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## Understanding and Documenting the Dynamics and Dimensions of Cultural Diversity in the Kathmandu Valley - An Integration of Knowledge and Culture with Nature

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### ABSTRACT

Throughout human history, language, religion, and knowledge diversity, as well as environmental diversity, have been inextricably linked. However, it is only in contemporary globalized period, in light of the ongoing process of cultural and biological variety extinction, that natural and social sciences have focused more on the complex and diverse phenomena of human-environment interactions. The growing recognition of the commonalities and interconnections between these dual realms of diversity, as well as the fact that the breakdown of these connections is at the root of many of humanity's environmental and social problems, has given rise to a new field known as "Biocultural diversity," which is defined as the total variety displayed by the world's natural and cultural systems. The term "Biocultural diversity" refers to the diversity of life in environment and culture as a whole. Biodiversity, cultural variety, and linguistic diversity are all seen as interconnected and interdependent aspects of life's web. Because biodiversity is a supply of raw material on which evolutionary processes rely, it is critical to clearly highlight the importance of human variety in biodiversity protection. The existence of a range of cultural groups within a society is referred to as cultural diversity. Culture, religion, ethnicity, language, country, sexual orientation, class, gender, age, mobility, health differences, geographic location, and a range of other factors can all be shared by cultural entities.

The main goal of this research paper is to introduce the relatively new and underappreciated concept of Biocultural diversity, as well as to show some exemplary preliminary qualitative and quantitative results on the relationships between biological and cultural diversity dimensions, which suggest that success in conserving biological diversity may be linked to the preservation of cultural diversity.

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Keywords: Biocultural diversity, Ethnicgroup, Culture, Religion, Language, Index of Biocultural Diversity

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### INTRODUCTION

Biodiversity also incorporates human cultural diversity, which can be affected by the same drivers as biodiversity, and which has impacts on the diversity of genes, other species, and ecosystems (UNEP, 2007, p160)

The greatest feature of life on Earth is its incredible diversity. Life on Earth is diverse not just because of the range of plant and animal species and ecosystems found in nature (biodiversity), but also because of the diversity of cultures, languages, religions, and philosophies present in human civilizations (cultural diversity). Over the last decade, the connections between biological and cultural variety, as well as the mounting challenges that both confront, have gotten more attention. Concerns about these two realms of diversity were expressed at the United Nations Conference on Environment and Development (UNCED) – the Earth Summit in Rio de Janeiro in 1992, and they are reflected in subsequent international action plans and instruments (Agenda 21, Rio Declaration, Convention on Biological Diversity [CBD], and others), as well as major global biodiversity conventions.

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The biodiversity crisis should be understood on the basis of a more detailed evaluation of the interactions among a wide range of social, cultural, economic, political, and ecological variables, as it became clear in the 1990s that human relationships with the environment are a highly complex and diverse phenomenon. This viewpoint has led to the rise of an integrated Biocultural approach to the planet's environmental crisis in both the environmental and social sciences, implying that success in conserving biological diversity may be linked to the preservation of cultural diversity, and that, conversely, the loss of cultural diversity is part and parcel of the loss of biological diversity.

As the globe moves toward globalization as a result of technological advancements, a connection to nature is being increasingly neglected. We are neglecting and disregarding our culture and religion in the sake of competition. Our culture's knowledge is inextricably linked to the natural world. Nepal, a landlocked country, has a diverse culture. Heritage sites, monuments, folklore, traditional activities and traditions, language, and other cultural features are regarded important to be conserved for future generations. Cultural diversity refers to the range of human communities and cultures found in a certain place or throughout the world. Due to its geographical variety and numerous ethnic groupings, Nepal is regarded as one of the richest country in terms of indigenous traditional knowledge. Different parts of Nepal have different customs and traditions. Kathmandu, the capital city, has a complex tapestry of cultures that merge to establish a national identity.

Humans, like other animals, are an integral component of the natural world. Humans have always used and manipulated the natural environment to meet their material and non-material requirements throughout the species' existence. In the meanwhile, Human civilizations have evolved in response to the natural context. As a result, this adaptation process has altered them. This mutual interaction between humans and the environment is manifested in cultural ideas, values, institutions, knowledge systems, languages, and practices: they both express this interdependence. These are the mechanisms through which this bond has been established. The world's cultural systems (also known as "cultural variety") encircle the globe, forming. Some have used the term "logosphere" to describe a global web of human languages (Krauss, 1996) – and others – as a "ethno sphere" – a global network of human civilizations (Davis, 2001). Both concepts are reminiscent, to some extent, of the much earlier notion of 'noosphere', the planetary web of human cognition proposed by (Teilhard de Chardin, 1996). This complex system of cultural diversity does not simply parallel the diversity found in the natural world; it is profoundly interrelated with it (Posey, 1999; Maffi, 1998, 2001, 2005, 2007a; Harmon, 2002; Stepp et al, 2002; Carlson and Maffi, 2004; Maffi and Woodley, 2007; Kassam 2009). The organization, vitality, and resilience of ecosystems and those of human communities are mutually linked (Berkes and Folke, 1998; Rapport, 2007; Rapport and Maffi, 2010). No matter how near or far their everyday interaction with the natural world is, all humans are tangled in this web of interdependence. Human cultures' current condition and future are intricately linked in contrast to the natural surroundings in which humans dwell.

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### **Biocultural Diversity: A New Strategy to More Effective Global Biodiversity Protection**

The connections and correlations indicated that biological and cultural diversity are not distinct components of life's diversity, but rather closely connected and mutually supportive ones. The emergence of a new discipline dubbed "Biocultural diversity" has resulted from the rising understanding of these similarities. The overall variation shown by the world's natural and cultural systems is known as Biocultural diversity (BCD). It may be viewed as the sum total of all the world's disparities, regardless of their source. It encompasses biological diversity at all levels, from genes to populations to species to ecosystems; cultural diversity in all forms (including linguistic diversity), ranging from individual ideas to entire cultures; and the earth's abiotic or geophysical diversity, which includes landforms and geological processes, meteorology, and all other inorganic components and processes that provide life's context; and, most crucially, the interactions between all of these (Harmon and Loh, 2002).

Because of the work of biosystematics and conservation biologists, biodiversity loss has been reasonably widely recognized to the general public since the late 1980s. However, until recently, the world's language and culture loss, particularly indigenous social groups' traditional knowledge, was little recognized. According to estimates, the world's linguistic variety, which is an important element of civilization, peaked 10,000 years ago. It's possible that at that period, twice as many languages were spoken as there are now. Immigration has always had an influence on linguistic variety, as has political and economic growth. The pace of linguistic variety loss has risen as a result of colonization and Urbanization. There are 15% fewer languages now than there were 500 years ago, according to estimates (Maffi, 1998).

The number of languages spoken orally now is believed to be around 6500. The majority of these languages, however, are spoken by indigenous people or minorities. Approximately half of the world's languages are spoken by group of 10,000 or fewer people. One-fourth of the world's languages are spoken by communities of 1000 or fewer people. In all, linguistic groups with fewer than 10,000 speakers account for less than 0.2 percent of the global population. Only about 300 languages are spoken by 95 percent of the world's population. At least half of the world's 6,500 languages are likely to become extinct in the next century, according to even the most conservative predictions. While academic linguists and anthropologists have historically documented endangered languages, international awareness of the looming linguistic disaster is rising, and development organizations are becoming involved in the fight to conserve spoken forms. The extinction of a language represents the loss of yet another piece of cultural distinctiveness from our diverse planet's mosaic, and is thus a tragedy for humanity's legacy.

This indicates that the world's linguistic variety is in the hands of small groups of individuals. Due to the force that forces individuals to adapt to the mainstream culture and adopt the majority language, the languages of these tiny groups of people are generally under threat of extinction. "These numbers depict a threat to linguistic variety that may be considerably bigger in size than the threat to biodiversity," according to Maffi (Maffi, 2001). According to some experts, 90 percent of the world's languages will become extinct or moribund in the twenty-first century (Maffi, 2001).

Traditional and indigenous knowledge, as well as language variety, are threatened by dominant cultural frameworks, and local knowledge is on the verge of extinction, as this type of information and experience is often passed down orally from generation to generation. If newer generations lose the language of their forefathers and mothers, it is quite likely that they will also lose the knowledge that has been passed down through the centuries.

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## Research Methods

An online survey was conducted of 106 respondents to better understand Nepali people's opinions on cultural diversity and its possibilities for growth in Nepal. The materials utilized, the technique followed, and the results of the data gathering and for the other part of quantitative research the data was collected from the site of Central Bureau of Statistics, Ministry of Tourism and Civil Aviation and the Ministry of Forest and Environment were obtained. Both the qualitative and quantitative methods have been applied in this research. For gaining initial insight regarding culture, online material related to different cultural monuments and places of historical importance within the Kathmandu Valley were referred. This provided a basis for quantitative research conducted in the next phase. For the purpose of the study, online questionnaires using Google forms was created and sent to people through whatsapp, Facebook and Instagram due to the lockdown caused by COVID 19. The convenience sample approach was employed in conjunction with a structured questionnaire. The replies were then subjected to a descriptive analysis. Data on visitor flows to various places in Kathmandu was also gathered and examined from the websites of the Nepal Tourism Board and the Ministry of Culture, Tourism, and Civil Aviation in order to gain a fuller picture of Culture in Kathmandu.

The research foundation was initially established through qualitative research, which assisted me in identifying the factors and components of culture that needed to be examined in order to determine the current status and views of cultural diversity. The replies gathered through online surveys, and statistical analyses are all critical in reaching a final judgment. Quantitative research, on the other hand, was an essential component of the study since it assisted in quantifying the variables and determining their relative relevance in specific numerical values or percentages. The bigger the number of responders, the more accurate and reliable the data is. This can help making final conclusions from the research much easier. As a result, we attempted to reach as many people as possible during the survey.

The information is provided in the form of numerous tables, charts, diagrams, pie charts, and figures to help readers grasp the material more readily. The usage of numerous web tools and other presenting processes were used to characterize the findings in a more accessible and complete way

There were two phases to the research for this work. The first consisted of a communication with local people and Known people through phone Calls. During the second phase, Google forms were used to generate an online questionnaire. In addition, statistics and other secondary data provided on the websites of the Ministry of Culture, Tourism and Civil Aviation and the Nepal Tourism Board were evaluated to support the study for calculating the Biocultural index of Kathmandu, Nepal.

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## Quantitative Method to Measure the Biocultural Diversity Index of Kathmandu, Nepal

This index is Baseline data for quantifying the worth of Biocultural Diversity and providing scientists and policymakers with important information for enforcing more effective global biodiversity protection.

The Index of Biocultural Diversity (IBCD) is a first step in gathering such information. Harmon and Loh (2002) started working on the IBCD under the supervision of Terralingua, an international nongovernmental group that assesses the world's BCD on various fronts. In a nutshell, the IBCD ranks 238 nations and territories based on a mix of BCD indicators. There are five signs to look for:

the number of (1) languages, (2) faiths, and (3) ethnic groupings found in each nation as a proxy for cultural variety; and the number of (4) bird and animal species (combined) and (5) plant species as a proxy for biological diversity.

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### Purpose of Index of Biocultural diversity:

The Index on Biocultural Diversity (IBCD) is based on indices used in the conservation sector to assess current environmental conditions and trends. Its goal is to quantify worldwide Biocultural diversity conditions and act as a benchmark for analyzing Biocultural diversity trends. The IBCD seeks to point to a broad grasp of what is occurring to Biocultural diversity, as well as knowledge gaps, using a modest number of indicators.

The IBCD is divided into three sections, each of which examines these indicators in a different way:

- A Biocultural diversity richness component (BCD-RICH), which is an uncorrected count of the five variables used to calculate a country's "raw" BCD.
- An Area component (BCD-AREA), which accounts for land area in the indicators and so assesses a country's BCD in relation to its physical size. Because large countries are more likely to have more biological variety than small countries, this is an essential metric to track.
- A Population component (BCD-POP), which accounts for human population in the indicators and so assesses a country's Biocultural diversity in relation to its population size. This is an essential metric to track since nations with large populations are more likely to have greater cultural variety than those with smaller populations. Nonetheless, some nations with tiny populations have great cultural diversity compared to their population size, while others with large populations have low cultural diversity compared to their population size. To accommodate for these circumstances, BCD-POP changes the ranks.

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### Limitation of IBCD:

IBCD is a worldwide index that, like many global environmental and cultural indexes, relies on datasets that are partial, of varying quality, and perhaps out of date. On a country-by-country basis, the IBCD assesses the state of BCD and trends. Because species, cultures, and languages rarely follow national borders, organizing the IBCD in this manner is not ideal from an ecological and ecolinguistic standpoint. Furthermore, shifting national borders might make it difficult to create meaningful time-series data sets. However, the majority of global data relevant to the IBCD is structured on a country-by-country basis, as do all global indexes.

- The fundamental data elements required to completely establish the worldwide state of BCD are currently unavailable. The index given here is only based on data on richness.

-A more comprehensive study would examine abundance and distributions, however the absence of data on relative abundance of species, language speakers, and other factors currently prohibits this possibility. If data for a specific indicator (LD, RD, ED, MD, or PD) within a component's cultural diversity (CD) or biodiversity (BD) components is absent, the remaining indicators are utilized to compute the IBCD for that nation.

Despite these flaws and limitations, IBCD is a useful source of information since it provides first-hand knowledge on large-scale patterns based on the best available data.

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### Methods for Calculating IBCD

The three components of the IBCD (BCD-RICH, BCD-AREA, and BCD-POP) are generated from five BCD indicators: the number of languages, ethnic groupings, religions, bird and mammalian species (combined), and plant species. Cultural and biological diversity are given equal weight in each of the three elements of the IBCD.

A country's IBCD value in fact is calculated as the average of its cultural diversity (CD) and its biodiversity (BD), or:

$$IBCD = (CD + BD)/2$$

In measuring a country's cultural diversity (CD), equal weight is given to linguistic, religious, and ethnic diversity. Therefore CD is calculated as the average of a country's language diversity (LD), religion diversity (RD), and ethnic group diversity (ED):

$$CD = (LD + RD + ED)/3$$

In measuring biodiversity (BD), equal weight is given to animal species diversity (using birds and mammals as a proxy for all animal species) and plant species diversity.

Therefore BD is calculated as the average of a country's bird and mammal species diversity (MD), and plant species diversity (PD):

$$BD = (MD + PD)/2$$

#### *For calculating the Language Diversity-*

There are 123 languages currently spoken in Nepal and there are 6500 languages in the world According to National Census 2011, Ministry of Foreign Affairs,  
Kathmandu, Nepal

$$LD = \log L_i / \log L_{\text{world}}$$

$$= \log 123 / \log 6500$$

$$= 2.08 / 3.81$$

$$= 0.54$$

•For The calculation of Ethnic Group

Total ethnic group in Kathmandu, Nepal= 67 according to the population census 2011

Total Ethnic group in the world= 650

$$= \log 67 / \log 650$$

$$= 1.82 / 2.81$$

$$= 0.64$$

•The calculation of Religious diversity

Total religion group in Kathmandu, Nepal= 10 according to the census of 2011

Total Religious group in World= 4300

$$= \log 10 / \log 4300$$

$$=1/3.63$$

$$=0.27$$

So Cultural diversity =LD+RD+ED/3

$$=0.27+0.64+0.54/3$$

$$=0.48$$

•For the Biological Diversity= MD+PD/2

Number of bird diversity in Nepal=886(IUCN Nepal, 2014)

Number of Mammal =208(IUCN Nepal, 2014)

Number of plant species= 6,999(6973-Species of Angiosperm and 26 species of Gymnosperm) According to Ministry of Forest and Environment, 2014

Total number of Bird species in world=18000 According to American Museum of Natural History

Total Diversity of Mammals=6495 (IUCN, 2014)

Total Plant diversity in the world=400,000

For MD= Number of Bird Diversity +Number of Mammal Diversity in Nepal/world

Sum of total species of Bird +total species of Mammal of Nepal=1094

Sum of total species of Bird +total species of Mammal of world=8295

$$=\log 1094/\log 8295$$

$$=3.03/3.91$$

$$=0.77$$

For PD=log6999/log400000

$$=3.845/5.60$$

$$=0.686$$

For calculating Biological Diversity (BD)=0.77+0.68/2 as BD=PD+MD/2

$$=0.72$$

For Calculating the Index of Biocultural diversity of Kathmandu (IBCD) =CD+BD/2

$$=0.48+0.72/2$$

$$=0.603$$

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## Data Interpretation

There is good correlation (IBCD=0.603) (ideal value should be greater than 0.6) between number of languages and area, ethnic groups and area, bird/mammal species and area, and plant species and area and good correlation between CD-AREA and BD-AREA.

It means the Biocultural diversity is well developed in the Kathmandu valley as the indices is come out to be 0.603. Since the data has been taken up from the website of Ministry of Foreign Affairs, Ministry of Environment and forest was of year 2011 and 2014 prior to the Earthquake of 2015. So the result is validated only for the data available prior to 2015.

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## Research Limitations, Validity, and Reliability

The data can only be used within Kathmandu because the web-based survey was only performed among Nepalese individuals. It was solely looked at from the standpoint of Nepalese people. As a result, the findings may not be applicable to the entire cultural sector because other nations were omitted from this section of the study. The Survey findings were afterwards gathered over the internet, which may have influenced the outcome. Because of differences in method, attitude, style, and many other aspects, the replies collected may have been somewhat different if the writers themselves had been part in the process. The author's online questionnaire link was initially distributed to a group of friends through social media, who were then asked to share it to others. It resulted in the web link being disseminated solely to people of a specific age group. It was likely that the survey results might change if a larger number of respondents from varied backgrounds, ranging in age and residing in different areas of the country had participated.

The quantity of answers received over the internet is lower than the author had anticipated. To make the survey's results more valid and trustworthy, both qualitative and quantitative research approaches are used. Online information linked to various cultural monuments and historical sites inside and beyond the Kathmandu Valley was consulted to obtain an introductory understanding of culture and tourism. To obtain a better image of cultural diversity in Nepal, researcher looked through the websites of the Nepal Tourism Board and the Ministry of Culture, Tourism, and Civil Aviation. For more help, the researchers turned to their own thesis guide. Following that, questions on Nepal's cultural diversity resources and possibilities were asked. The goal was to concentrate on the subjective aspect of study.

According to the Survey, Nepalis have high expectations for cultural Values as it has an impact on their lives as well. Due to the post-earthquake effect, Nepal's economy was in worse shape. At the time, the country sustained a massive loss and is still fighting to rebuild. This has a direct impact on the tourist business as well. Due to the frequent aftershocks, Nepal was getting a relatively small number of visitors, and this impact is still there. These problems may also have an impact on the outcome. However, the study focused on Nepali people's perspectives on cultural knowledge, and the data is most likely accurate for that period.

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## Conclusion and Recommendations

The major goal of this research was to better understand the viewpoint of culture and its influence on the host country as well as to assess Nepali opinions of cultural impacts. In order to achieve this goal, descriptive and analytical data results were analyzed to come up with some intriguing conclusions about Nepalese people's opinions of cultural knowledge and practices and belief associated with it. Despite being a small landlocked nation, Nepal stands out for its sociocultural variety and natural beauty. It has always been praised by tourists who have visited and spent time in various regions of the country. Cultural heritage, architecture, temples and monasteries, as well as distinctive music, dance, literature, painting, sculpture, traditional folk arts, and crafts, abound in the country. Those who have even a passing knowledge of Nepal's beauty and culture are enamored with it. Nepal was also just included in BBC Holiday's list of 50 places to visit before you die.

The Nepali people think that the country has potential for future cultural growth; however the country is falling behind owing to inadequate resources, particularly financial ones. However, these resources are in the process of being developed, and they will hopefully propel Nepal's cultural sector to new heights. Nepal is a country with a wealth of historic, cultural, and ethnic traditions that might draw visitors from all over the world, but due to a lack of appropriate advertising, they aren't widely recognized to the general public.

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