
➢ Body parts Trade
➢ Trade for biomedical research
➢ Bushment trade

3) Other causes
➢ Global warming /climate change
➢ Pollution
➢ Introduction of invasive species
➢ Farmer/Rancher shooting

Currently, in Asia wildlife species being removed or else due to human persecution at alarming rate. More recently conservation and ecological researches published in principle journals is biased in the direction of study sites based intemperate and wealthy countries (De Silva, 2016) [7]. Southeast Asia is recognized as one of the hottest of the world's hotspots of endangered biodiversity (Edwards *et al.,* 2011) [10]. Main threat for Asian wildlife is Critical habitat loss and hunting. So, for protection conservation and management of wildlife, longitudinal research is very necessary especially in the case of illegal and legal trade, and to know about the basic population dynamics, related to long live species (De Silva, 2016) [7].

Loss of Habitat and fragmentation
The greatest threat to biodiversity is habitat loss (Segan *et al.,* 2016) [22]. During the last two centuries human population increase rapidly so in order to meet their requirements land, farming and urbanization an important amount of natural vegetation was degraded which leads

Correspondence
Mubashar Hussain
Department of Zoology,
University of Gujrat, Hafiz
Hayat Campus, Gujrat Pakistan

to deforestation around the world (Dimobe *et al.,*2015) [9]. For biodiversity conservation Forests play fundamental and leading role that is recognized by global community and prioritized forest biodiversity preservation and conservation through different projects and agreements such as Aichi's Targets and Millennium Development Goal (Morales-Hidalgo *et al.,* 2015) [14]. In 2010, the five parties of Convention on Biological Diversity (CBD) organized an intentional plan for 2011-2020. This arrangement or plan is known as Aichi's Target and have five strategic goals. It is step forward in 2010 by 1st target "achieving significant reduction of the current rate of biodiversity loss" handling of 20 targets at once is very tuff and have great burden for some countries. However progress is slow but in October 2014, 12th conference of the parties was held and agreed to enhance progress to achieving the 2020 target (Marques *et al.,* 2014) [13].

 The forest area that is designed for conservation of biodiversity we can quantify that current area as area of forest that is protected, and forests that are already present in country and biomes. According through recent studies, Earth's land area nearly 30% covered by forests having 80% terrestrial biomass and almost more than half known terrestrial plants and animals biodiversity of the world inhabiting there. Although globally recognizing the significance of forests, and admit that area of forest has been shrinking regularly due to fragmentation while land of agricultural is expanding in 70% of countries. In the 1990s it is estimated that annually 16 million ha of deforestation are reducing world widely and between 2000 and 2010 is 13 million ha annually however in other hand recently 0.08% rate of loss is reported for the years 2010 to 2015 is at a tranquil issue of to be concerned because there is huge loss in area having high biological value. Because lot number of known terrestrial species live in forests, and about 9% of trees diversity alone are currently at risk of extinction, so for slowing or reversing the deforestation is the main goal of Aichi Biodiversity in addition Millennium Development goal also very important. As the world's community is aware about the significance of biodiversity and woods cover, therefore there is a great improvement in the direction of achieving biodiversity conservation and minimizing loss of forest goals but it seems to big challenge. Now, one of the primary strategies for century is designating protected areas; however, it is found that large numbers of important biodiversity areas are not satisfactorily covered as protected area rank (Morales-Hidalgo *et al.,* 2015) [14]. Amongst conservationists maximizing forest area is a major concern (Sloan and Sayer, 2015) [23]. At Global scale FRA (Forest Resources Assessment) give opportunities to collect and analyzed data. Due to this trend many issues that manipulate wildlife conservation are highlighted at large scale and suggest many probabilities for enhancement and protection of biodiversity. When analyzed in relation to other concerns (e.g., socioeconomic data), that offer approaching into the aspects that influence conservation of forests at a large scale and suggest promises for improvement together in conservation of forest and in following the rank of forests which is very necessary for conservation (Morales-Hidalgo *et al.,*2015) [14].

Global Forest area
In year 2015, reported that total global forest area is about 4000 million ha, in 1990, it is reported that there is decrease about 3% from 4128 million ha. The main cause of this decrease is decline of tropical domain that is about 200 million ha, and in temperate domain there is 65 million ha partly increase. In 2015 it is reported that in tropical domain there is highest% age of forest area that is (44% of total), Temperate domain followed as (26%). Region wise, Europe has highest forest area 25%, North America (16%) and South America (21%) (Morales-Hidalgo *et al.,* 2015) [14].

Role of planted forests
Planted forest play significant role in biodiversity conservation and also reduce pressure on natural forests. During 1990-2015 it is assessed globally that deforestation is decreased and afforestation is increased. Both FRA (Forest Resources Assessments) and FAOSTAT data shows that if globally planted forests increases as 2.4% per annum from 2010-2050 it might be restore natural forests for fiber as well as timber. Current 80% forests are contributed to production. That is not diverse from 2.05% per annum increase reported by FRA for 1990-2015 (Sloan and Sayer, 2015) [23]. There is a great need of public awareness in this time for conservation of forest and wildlife. For this reason Tourism is the best way especially for school, college and university students (Thurstan *et al.,* 2015) [27].

For biodiversity conservation forests designed as protected area
For reducing the negative impact of human persecution on natural environment many protected areas in the world are established for maintaining balance and conservation of wildlife (Dimobe *et al.,* 2015) [9]. According to IUCN in FRA "area especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources and managed through legal and other effective means is known as protected area" as well as "Forest area designed primarily for conservation of biological diversity that includes but is not limited to areas designated for biodiversity conservation within the protected areas is known as the area for conservation of biodiversity". In 2010, maximum 86% forests designed for biodiversity conservation 234 countries reported as officially protected forests. In 1990, globally forest area that is protected reported more than 80% and area for the conservation of biodiversity is 88%. Some countryside have large protected areas but they do not give reports in all years including Australia, Congo, Bolivia, Peru, Venezuela and Mexico that's why it is not easy to comparing data between years. Almost 507 million ha area of forest in 2015 is reported as protected of the total 651 million ha of protected forests. Over 25-years there is an area that is protected increased in all climatic spheres most of increasing take place before 2010. About 0% was in 1990 to 15% of forest protected area in 2015. List of top 15 Countries which have reported largest protected area in 2015 are Brazil; United state; Indonesia; China; Congo, the Democratic Republic; Venezuela, Bolivarian Republic; Canada; Australia; Peru; Russian Federation; India; Botswana; Bolivia, Plurinational State of; Zambia and Thailand. Some countries are excluded for the reason that they did not give report throughout the years. FRA has reported biodiversity conservation area of 15 countries in 2015 (from 1990-2015)ordered by year including countries: United State; Brazil; Maxico; Russian Federation; Australia; Congo, the Democratic Republic of; Venezuela, Bolivarian Republic of; Canada; Indonesia; Peru; India; Bolivia, Plurinational state of; Zambia; Colombia; Thailand.

In 2015, in all countries 427 million ha area out of the total 524 million ha area designed as area for biodiversity conservation (Morales-Hidalgo *et al.,* 2015) [14].

Conservationists have great concern for maximizing forest area but the major issue is climate change. Political involvement claimed that there is zero deforestation and international financing continually insisting that reduce the deforestation and increase the afforestation (Sloan and Sayer, 2015) [23]. Drought is a great recognizing problem in recent years which increase the mortality rate in forests of western North America (Assal *et al.,* 2016) [1]. In grasslands and shrub-lands habitats are continually declining by disturbance. To tackle this decline Government agencies use anthropogenic disturbance like mowing or logging to mimic natural once. Another step taken for land management is the management database by Massachusetts that will tackle all land management activities by state agencies. This database is highly significant. Allow coordination among NGO's and different agencies and give easy access to data for management efforts (Schlossberg and King, 2015) [21].

National and international wildlife Trade
For conservation of wildlife there is great threat of wildlife trades. CITES (Convention on International Trade in endangered species) relying on trade bans and controls (Challender *et al.*, 2015) [5].

Coral reef Trade
Ornamental coral reef wildlife trades include the jewelry, aquarium, and curios provide multi-million dollars to industry. Vulnerable coral reef species are threatened due to not good Collection practices and lack of effective management and regulation. Primary international mechanism that is an agreement among 175 countries that regulate the coral reef trade is CITES (Dee *et al.,* 2014) [8].

Pets Trade
Keeping Wildlife animals as pets is an illegal trade for conservation and welfare of animals is a global concern. Many national and international Non-governmental organizations (NGOs) are working to decrease this illegal trade. In domestic market of Peru, it is recognized that 28 NGOs are working. In an interview it is observed that only 5 NGOs that have strong perspective toward wildlife conservation have high efforts to decrease this illegal trade in two regions of Peru. Overall interviews show that there is a careless behavior of government toward legislation (Daut *et al.,* 2015) [6].

Body parts Trade
Wildlife species are hunted all around the world for certain parts of animal bodies that are used in medicine and fetish practices. Animal parts are also used for traditional and cultural practices in Africa. Avian mortality related to human persecution for trade in the Cross River region of south east Nigeria is observed through personal interview from 18 villages are conducted in 2015. Results show that 27 birds species from 13 families used as regional trade out of which top 5 are globally recognized as threatened species (Atuo *et al.,* 2015).

Trade for biomedical research
There are many laws, regulations, convention, treaties, policies and organizations for the use of animal species for biomedical research but also there are further requirements for non-human primates. These requirements include political initiatives, medical needs, moral and ethical concerns, social and cultural perspectives and species differences (Bayne and Morris, 2012) [3].

Bushment trade
In tropic areas used of wildlife is massive, local community consumed about 5 million tons bushmeat (Kanagavel *et al.,* 2016) [12]. For conservation of biodiversity human behavior have great importance. For conservation project compliance about conservation rules (e.g., no hunting, shooting etc) is very necessary. Because conservation is very sensitive issue and victims are voiceless so "detection and understanding violation of conservation rules" are very necessary (Solomon *et al.,* 2015) [25]. Due to this it is clear need to understanding issues for better complains and effective implement (Challender *et al*., 2015) [5].

International agreements for trade regulations
CITES (Convention on international Trade in Endangered Species) of wildlife biodiversity is an agreement among 175 countryside. According to level of protection species that are covered by CITES are included in three Appendices.

Appendix-I: This Appendix gives protection at highest level to those species that are threatened with extinction and vulnerable to international trade. It inhibits all international commercial purpose trades. E.g. Hawksbill turtle is inhibited for all international trades for jewelry and luxury items.

Appendix-II: It includes those species currently that are not in danger of extinction but are threatened by over-exploitation. Export permits are issued by exporting country just when (i) when it is advised by scientific authority that export is for the survival of that particular specie (ii) specimen is not taken illegally (iii) for living specimen minimizing the risk of injury and cruel treatment during transport. It includes more than 30,000 species including all giant calms, all seahorses, > 2000 hard corals, and 3 species of hammerhead sharks.

Appendix-III: It includes those species having at least one member of specie is requests enforcement assistance from other members of CITES. In July 2008, 4 species of Corallium are reported in CITES Appendix-III, adding export permit from China (Dee *et al.,* 2014) [8].

Other causes
There is a great anthropogenic pressure on natural biodiversity within increasing human population and compelling the wildlife managers that how they conserve and protect the wildlife (Noor *et al.,* 2016) [16].

In TWRB (Total Wildlife Reserve of Bontioli) in West Africa SHOWS land degradation and deforestation (LDD) and loss of vegetation of cover for the sake of Agricultural area (Dimobe *et al.,* 2015) [9].

Global warming /climate change
In Scotland salmon rate decline due to number of factors including climatic change from mid 1980-2000. Due to this there is a low abundance in 1991-1992 and from 1996-2003. Side by side seal number is also decline during this period

(Butler *et al.,* 2015) [4]. Due to human activities there are continually changing in the environment which leads to environmental degradation, Habitat loss, and fragmentation. It is a great threat to world's biodiversity (Segan *et al.,* 2016) [22]. Climatic changes are very important for species distribution and dispersal with the passage of time global warming is continually accelerating so it is predicated that risk of declining species will increase under climate change condition. In a study on *A. quadra* which is endemic to mountain was predicted that it will reduce into 85% at the end of 21st century. The mean temperature of mountain is < 19 °C but with increasing temperature in future these climatic conditions will turn into higher altitudes and *A.quadra* restrict to highest area in response to global warming. This shows that in 2050-2070 there will be a small part of suitable area for this specie (Sobral-Souza *et al.,* 2015) [24].

Pollution
Due to human activities there is a great amount of litter in oceans. That's lead to great problem for aquatic life. Introduction of polychlorinated biphenyl (PCBs) into marine food web increase the mortality rate of seabirds, fish, turtles and mammals (Hardesty *et al.,* 2015) [11]. Similarly, organochlorine (OCs), and dichlorodiphenyltrichloroethanes (DDTs) are also a harmful pollutants and they persist for a long time (Randhawa *et al.,* 2015) [18]. In oceans more than 6 million metric tons of plastic enter each year and it is eastimited that it will increase in great megnitudes in next ten years. Its degradation time is unknown. Marine species that are affected by litter is about 700 and increase continually (Hardesty *et al.,* 2015) [11].

Introduction of invasive species
An invasive or Allian species introduced in a new environment by accidently or manually. It will compete for survival with endemic species of that area which lead to death and decline. Scientist has designed a project by volunteer approach to eradicate a harmful invasive species in Scotland. (Santangeli *et al.,* 2016) [20].

Farmer/Rancher shooting/poaching
Illegal poaching is also another threat to wildlife conservation. Conservationists have lobbied for better manage land area for minimizing threats (Piel *et al.,* 2015) [17] as poaching is great threat to wildlife conservation. In current situation having no such Law's for protection of species so, an alternative approach is applied. That is the commercial breeding that keeps the pressure off from wildlife reffered as wildlife farming (Tensen, 2016) [26]. The success of conservation is not only rely on ecological information but public awareness and predication of target specie is very valuable (Vincenot *et al.,* 2015) [28]. Pangolian trade is a great threat for this specie. Its poaching in China and Vietnam is for meat and scales (Nijman *et al.,* 2016) [15].

Conclusion
Globally there is an immense need to conserve and save wildlife particularly in Asia and Southeast Asia. Main threat is the habitat loss in all previous researches. Reducing deforestation is a key solution of habitat loss. Since 1990-2015 it is evaluated that deforestation is decrease and afforestation is increased. Other Important initiatives for managing habitat are Aichi's Target plan (2010-2020) and

Millennium Development Goal. Area of forests is continuously shrinking by fragmentation and 0.08% rate of loss is reported since 2010-2015 which is a still issue for debating. FRA is very active to collect and analyzing data but cooperation of countries with FRA is very necessary for knowing and highlighting issues. Second, main threat of wildlife loss is international and national trades. These trades are flourished rapidly for earning. There is an international CITES agreement among 175 countryside for trade regulations. But there is no strong implementation, governments show careless behavior toward legislation and implementations of rules. Due to human activities Climatic changes/global warming and pollution continuously accelerate on earth. There are no more Law's and strong implementation of present law's that will protect the species. In current circumstances there is an enormous need for strong legislation, political initiatives, public awareness, prediction of targets, moral and ethical concerns and most important is collaborations between Government and non-government organization to conserve wildlife.

Recommendations
- More researches should be done for highlighting the current issues about biodiversity and attempt has been done for conservation of biodiversity.
- There is a strong need to collaboration of Government and Stakeholders with NGOs for different programs concern to conservation of biodiversity and wildlife welfare.
- Government should prescribe legislation for illegal activities that leads biodiversity to the edge of extinction.
- There should be public awareness about biodiversity importance through social, print and electronic media.
- Students study tour should be arranged at school, college and university level for giving awareness about the importance of biodiversity and necessary actions for its conservation.

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