Journal of Advances in Science and Technology
Vol. 16, Issue No. 1, March-2019, ISSN 2230-9659

A Study of Biodiversity Evolution & Recognition of Law

More Amit Ajitkumar[1]* Dr. Rahul Chowdary[2]

[1] PhD Student, University of Technology, Jaipur

[2] PhD Guide, University of Technology, Jaipur

Abstract – Biodiversity is the diverse ways of existence on earth, which include the various plants, animals, micro-organisms, the genes they possess and the environment they form. The research focuses on the creation and recognition of the law concerning biodiversity protection." It covers genetic variation, the variation of the environment, the variation of species in a region, biome or planet (number of species). Biodiversity is important in a variety of areas, including encouraging the aesthetic importance of the natural world, helping to improve the quality of your material by utilitarian value by delivering fruit, fodder, wood, timber, and medicine, throughout the range of landscapes, biotic communities, and ecological processes throughout the biosphere. The life support mechanism is biodiversity. Breathing oxygen, fruit and drinking water are dependent on organisms. Wetlands filter water, vegetation and plants toxins by removing biomass and reducing environmental warming and agricultural materials and soil fertilisation through bacterial and fungal substances. Empirically, it has been shown that the diversity of native organisms and the quality of life of people are related to the wellbeing of habitats. The biodiversity ecological resources are preserved by soil development and safety, water preservation and purification, hydrological cycles, biochemical cycle control, pollution absorption and decomposition, waste material decomposition, commitment, and regulation of the natural climate planet. Despite the advantages of biodiversity, the danger posed by human mismanagement of ecological capital, sometimes stimulated by imprudent policy on the economy, deforestation and defective structures in addition to climatic change, are rising daily. It is essential to preserve biodiversity in order to guarantee intra- and intergenerational equity. Some of the existing biodiversity management initiatives involve reforestation, zoos, botanical gardening, national parks, reserves for biosphere, germplasm banks and the introduction of breeding methods, Techniques of tissue culture, social forestry to reduce the pressure on exploitation of forest land.

Keywords – Biodiversity, Disease Risk, Public Health, Conservation, Climate Change, International Law, Chronology, Evolution

----------X----------

1. INTRODUCTION

The biological diversity is the heterogeneity of living beings and their ecologic complexes, namely species, species and habitats diversity (CBD 1992). The three layers of biological organisation (species, ecology and genetic diversity) have traditionally been identified (molecular diversity; Campbell 2003). It is generally regarded as a key determinant of ecological conservation and. The human influence on the Earth's ecosystems resulted in an abrupt drop, usually referred to as 'sixth mass extinction' (Barnosky et al. 2011000 times higher than baseline concentrations (those typical of fossil records; Macedonia et al. 2006). Land-use transition and climate change, nitrogen accumulation and biotic sharing are the major driving force behind the depletion of biodiversity (Sala et al. 2000).

The need to preserve biodiversity has now become a widely recognised social objective – which is expressed in foreign, state and local agendas and a rich array of policy content and advertising campaigns. While the original focus on moral, ethical or theological motivations, often based on forceful statements (e.g. 1988 trillion a year, the prevailing perception nowadays highlights the concrete economic advantages biodiversity offers to human community. Indeed, diversity of life is regarded as a core component of many environmental resources with an estimated overall importance of US$ 33Costenanza et al. 1997 (e.g. erosion monitoring, soil formation, cycling, pollination, biological management, air composition control, temperature, weather, and perturbances). Moreover, a big risk for health and food protection is the depletion of biodiversity.

Our vision about the biodiversity and ecological structure was mostly stagnant and was aimed to preserve biodiversity as it is and ideally as it has been, in opposition to the complex developmental flux that characterises existence. However, this perspective is now outdated because of the scale and pace of human environmental changes. Human acts frequently lead to impreviewed developments that cause swift evolutionary responses, whereas raw material for short-term evolutionary responses is (most often depleted) dramatically affected: genetic variability remains. Simultaneously with the decommissioning and rehabilitation of current biotic populations triggered by the mixture of landscape, environment and biotic changes, new societies and co-evolutionary networks have continued to develop with which we lack past analogues (Williams and Jackson 2007; Stewart 2009; Stralberg et al. 2009). These mechanisms are responsible for producing, preserving and (often) erosion of biodiversity in the 'true' environment (i.e. anthropogenic, evolving and gradually linked). There is growing focus upon generating and transfering progressive awareness on the need for innovative and cost effective strategies to guide anthropogenic transition towards sustainability.

We evaluate recent evidence in this paper suggesting the need to adopt policies on biodiversity that go beyond identifying and preserving particular ecosystems, locations or organisms of high conservation importance and recognise the vibrant existence of evolutionary processes that produce and preserve diversity. We then discuss the relevance of biodiversity policies for the international community, analyse their incorporation into them and find ways of innovation and change. To this end, we concentrate on the Biological Diversity Convention, which can be regarded as a core element of biodiversity policies across the world, and the European policy on biodiversity, which provides an adequate illustration of trans-national policy-making.

2. BIODIVERSITY

Biodiversity is a modern concept that literally implies "the variety of earthly existence." This variation can be calculated at various levels.

- **Genetic** - Changes between the same species humans. This involves the genetic differences between people and between various groups of the same species in a single community. Genetic variations can now be calculated by more advanced methods. The basic material in evolution is these variations.

- **Species** - The diversity of organisms in a place or field is the range of species. This may be measured either by counting the amount of organisms present or the taxonomic diversity. Diversity of taxons is more accurate and takes account of the interaction between organisms. The amount of taxa (the major grade categories) present can be determined by counting them. For instance a pond containing three species of snail and two fish, while they all have the same amount of species, is more varied than a pond containing five species of snail. The biodiversity of high organisms is not always a positive thing. A ecosystem will, for example, possess a high species of biodiversity so several common and It is invaded by widespread species at the expense of the only species.

- **Ecosystem** - Plant and animal communities interconnect as an evolutionary structure or community along with their natural environmental features (e.g. geology, soil and climate). Diversity of ecosystems is difficult to quantify since there are rarely consistent and mutually classified boundaries of various ecosystems. However, as consistent parameters are selected to set habitat boundaries, their amount and distribution may be calculated as well.

Types of Biodiversity

(i) **Genetic diversity:** A single species could demonstrate high genetic diversity across its distribution range. The genesis of the Rauwolfia vomitoria plant, which grows in various Himalayan ranges, may be based on the power and concentrates of the active chemical (reserpine) generated by the plant. India has over 50,000 rice strains and 1,000 mango species with genetically diverse species.

(ii) **Species diversity:** For example, at the species level, the wealth of western Ghats is greater than the east Ghats.

(iii) **Ecological diversity:** For example, on an ecological basis, India is more varied than Scandinavia's, with plains, rain forests, mangroves, reefs, rivers, estuaries and alpine meadows. India has more ecosystems than Norway.

This rich nature richness has taken millions of years to develop but, in just two hundred years, we could destroy all this abundance if the current pace of extinction of organisms continues. Biodiversity and its preservation are also crucial foreign environmental concerns, when more and more citizens worldwide are beginning to understand the fundamental relevance of biodiversity to our life and well-being on this earth.

3. LOSSES OF BIODIVERSITY

- Life is a fact of extinction. From the origins of creation, species have evolved and died. To appreciate this, you have to look at the fossil record.

- However, animals are now now completely extinct due to human activity, at an unprecedented pace. Earlier mass extinctions, which are visible in the fossil record, were primarily caused by major climatic or environmental changes. Mass extinctions are unusual in natural history as a direct result on the behaviour of one human population The extinction of biodiversity is particularly well-published and highly concerned in tropical habitats such as rain forests. The decline of biodiversity and animals closer to home in Britain is, however, equally troubling. This is likely to be on a similar scale, considering the much narrower location.

- Potential species declines are predicted and estimated abundantly. A fifth of all animals on earth would possibly be eradicated or on the path to extinction in 30 years. One such prediction estimates. Another forecasts that in 100 years, three-fourths of all animals would either end or be identified as "lead dead" in ecosystems too tiny.

- There are just forecasts, it is worth emphasising. Most forecasts are dependent on computer simulations and as such a generous pinch of salt needs to be taken. In the beginning we don't even know how many animals our premise is based on. It is difficult to forecast what will happen with some degree of precision. There are still too many factors involved. In reality, certain animals prosper from human activity, although many others suffer detrimental effects. Nevertheless, the growing rivalry with animals for room and energy would surely lead to forests and their species being lost as the human population continues to soar.

- The size of human population growth in the last two centuries is challenging to understand. No damping impact on increasing populations is being experienced notwithstanding the horrendous cumulative death rates in two World War IIs, Hitler, Stalin, massive flu pandemics and AIDS. In 1950, there were 2.4 billion people worldwide. Only over 50 years old, the world's population almost tripled to 6.5 billion.

- Every year in the United Kingdom alone the population is growing to a new city. The dilemma is exacerbated further by corresponding calls for a better quality of life for everyone. It is predicted that if anyone else in the planet were at the UK level of life (and why citizens abroad could be given this right), then another three countries would have to provide the requisite services or otherwise, the global population would have to be reduced to two billion.

- The only logical result is that after a considerable reduction in human numbers, nature would inevitably continue to experience serious declines.

4. BENEFITS OF BIODIVERSITY

- Our environmental well-being contributes to the biodiversity. We also generated different biodiversity productive resources e.g. agriculture or nutritional materials, medical products, industrial raw materials etc.

- More than 60 wild species were used to improve 13 major crops worldwide by supplying genes to withstand pests, improve production and improve nutrition (IUCN, 2012).

- About 7,000 plant species have been used for human use since cultivation started around 12,000 years ago. Although most people depend mainly on domesticated animals in terms of diet, some 200 million wild species remain in at least some of their food.

- South and East Asian populations are based upon diverse agro-ecosystems of rice-fishes, in which the local communities use fish and other aquatic animals as protein sources and provide vital rice productivity services in flooding areas.

- At least 15 percent of animal protein eaten specifically by human beings is fished by themselves. Indirectly, fishing supports more food development by inputs to aquaculture and animal industry. Amphibians perform a crucial function in habitats, are health markers and are used in the pursuit of innovative drugs in 'hopping pharmacies.' However, 41 % of amphibians are endangered.

- Medicinal plants and animals are more often consumed in certain countries and half of the 100 most used products are from wild creatures, even in technologically sophisticated countries like the USA. According to the WHO, almost 80% of citizens in Africa depend on conventional

medicines as their primary source of health care needs.

- More than 70,000 different plant organisms are covered in traditional and current medicine. Microbes have provided us nearly half of our drugs, such as penicillin and cholesterol lowering. With the chemical taxol derived from Pacific Yew, cell cancer has been seen to be extinct. Pit Viper is a source of ACE inhibitors, one of the most common medications known for high blood pressure treatment (Bothrops jararaca).

5. BIODIVERSITY CONSERVATION

Conserving biodiversity means saving life in all facets of the earth and maintaining a working and stable natural environment. This includes preserving, maintaining, sustainable usage, recovering and improving biological diversity elements. Where - conservation - means efficient usage of resources which covers preservation, exploitation and conservation - is an element of conservation that means anything should be kept without alteration or modification. Another complex component of biodiversity restoration is sustainable growth. This applies to innovations that satisfy the needs of the current generation without compromising the ability of potential generations to satisfy their needs. It just points to intragenerational and intergenerational wealth. Sustainable growth means the restoration of habitats results in a harmony between climate, development and culture. That is only feasible if policies/conventions and environmental organisations are well implemented and implemented.

6. WHY IS BIODIVERSITY

1. Biological Resources

Figure 1: The tensile strength of spider silk provided inspiration for engineering a similar synthetic fabric.

This goods which we reap from nature are the biological tools. The services are divided into various categories: fruit, medication, fibres, wood goods, etc. For eg, more than 7,000 plant species are used in food but only 12 main food crops are used. Most people are dependent on medicinal plants. Most of our drugs in the developing world are additives produced by pharmaceutical firms, although the initial formulations were also made of plants. Aspirin is extracted from willows and quinine to cure malaria comes from the Chinchona flower. For example, opian pain-rescuer is derived from poppy. Both the rose-shaped periwinkle (Vinca rosea) and the Pacific yew (Taxa brévifolia) give chemotherapy chemotherapy substances that prevent cancer cell division. A wide range of plants, including cotton plants, silk, hemp (cordage and canvas), agave plants (sisal), cork fibre (jute) and bamboo, as well as palm trees, are available to provide fibre in furniture, clothing, sacking, webbing, netting and other fabrics. Trees provide wood components for the manufacture of houses, furniture and paper products.

Furthermore, live species inspire engineers who look for new and more effective devices. The so-called biomimicrics area is the investigation into natural materials that can solve human needs. For eg, hydrodynamic swimming suits were provided with shark skin. The glue used for cementing their sand particle shelles from Sandcastle worms inspired the glue which mixes broken bones in an aqueous body setting. Finally, researchers use the chemical character of spider silk in order to produce solid, lightweight fibres (Figure 1).

2. Ecosystem Services

Ecosystem services are mechanisms that sustain human existence through default. These programmes provide waste breakdown, pollination, water cleansing, flood moderation, and soil fertility regeneration. The processes of the ecosystems are sometimes ignored and often not respected in the economic sector until they stop operating. If these programmes are given economic importance, they are always appallingly expensive. Insect pollinators, for example, help grow many economically valuable fruits, including almonds, melons, blueberries and apples. The global economic importance of insect pollination services is worth $217 billion annually (Gallai et al. 2009).

How does a water purification procedure work? Rain waters are pumped into the atmosphere by the vegetation and bacteria that are able to break down fertiliser and contaminant and slow down metal ions. Sediments accumulate nitrogen and capture wetlands and riparian vegetation, which diminish water quality.

Human building and growth are disturbing natural ecosystems, but most species are able to regenerate exceptionally when they are granted the opportunity. This is because dormant seeds will sprout in the soil, stabilise the soil, and trigger

successive events that return plant life to other colonising species. Indigenous plants like fireweed can help fire an area.

3. Social and Spiritual Benefits

During much human existence, nature has been protected by the divine blessings that it offers and holy sites throughout the local ecosystem have been protected. Indigenous people's stories incorporate extensive awareness of their own world's wildlife and plants. The mythological, folk art and common dance's heterogeneity demonstrate the cultural growth impact of biodiversity and contributes to the enrichment of the global literary and artistic arts (Figure 2)

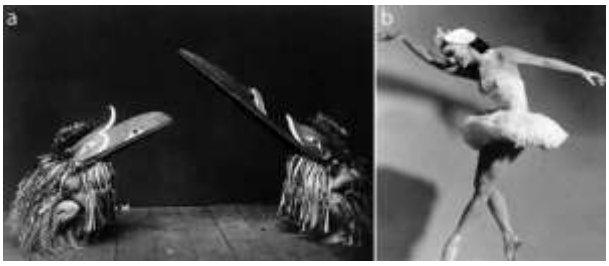

Figure 2: The costumes and stances of these dancers illustrate cultural differences in depicting birds through dance.

A) Native American Kwakiutl (1914) (Edward S. Curtis, Eduard S. Curtis Collection, Washington D.C. digital. id. cph 3c08464) ceremonial British Columbia dancers (1914). (b) The Swan Queen in Swan Lake by Alicia Alonso of the Grand Tetro of Havana (1946).

Figure 3: People flock from around the world to see the bull elk bugling and displaying during mating season at Rocky Mountain National Park.

In various landscapes diverse communities were created that had an impact on activity, professions, diet, language and architecture. Cultures adapted to local environmental challenges by local agriculture and irrigation schemes, shooting, fishing and catching. Cultures adapted to local environmental challenges There's a feeling of location in biodiversity. Countries and States have flagship animals and plants which make each habitat special and are a source of pride (Figure 3). The need to see this blend of cultural, landscape and biological complexity is driving travel, which offers immense pleasure for many.

Ecotourism is the journey to the natural environments and local communities in order to see, support and support them. Encouragement of ecotourists will mitigate habitat loss, protect wildlife habitats, and create opportunities for local economies. The Wasini Island project in Kenya, for example, was a big success storey in eco-tourism. The growth, cultivation and mining of reef species have deteriorated coral reefs and mangrove forests. The support of the Biodiversity Conservation Program allowed the local community to build boardwalks and other features for wildlife inspection. Local people have been educated to operate a successful ecotourism operation, as well as as guides and administration. Tourism funding supports local economies, encourages habitat maintenance, offers local health clinic funding and bursaries for local students (Peopleandplanet.net 2009).

In 1892, the Congress of the US set aside the first national park for "the profit and pleasure of the public," recognising the aesthetic importance of nature (NPS 2010). Frederick Law Olmstead had in 1800 developed and controlled the rejuvenating forces of nature, designing and managing parking structures and metropolitan Parks like Central Park, New York City. He believed the greatness of nature helped people to place their lives in context. In the new age, residents are looking for city parks, green spaces and walks, and travel to national parks and wild sites. Appropriate, economically significant hobbies are birding, camping, swimming, shooting and planting as well as other ways of leisure.

While contemporary claims are most much about the anthropocentric importance of biodiversity, the inherent qualities of biodiversity were stressed by natural writers such as Emerson, Thoreau, Leopold, Muir and many more. "This curious universe we live in is more magnificent than convenient; is majestic than useful; is more admirable and fun than it is to be used" said Henry David Thoreau (1837).

7. EVOLUTION OF BIODIVERSITY

7.1 Chronology

3.5 billion years of evolution was the legacy of biodiversity. Scientists have not identified the source of the life, However, there is proof that around 100 million years after the foundation life on earth could already have been created. Everything life was composed of micro-organisms – archaea, microbes, single-cell protozoans and protists until around 2,5 billion years ago.

During the Phanerozoic era (last 540 million years) biodiversity history starts during the Cambrian eruption with rapid expansion. —a time in which almost any multicellular organism phylum first emerges. Invertebrate diversity showed no overall trend for the next 400 million years and vertebrate diversity indicates an exponential overall trend. This rapid increase in diversity has been marked as mass extinction occurrences by major seasonal declines in diversity. As rainforests declined in the carboniferous area, there was a huge loss. The strongest was the 251 million-year-old Permian-Triasic extinction. Vertebrate's recovery from this incident took 30 million years.

The geological record suggests the highest biodiversity in nature within the past several million years. However, not all scientists share this opinion since there is confusion about how the availability and recovery of recent geological parts are closely bound up with the fossil record. Some researchers claim that current biodiversity does not vary significantly from biodiversity 300 million years ago, as corrected for sampling specimens, whereas others think that fossil records represent the diversification of life fairly. The current world diversity of macropodic organisms is estimated at between 2 million and 100 million and the overwhelming majority of arthropods are estimated at some 9 million. The lack of natural selection seems to enhance diversity continuously.

7.2 Diversification

There is also the issue of whether this constraint may also limit the number of animals, given the existence of a global carrier capability limiting the survival time. Records of life on the sea indicate a logistic trend of development, but the increase in diversity on the land (insects, plants and tetrapods). "Tetrapods have not yet invaded 64 percent of potentially habitable modes, however the ecological and taxonomical diversity of tetrapods will continue to rapidly rise without any human intervention before most or all eco-space is occupied." As one author says.

It seems even that, particularly after mass extinctions, diversity tends to grow over time.

In contrast, improvements by phanerozoic compare much more than with exponential and logistic models with a hyperbolic model (whose applications in population genetics, demographics and macro-common science, and in fossil biodiversity). The above models suggest a shift in diversity based on a favourable feedback in the first place (more predecessors, more descendants) and/or on negative feedback from limitations of resources. Model hyperbolic means a constructive reinforcement of the second order. Unlike bivalves after end-permian extinction, variations in the intensity of the second order feedback caused by different interspecific intensities of competition can explain the faster re-diversification of ammonoids. The hyperbolic tendency for world population growth results in a second order of constructive input between population size and acceleration of technological change. The hyperbolic nature of biodiversity training may also be contributed through input between diversity or the dynamics of population structures. Possibly since cyclical/stochastic processes interact with the pattern of hyperbolia, the correlation between biodiversity and humans is.

However, The latter portion of the latest mass extinction regarded as the extinction of Holocene is seen by most scientists as being caused mostly by human environmental impact. The new extinguishing pace is said to be sufficient in 100 years to destroy most creatures on earth.

New organisms (by 5–10 000 new species, the majority of them insects) are frequently found and more, while not yet named, are also discovered. The majority is present in tropical forests and the ground has overall more biodiversity than the sea; there could be about 8.7 million species on Earth, of which only 2.1 million remain in the ocean

8. THE BIOLOGICAL DIVERSITY LAW

The Biological Diversity Act provides for - preservation of biological diversity, efficient usage of the components of biological diversity as well as equal and balanced allocation of profits from or on related issues of the use of biological capital.

The National Biodiversity Authority was created in 2003 in Chennai for the purpose of implementing provisions of the BD Act (Section 8 of the BDA).

BD Rules 2004 is told according to Section 62 of the BD Act 2002. DIVERSITY ACT PROVISIONS Biolet, 2002 2002 2002

Section - 3: Permission by NBA to the obtainment of biological resources is needed for any foreign national. Section - 4: Indian persons/entity for the transition of knowledge/research and information to foreigners for clearance.

Section - 5: Guidelines for joint science programmes funded by the government.

Section — 6: Prior approval of the NBA prior to applying for any IPR focused on biological material analysis and or related expertise from India. Section — 6.

Section - 7: Indians requested prior information from state biodiversity boards on state biological content for commercial purposes. SBB may monitor this access.

Section - 22: State Bio-diversity Boards are established

In behalf of the Official Gazette by notification, a board for the State to be identified as the (name of the State) Biodiversity Board will be created by the Government for the purpose of this act.

Section - 23: State Boards on Biological Diversity Section 24: State Biodiversity Council powers.

Section 24. The role of the State Biodiversity Board shall (a) inform the State Government, in compliance with any guidelines published by the Central Government, in relation to biodiversity protection issues, sustainable usage and fair share of benefits from the application of biodiversity resources; (1) regulate by granting permissions or other applications to use biological resources 1;.

Section - 26: National Biodiversity Fund

(1) Any charges and dividends collected under the Act by the National Biodiversity Authority and any amounts received from other outlets by the National Biodiversity Authority shall be generated and credited for any grants or loans made under Section 26 to the National Biodiversity Authority.;

(2) Incentives shall be extended to reward claimants to channel from the Facility, to protect and promote biological resources and to create the areas from which access is obtained from such biological resources or related knowledge.

Section - 32: State Bio-diversity Fund

Any grants or loans rendered to the State Biodiversities Board under section 31 shall be credited, and all amoune obtained from that State Biodiversity Board from any other source, which may be agreed in the State Government, shall be made up of a fund to be named the State Biodiversity Fund.

Section - 36: Central Government to develop National strategies plans etc. for the conservation of biodiversity.

Section - 36 (3) (ii): Regulate release of GMOs

Section - 36 (4): Measures for protecting the traditional knowledge Section - 37: Biodiversity heritage sites

Section - 38: Notifications of threatened species.

Section - 41: Establishment of Biodiversity Management Committees by local bodies. 8 National Authority for Biodiversity Biodiversity Protection Council of the State

All the local body constitute a Committee for Biodiversity Management in the area to promote conservation, sustainable use and biodiversity documentation, including the conservation of habitats, landrace conservation, folk species and cultivars, domesticated animal and micro- organism inventories and the chronicling of biological diversity knowledge.

Section - 42: Local Biodiversity Fund

Section - 55: Sanctions – up to five years in jail and up to a 10 lakh fine or to the amount of harm incurred.

9. CONCLUSION

People are constantly changing the habitats of the Earth. The high and growing levels of living in industrialised and quickly developing countries are transforming additional land into farming and urban areas, increased use of resources, climate change and biotic homogenization. Such developments poses new problems as novel pathogens spread from biodiversity through invading natural zones by human activity, by introducing pathogens into new areas and by introducing novel host species to new continents or islands, by increasing or decreasing animal numbers as the land use changes, by making the environment colder and wetter or more dry. This difficult public health challenges can need new policies and strategies. We also summed up the studies necessary to establish interventions on biodiversity protection in public health instruments. We also established methodologies for the promotion of this strategy until substantial improvement in expertise can be properly calculated in order to assess the effects and cost-effectiveness of such measures on human welfare. If diversity would prove net positive to people, it could offer a strong impetus to save the rest of Earth's biodiversity.

REFERENCES

1. Biomimicry Institute (2009). Case Studies: Secrets of the sandcastle worm could yield a powerful medical adhesive.

2. Dirzo, R. & Raven, P.H. (2003). Global State of Biodiversity and Loss. Annual Review Environment and Resources 28, pp. 137-167.

3. Ellsworth, J.W. & McComb, B.C. (2003). Potential effects of passenger pigeon flocks on the structure and composition of presettlement forests of Eastern North America. Conservation Biology 17, pp. 1548-1558.

4. Food and Agriculture Organization of the United Nations. The State of the World's

Plant Genetic Resources for Food and Agriculture (1997).

5. Gallai, N., Sales, J. et. al. (2009). Economic valuation of the vulnerability of world agriculture confronted with pollinator decline. Ecological Economics 68, pp. 810-821.

6. Grant, M., Mitton, J. B. et. al. (1992). Even larger organisms. Nature 360, pp. 216.

7. Foley JA, et. al. (2005). Global consequences of land use. Science 309, pp. 570–574. (10.1126/science.1111772)

8. Keesing F, Holt RD, Ostfeld RS (2006). Effects of species diversity on disease risk. Ecol. Lett. 9, 485–498. (10.1111/j.1461-0248.2006.00885.x)

9. Dornelas M, Gotelli NJ, McGill B, Shimadzu H, Moyes F, Sievers C, Magurran AE. (2014). Assemblage time series reveal biodiversity change but not systematic loss. Science 344, pp. 296–299. (10.1126/science.1248484)

10. Dirzo R, Young HS, Galetti M, Ceballos G, Isaac NJB, Collen B. (2014). Defaunation in the Anthropocene. Science 345, pp. 401–406. (10.1126/science.1251817)

11. Cardinale BJ, et. al. (2012). Biodiversity loss and its impact on humanity. Nature 486, 59–67. (10.1038/nature11148)

12. Hooper DU, et. al. (2012). A global synthesis reveals biodiversity loss as a major driver of ecosystem change. Nature 486, U105–U129. (10.1038/nature11118)

13. ones KE, Patel NG, Levy MA, Storeygard A, Balk D, Gittleman JL, Daszak P. (2008). Global trends in emerging infectious diseases. Nature 451, pp. 990–993. (10.1038/nature06536)

Corresponding Author

More Amit Ajitkumar*

PhD Student, University of Technology, Jaipur