*REDVET - Revista electrónica de Veterinaria* - ISSN 1695-7504
Vol 25, No. 1s (2024)
http://www.veterinaria.org
Article Received: Revised: Accepted:

# Tribal Communities and Wildlife Conservation: A Study of Sustainable Practices in Rajnandgaon-Kabirdham, Chhattisgarh (India)

**Sanjay Thiske[1], Chiranjeev Pandey[2], Sonal Mishra[3],Trilok Kumar[4], Kiran lata Damle[5], Majid Ali[6], Gurprit Singh Bhatia[7],Akhilesh Yadav[8]**

[1*,2, ,5,6,7,8]Department of Zoology, Department of Botany, Chhattisgarh(India),491441
[3,4], Government Digvijay Autonomous P.G. College, Rajnandgaon, Chhattisgarh(India),491441, India,chiranjeev717@gmail.com, ORCID -0009-0004-1496-8722

**Abstract:**
The assertion that tribal communities, particularly within the Chhattisgarh region, are responsible for the decline of wildlife diversity is fundamentally erroneous, as their interactions with wildlife are predominantly constructive, owing to their sustainable practices. This scholarly article, entitled "Tribal Perspectives on Wildlife: A Case Study of the Rajnandgaon-Kabirdham Districts, Chhattisgarh, India," seeks to explore this phenomenon. Primary data were systematically gathered from the locales of Mohla and Ambagarh Chowki in the southern region, as well as from Pandaria and Bodla in the northern region, utilizing structured questionnaires during December 2015. The tribal participants reported a substantial presence of various wild fauna, which implies a relatively low degree of habitat degradation. Nonetheless, key species such as the Tiger, bison, hyena, and Jackal have experienced a significant decline in numbers. The northern area demonstrates a higher richness of wildlife in comparison to the southern region, which can be attributed to the initiatives of the forest department under The Bhoram Dev Sanctuary project. Tribal individuals residing in proximity to forested areas exhibit a cognizance of the factors contributing to biodiversity loss, pinpointing timber extraction for fuel and the expansion of agricultural lands as major drivers of deforestation. Approximately 90% of the tribal respondents expressed support for a synergistic coexistence with wildlife, recognizing the essential role of wild animals in human survival. The results elucidate inadequacies in the conservation initiatives undertaken by both forestry officials and local governance structures in the region.

**Keywords:** Tribal's, wild animals, conservation, coexistence, Bhoram Dev, agricultural.

**Introduction**: The animal life on the earth since evolution of species as has been discussed in length and breadth by Charles Darwin has evolved and developed in conducive geographical environment that includes climate (**Ali Salim, *1985***) [1]. According to the Forest Survey of India's 2003 report, 20.55% of the country's geographical area is covered with forests (**Arora P.N. and P.K., 2007**) [2]. Of this, about 12% is dense forest cover and about 7% is open forest cover. According to forest department of Chhattisgarh the total forest cover of state is placed at 55,870 Sq. Km. (**Beatty Richard and Nancy Simon, *2008***) [3]. According to forest survey of India Assessment (2007) the extent of very dense forest is 4,162 Sq. Km., dense forest 35,038 Sq.Km. and open forest is 16,670 Sq.Km (**Bebarta *and* Chandra Kailash, *2004***) [4]. The legal forest area (as per the legal definition) of the state is 59772 sq. km. This accounts for 44.2 % of geographical area of the state and 8.4% of country forest cover (**Blastland Michel *and* Andrew Dilnot, *2005***) [5]. Unfortunately this all forest % is very low compare with the USA, Australia, Africa and Asian countries like Malaysia, Thailand, Philippines and Vietnam (**Burry *and* Richerd Spils, *2009***) [6]. Historically the forest area is cover very huge area of land in India (**Pandey, C. *et.al; 2024***)) [7]. But the vanishing, destroying and deforestation of forest is rapidly increased from last few years (**Pandey, C. *and* Mishra, A., *2024***)) [8]. Gradually the practice of cultivation the forest area also decreases quickly. There is no doubt these all activity directly affected the relation between man and nature including wild life. so here it is very necessary to do the work which is analysed what is the response of tribal and rural people toward the wild animals and its conservation (**Pandey, C. et.al; *2024***) [9]. The district Rajnandgaon of Chhattisgarh has been untouched since now recent time from this subject (**Pandey, C. et.al; *2024***) [10]. In this work authors try to prepare of questioner to know the response of tribal peoples about the wild animals (**Guru, Gagan Singh *and* Pandey, C. *2024***) [11] . The role of forest department is very crucial in conserving the wild life and creating awareness among the tribal people, especially in Bhoram Dev state sanctuary of kawardha forest division. Wild life conservation is very necessary part of our ecosystem (**Kumar, T., Mishra, S., Pandey, C., & Ali, M., *2024***) [12].

**Material and Methods:**

**Study Area:** Rajnandgaon - Kabirdham districts are politico-administrative region (**Inger R.F. *and* Dutta S.K., *1986***) [13]. Since, they are contiguous in nature; they together form the western margin of the Mahanadi Basin (**Jagetiya B.L. *and* Soni A., *2012***) [14]. In other words, they make western border of the newly born Chhattisgarh state, carved out of

*REDVET - Revista electrónica de Veterinaria* - ISSN 1695-7504
Vol 25, No. 1s (2024)
http://www.veterinaria.org
Article Received: Revised: Accepted:

the eastern part of Madhya Pradesh on 1st November 2000 (**John D. Andrew, Campbell John P. friel.,** ***2008***) [15]. Its geographical location between 19057' and 22028' north latitudes and between 80023' and 81048' east of longitudes shows that it falls in the north and eastern hemispheres, i.e. north-eastern parts of the globe (**Jerdon T.C.,** ***1853***) [16]. This location confers it a typical identity of a tropical land with a distinct monsoon climate. Region's rectangular shape emerges from its north - south length of 267.3 kilometres and its east-west width hardly 62 kilometers (**Kapoor V.C.,** ***1983***)[17]. This longitudinal shape seems to have played a crucial role in the regional variations of climatic elements and the resultant effects on the floral and faunal life, particularly bio-diversity i.e. both vegetal and zoo diversity (**Jones Kate E.** ***and*** **Safi Kamran, 2011**) [18]. The study region is surrounded by land from all sides, e.g. Bilaspur district in the north, Kanker district in the south, Gadchiroli (Maharashtra) and Balaghat (M. P.) districts in the west and Durg and Bemetra districts in the east (fig. 1) (**Khanna L.S.,** ***and*** **Khanna Bandhu Tilak,** ***2015***) [19].

This clearly exhibits that the study region is a land-locked country (**Khare Neelim Kumar, 2006**) [20]. This acts as a significant factor in determining regional climate (**Wakeing Knowles R.J.,** ***2016***) [21]. This region spreads over a geographical area of 9057.51 square kilometers. Rajnandgaon covers more than two/3rd (68.99 percent, or 6248.78km2 ) of the total land in the southern portion (**Kumar U.** ***and*** **Madendrajeet Asija,*****2007***) [22]. Thus, northern part of the region is left over with only 31.01 per cent, or (2808.73 $km^2$ ) for Kabirdham district (**Kotpal R.L.,** ***2004***) [23].

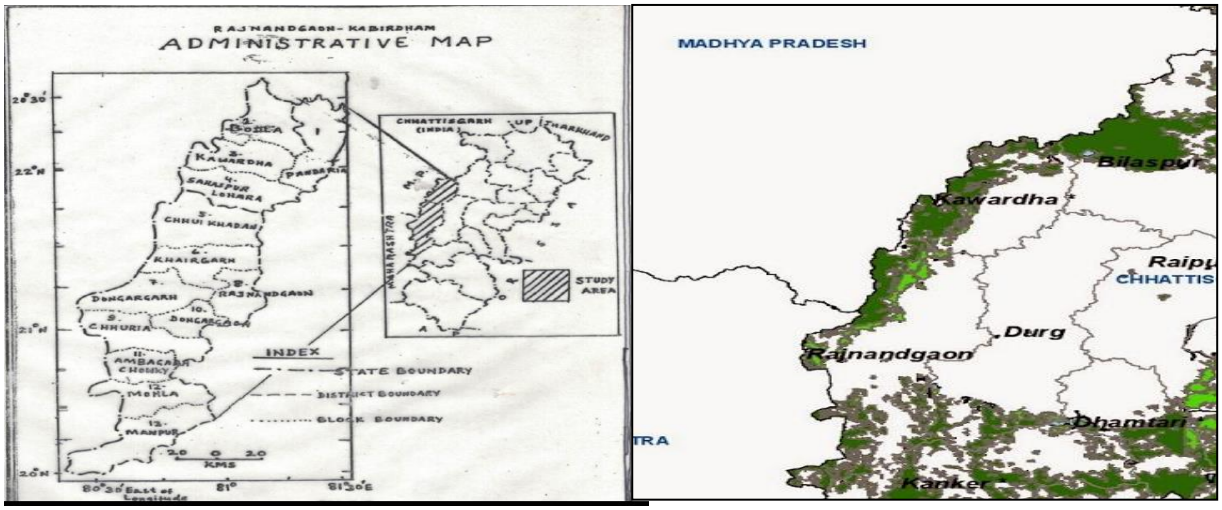



**Fig 01: Map of Study Area**

**Methodology**: The study is based on primary data. It has been generated by preparing thoughtful questionnaires to find out tribal's outlook on the status of wild life. The data also covers socioeconomic aspects of the respondents. The sampling method includes purposive random sampling. Since, the study region has two distinct areas of The Bodla and Pandria blocks in the north (It includes the Chilpi forest range, eastern part of Kanha Kisli forest of Mandla district M.P adjoining western parts of District) and Manpur and Mohla blocks in the southern part of the district. A total of 120 respondents have been chosen equally from all four blocks.

| **Table – 01 Amphibian And Reptiles Rajnandgaon and Kabirdham** | | | |
|---|---|---|---|
| Decline | | Frequency of Wild Animals Reported by the Respondents | |
| Range% | Category | 54 | 42.86 |
| Below 25.00 | Low | 26 | 20.63 |
| 25.00- 50.00 | Medium | 23 | 18.25 |
| 50.00- 75.00 | High | 23 | 18.26 |
| 75.00-100 | Very High | 126 | 100 |

*REDVET - Revista electrónica de Veterinaria* - ISSN 1695-7504
Vol 25, No. 1s (2024)
http://www.veterinaria.org
Article Received: Revised: Accepted:

| Table – 02 Status of Decline: Mammals Rajnandgaon and Kabirdham | | | |
|---|---|---|---|
| Decline | | Frequency of Wild Animals Reported by the Respondents | |
| Range% | Category | 70 | 25.83 |
| Below 25.00 | Low | 58 | 21.4 |
| 25.00- 50.00 | Medium | 47 | 17.34 |
| 50.00- 75.00 | High | 96 | 35.42 |
| 75.00-100 | Very High | 271 | 100 |

**Table – 03 Status of Decline: Mammals Rajnandgaon and Kabirdham**

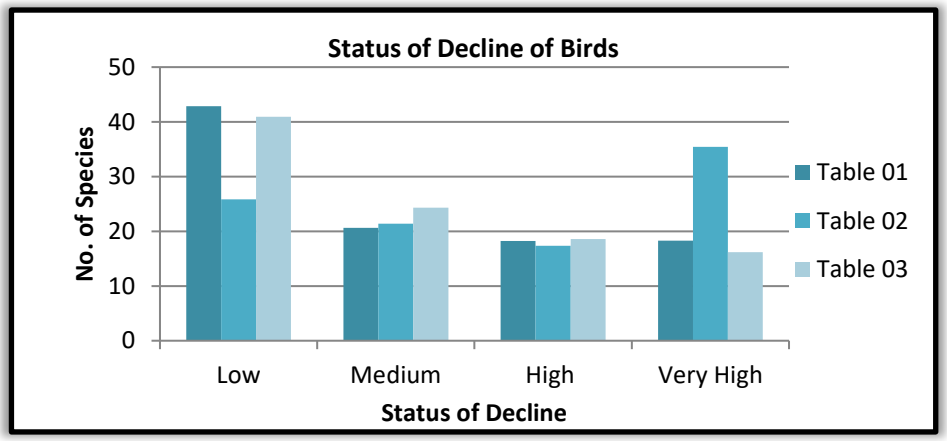
| Decline | | Frequency of Wild Animals Reported by the Respondents | |
|---|---|---|---|
| Range% | Category | 86 | 40.95 |
| Below 25.00 | Low | 51 | 24.29 |
| 25.00- 50.00 | Medium | 39 | 18.57 |
| 50.00- 75.00 | High | 34 | 16.19 |
| 75.00-100 | Very High | 210 | 100 |

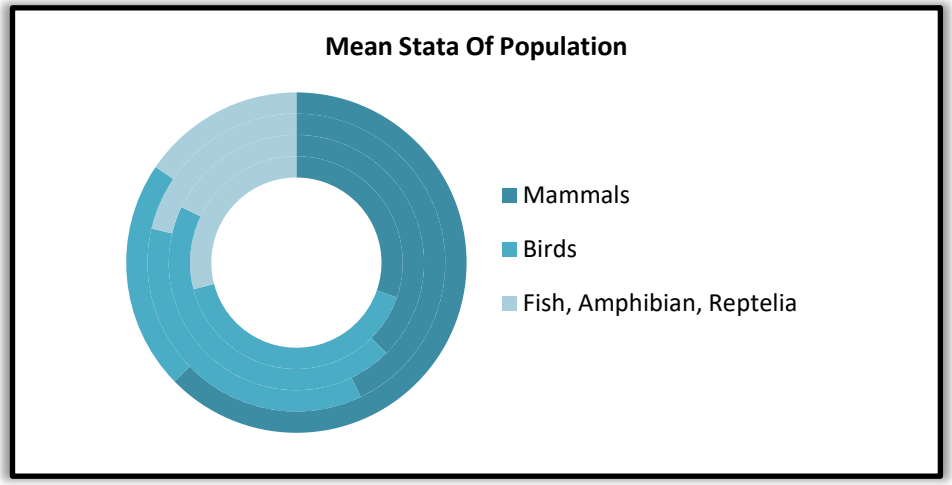
| **Table – 04 Bodla- Pandaria (Northern Region) :Mean Status of Animals Population** | | | | |
|---|---|---|---|---|
| **Animals Group** | **Nature** | | | |
| | **A** | **F** | **O** | **R** |
| Mammals | 2.65 | 2.2 | 1.7 | 3.31 |
| Birds | 3.4 | 2.34 | 1.6 | 1.3 |
| Fish, Amphibian, Reptilian | 2.0 | 1.03 | 0.84 | 0.87 |

| **Table – 05 Manpur Mohla (Southern Region) :Mean Status of Animals Population** | | | | |
|---|---|---|---|---|
| **Animals Group** | **Nature** | | | |
| | **A** | **F** | **O** | **R** |
| Mammals | 2.61 | 2.02 | 1.75 | 3.60 |
| Birds | 3.5 | 2.4 | 1.46 | 1.25 |
| Fish, Amphibian, Reptilian | 2.5 | 0.96 | 0.87 | 0.89 |

**Results and Discussion:** This chapter contains three areas of wild life diversity, causes of its decline and suggestions obtained from the respondents during the field survey. Diversity of wild animals has been tried to find out from the field using structured questionnaires. Following sampling technique, respondents have been selected from northern and southern regions, which are largely forested in the study area. The tribes who seem to be the real conservators of wild life mostly inhabit these areas. Therefore, their observations about the status of wild animals are valuable. They have been asked about the percent decline of listed mammals, birds and fish, Amphibian and Reptiles. Status of decline of wild animals have been categorized into four categories of low, medium, high and very high which may be taken as the synonyms categories of abundance (A), frequent (F), occasional (O) and rare (R) for the analysis purpose. Field data reveals that wild animals in the study area have declined lowly that means they are present in abundance. Deer, wild boar, beer, monkeys, snakes, parrot, peacock, cormorant, egerat, etc are found in sufficient, numbers this is due to intact and less destruction of habitat of wild animals. Despite that, a few wild animals like Tiger, bison, hyena and python, Jaikal, frogs, local fishes like tegna, mongri, etc. have become rare. Table 1 little over 50% animals in the study area have declined less than 25%, as reported by the respondents. This is a gross picture. On the opposite end, about one-fourth animals show alarming declines in their numbers (more than 75%). The remaining animals share almost equal percentage of decline fall in the medium and high categories. Class wise picture of animals will throw more light on this area. Table 1 Status of Decline: Fish. The study unravel the facts that two-fifths Birds have lowly declined in the study area. Opposed to it, very high decline includes only 16.19%. In between the two, medium category shows much higher share than that of the high category (Table 2 and Fig.2). Thus, one can conclude that the fishes in the study area are found in abundance as earlier. The respondents report that all wild mammals of the study area have declined

extensively. This is obvious from Table 3 and fig. 3 which show the highest decline in the very high category. This situation is opposed to the birds. High and very high category of decline taken together crosses over 50 %. It, thus shows an alarming situation in the time to come if proper and timely conservation of wild animal is not taken up seriously. The respondents were given a list of all wild mammals (15), birds (25), reptiles (07) amphibians (03) and fishes (18). They were asked to tick mark them on the scale of Abundance(A), Frequent(F), Occasional (O) and Rare(R).As every result / work has some reason, declining status of wild animals in the study area is also attributed to some causes. The respondents were asked to rank 6 given causes. Table 6 reveals the highest number of respondents ranked first to Clearing of forest for cultivation. All most same number of respondents gave 2nd rank to Cutting of forest for fuel wood. Likewise ranks for other area given in the table may be easily comprehended. Table 7 displays man-nature relationship in terms of human response to wild life. The respondents were asked five questions on human attitude towards wild life. The answer reveals the fact that all view positive good relationship with the wild life. That's why they are against the killing of wild life like tiger, in case of their domestic animals are killed by a tiger. They, thus, believe in compactness of human; life which is not complete without wildlife. Most of them say that forest department launches Programe for conservation of wild life. But it is a Gram Panchyat which is apathetic to the wild life.




**Correlates of Zoo-diversity**: Merriam-Webster defines relationship as 'the state of interaction between two or more people, groups, or countries' (**Larsson Tor-Björn, *2001***) [24]. Relationship involves two parties. It is of bi-variate in nature, when there are two variables; one is dependent and other is independent. If there are more independent variables, it is the case of multiple relationships. Zero order correlation matrixes are prepared for multiple correlations. Relationship is of two types on the basis of its nature – Positive and negative (**MoEF, Govt. of India *and* Kalpavriksh, *2004***) [25]. It is the direction of movement. In the first case, both the variables move in the same direction, whether upward, or downward (**Tanya Dewey, *2015***) [26]. But in case of the second, two variables move in opposite directions; one upward, then second downward and vice versa. Level of significance is another area of utmost importance (**Krishna Murthy K.V., *2006***) [27]. It helps in accepting, or rejecting of a hypothesis. It is usually tested at p.05 i.e. 5 per cent level of significance. In other words, it states that relationship is at 95 per level of confidence (**Parker *and* Haswell, *2014***) [28].

**Conclusion:** After the observation the complete scenario of forest division of Rajnandgaon is not looking Satisfactory as the wild life point of view. During the interview senior and older person of tribal villages has enlighten that population of wild animal rapidly decline since last two decades they tell us the encroachment of wild animal's habitats by people is the main reason of this situation. If the wild life of the study area is to be enrich, developed, improved, improvised, in real sense, it needs a strong will power, appropriate management and strict monitoring, sincere participation of the local people and highest level of awareness in the society towards the wildlife. The effort made by the forest division of Kabirdham to carve out Bhoramdeo sanctuary for preserving and conserving wildlife is an exemplary model not only for the southern Rajnandgaon region but also for other regions of the country. This Nobel act will also yield very fruitful result when tourism as an industry will be developed to harness the sight scene of the natural scenery of the forest coupled with the thrilling experience of observing wild life in its natural habitats. Creation of Van Chetna Kendra by forest Division of Rajnandgaon at Manghhatta near Mudhipar in the District is also welcome step towards wildlife conservation. Its gradual development as tourist spot in the district is a good indicator of overall development. Similar act is warranted in the dense hilly tribal regions of Dongargarh, Churia in western fringe and AmbagarhChouwki-Mohla -Manpur region in the south. After reading our below massage, you decide yourself 'what do you want to be'? -Man, or Human being: - "Man, without Wild Animals is only a Mechanical Man, But, Man with Wild Animals is a True Human Being"

**References**

1. Ali Salim, The book of Indian Birds BNHS- Oxford, ISBN 9780195665239 **(1985).**
2. Arora P.N. and P.K., Mohan biostatistics Himalayan Publishing House, ISBN 9789351428237 **(2007)**
3. Beatty Richard and Nancy Simon, Exploring the world of mammal Che-fox, ISBB 9780791096512 **(2008)**
4. Bebarta and Chandra Kailash, Forest resources & sustainable development principles, Perspective & practices concept Publication Company, ISBN 9788180691324 **(2004)**
5. Blastland Michel and Andrew Dilnot, The Tiger that IS NOT Protite Books, ISBN 9781861978394 **(2007)**
6. Burry and Richerd Spils, Exploring the world of Reptiles and Amphibians, ISBN 9781604132557 **(2009)**
7. Pandey, Chiranjeev & Guru, Gagan Singh &Thiske, Sanjay & Bhatia, Gurprit Singh & Ali, Majid & Yadav, Akhilesh Kumar. (2024). Study Of Diversity And Status Of Endemic Ornamental Fish Of Shivnath River Mohla-Manpur-Ambagarh Chowki District Of Chhattisgarh (India). Journal of Advanced Zoology. 45. 10.53555/jaz.v45i6.4957.
8. Pandey, C & Mishra A (2024), Assessing The Heavy Metal Contamination On Tissue Of Fish Channa Striata (Bloch) And Its Consequent Impact On Blood Composition From River Kharun, Chhattisgarh (India).Gis Science Journal, 11 (07), 856-867.
9. Pandey, C., Thiske, S., Ali, M., Guru, G., & Sahu, D. P. (2024). Occurrence and Habitat of Indian Painted bat (Kerivuola picta) in Manpur, Chhattisgarh. TIJER - INTERNATIONAL RESEARCH JOURNAL. - Volume 11 ( 4) 720-724.
10. Pandey, C., Thiske, S., Bhatia, G. S., Ali, M., &Damle, K. (2024). First Report for Painted Globular Frog Uperodontaprobanicus in North BastarKanker District of Chhattisgarh,(India). UTTAR PRADESH JOURNAL OF ZOOLOGY, 45(15), 548-555.
11. Guru, Gagan Singh & Pandey, Chiranjeev. (2024). Assessment Of Water Quality Of Shivnath River And TheirTributaries At Rajnandgaon District And Its Impact On Fish Culture. INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS. 12(23) 300.
12. Kumar, T., Mishra, S., Pandey, C., & Ali, M. (2024). Optimizing Soil And Crop Productivity Using Coal Fly Ash: A Study From Chhattisgarh, India. Gis Science Journal, 11(08) 113-127.
13. Inger R.F. and Dutta S.K., An overview of the amphibian fauna of India, *Journal of the Bombay Natural History Society*, **83**, 135-146 **(1986)**
14. Jagetiya B.L. and Soni A., Bio-diversity Status of India and Rajasthan: Challenges and Conservation Strategies, *Annals of the Rajasthan Geographical Association*, **XXIX**, 152-162 **(2012)**
15. Jerdon T.C., Catalogue of the Reptiles inhabiting the Peninsula of India, *Journal of Asiatic Society of Bengal*, 462–79 and 522–34 **(1853)**
16. John D. Andrew, Campbell John P. friel., Exploring the world of aquatic life Ame-clo Vol. 1, 2,3,4,5 and 6, ISBN 9781604132564 **(2008).**
17. Jones Kate E. and Safi Kamran, Global biodiversity of mammals, The Zoological Society of London & the Max Planck Institute for Ornithology **(2011)**
18. Kapoor V.C., Theory & Practice of Animal Taxonomy oxford & IBH publishing Co. Pvt. Ltd., New Delhi, ISBN 9788120417205 **(1983)**
19. Khanna L.S., Forest protection, Khanna Bandhu Tilak Road Dehradun ISBN 8185933030 **(2015)**
20. Khare Neelim Kumar, Indian Snakses A field Guide Joytsna Prakashan ISBN 9788179253892 **(2006)**
21. Kotpal R.L., The Bird Rastogi Publication, ISBN:9788171336319 **(2004)**

22. Krishna Murthy K.V., An advanced textbook on biodiversity principal & practice oxford & IBH Publishing Co. Pvt. Ltd., ISBN 9788120416062 **(2006)**
23. Kumar U. and Madendrajeet Asija, Biodiversity Principles & Sarswati Purohit Pub., Delhi Student Edition, ISBN 818882626X **(2007)**
24. Larsson Tor-Björn, Biodiversity evaluation tools for European forests, Wiley-Blackwell, ISBN 978-87-16-16434-6, Retrieved 28 June 2011, 178 **(2001)**
25. MoEF, Govt. of India and Kalpavriksh, Nat. Biodiversity Strategy and Action Plan, India, Final Tech Report of the UNDP/GEF Sponsored Project, New Delhi **(2004)**
26. Myers Phil, Animalia Animals, In Tanya Dewey, ed., Animal Diversity Web, 1-25 **(2015)**
27. Parker and Haswell, Text Book of zoology vertebrates, 7th ed., Edited by Marshall & Williams, AITBS Publisher India, ISBN 9788174730305 **(2014)**
28. Wakeing Knowles R.J., Economic & Social Geography MADE Simple Book, ISBN 9780001000124 **(2016)**