INTERRELATIONSHIP OF CULTURAL DIVERSITY AND BIODIVERSITY AND ITS IMPACT ON CONSERVATION

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Abstract

The concepts of culture, cultural diversity and indigenous knowledge are demonstrated in conjunction with biodiversity in Samahni zone of District Bhimber (AK), Pakistan. The interrelationship between cultural and biodiversity was elucidated based on linguistic and traditional customs of the area. It is demonstrated that there is imperative correlation between cultural and biodiversity, as mega-diversity countries harbor the rich cultural diversity. The cultural diversity of the area was found to be 8.66 and biological diversity was estimated to be 211, which generated IBCD of the area 109.83. Global studies revealed that there was significant role of different cultures of the world such as Buddhism culture in China, Sacred grove culture in India on conservation and protection of biodiversity. Similar findings of the study were obtained from Samahni area, where Gujar and Jat tribes implemented their traditional cultural customs not only to their daily life but also on conservation of biodiversity in their vicinity region. There has been determination of informant consensus factor (ICF), data matrix ranking (DMR) and priority ranking (PR) for vegetation and its effects on man. The important plants of the area and there ethnobotanical uses were also formulated and presented in it. Many are used as a sole source of medication by the tribes as they live in the remote area. It was proven that cultural diversity could promote the conservation and application of biodiversity. Fuel wood consumption was determined as prevalent threat to the flora of valley. The studies suggested that indigenous knowledge (Ethnobotanical informations) should be employed for biodiversity conservation and sustainable ecosystem propagation. The conservation scientists may establish close affinity with indigenous peoples and religious persons, and attract and encourage their active participation in different activities of biodiversity conservation. Finally the perspectives of taking conservation as a culture should be proposed and promoted and extended in practical lives of communities of the area.

Introduction

Since time immemorial there has been a strong bond among language, religion and knowledge diversity and the biodiversity. This is an era of globalization and hitherto diminishing of biodiversity and cultural diversity has lead scientists to ponder over and explore the phenomenon of human relationship with environment (Harmon, 2002; Ahmad *et al.*, 2008).

Biological diversity (BD) is the total number of organisms and germplasm present on the globe. Presence of diverse indigenous cultures in an area is paramount for sustainably flourishing of biodiversity on the globe and this is termed as cultural diversity (CD). BD is presence of all sorts of life on land and hitherto more than 1.75 million species of plants, animals, bacteria, fungi and other microbes have been reported. Biodiversity is not an object to be conserved but an integral part of human existence, in which utilization is part of the celebration of life (Posey, 1999). In the biodiversity, plants play pivotal role in establishment and sustainability of different ecosystems. Cultural diversity (CD) has diverse definitions in the past and its origin connects back with ancient times. The word "Culture" is Latin of origin and comes from "colelere" with meaning of "care" or "look after" in term of agriculture.

In the world, different changes in BD and CD has oozed many environmental and social plethora which led the researchers to frame a new field called "biocultural diversity" (BCD) and it means world's natural and cultural systems. In different previous research it was described that cultural varsity is integral part of socioeconomic scenario culminating into BD loss (Harmon, 2004). BD is very important in area because it is part and parcel for establishment and progressing of ecosystem in an area and dynamic ecosystem with proper functioning "ecosystem services (ES)" is very vital for recycling of natural cycles of soil, air, water, pollination and providing other requirements of life such as food, fodder, shelter and medicines for life of man and livestock too. BD is major pillars in area on which any building of human civilization is constructed and nature's diverse products support different industries such as pharmaceutical, agricultural, cosmetics, pulp, paper, construction and waste treatments which comes under umbrella of Ethnobotany (Mafi, 2001; Ishtiaq *et al.*, 2006; 2007b).

Ethnobotany describes that plants have been used for various purposes by fauna and human beings since emergence of life on this planet. There has been researched that plants and man life necessities are intermingled and interrelated with each other which comes under umbrella of Ethnoecology (Ishtiag et al., 2006; 2007c; Reijintjes, 2010; Ahmad et al., 2011a). The term Ethnobotany comes from the Greek word "Ethnos", which means 'people', and "Botane" which means 'herb', so literally it would be translated as "the study of the interaction between plants and people, with a particular importance on traditional tribal cultures" (Harshberger, 1896; Ishtiaq et al., 2007b; 2012). Ethnobotany is part of an ancient tradition which is seeking information about beneficial plants from other cultures. In very early history, the rulers of ancient Egypt, Greece, and Rome encouraged ethnobotanical exploration and prescribed different herbal recipes for treatment of epidemics and warriors. Schultes was a Harvard trained botanist, who spent years documenting the indigenous use of plants in the Americas especially in the Amazon and was the counselor of many other scholars who have since contributed to the discipline. Schultes was an authority on such useful plants as coca, palms, orchids, and rubber (Schultes, 1988). Along with an increasing acknowledgement that there is a link between cultural and biological diversity on the planet, what is now referred as biocultural diversity :Ethnobotany has also become increasingly important in applied conservation projects that take in account both social and environmental aspects, i.e. both biodiversity and people (Terralingua, 2010; Ahmad *et al.*, 2011b).

The field of ethnobotany has become part of syllabi in different academia and many pharmaceutical industry research has been initialized and culminated into drug discovery and drug design at national and international level (Ishtiag et al., 2007b, 2010). Pakistan is rich in plant resources particularly the medicinal plants and many plants are directly or indirectly used in medicaments and other daily life subsistence (Ishtiaq et al., 2007a; Ali et. al. 2001). At least 1,000 medicinal plants species were reported from Pakistan (Baquar, 1989) of which 500 species were commonly used in health care practices and 350 were traded for billion of rupees to the national and international markets. Most of the medicinal plants that are available in the market or supplied directly to the pharmaceutical industries are extracted from the rural forest (Ikram & Hussain, 1978; Ahmad et al., 2010).

Azad Kashmir is very rich in plant biodiversity and it has many endemic species of plants located in Leepa and other high altitudinal range (Ishtiaq et al., 2012). Samahni area is quite rich in flora of diverse type and many of those plants are prevalently used by local tribes in fulfilling different needs of life. The people of an area are responsible for protection and devastation of biodiversity of the area and their traditional knowledge has paramount significance in collection, protection and conservation of biodiversity. In Samahni valley (SV) two major traditionally rich culture tribes Gujar and Jat were selected in this case study. It is demonstrated that information and traditional ethnobotanical knowledge (TEK) inherited by these pools of two tribes is very important for collection, utilization of various plants different aspects and their keen interest to protect and propagate the flora for future. There is invasion of global consumerism by losing traditional and endemic values and rituals and it is hour need to build consensus by global communities to develop cooperation and dialogue for preservation and conservation of world BCD. The main objectives of this paper were: (1) to find out the capacity of biological diversity of the area, (2) to explore the cultural diversity of two tribes (Jat & Guiar) and their consequent impacts on the biodiversity in the specific areas of Tehsil Samahni, (3) to document the usages of plants in daily life of communities and (4) to find out correlation between CD and BD at indigenous and its impacts on protection and conservation of biodiversity in the area.

Methodology

Study area: Samahni is one Tehsil of District Bhimber, Azad Kashmir, bearing lush green plants and lofty mountainous terrains. Geographically Samahni valley is located between 30.05° latitude and 74.82° longitude (Ishtiaq *et al.*, 2007b, 2010). It covers ca. 1270 km² with high lush green and lofty mountainous terrains. It has north facing and south facing high mountains with 1080– 18975 ft altitude and variable topography (Ishtiaq *et al.*, 2006; 2007). The valley is rich in cultural diversity (CD) having different ethnic groups such as; Jat, Gujar, Raja, Syed and others (Ishtiaq *et al.*, 2008).

Climate & temperature: The climate is at variance. The average maximum and minimum temperature is 28.9°C and 15.8°C, respectively. June and July are the hottest months of the year with 38.18°C and 37.18°C average temperatures, respectively. December and January are the coldest months of the year with 6.34°C and 5.22°C average temperature, respectively (Hussain & Ishtiaq., 2009).

Sample and data collection: Many field trips were arranged in order to collect information about the ethno medicinal survey by the local people in Samahni Valley, District Bhimber (AK) Pakistan. Standard methods such as open -ended and close-ended interview methods were followed for collection of plant materials (Ishtiaq et al., 2007b), drying, mounting, preparation and preservation of plant specimens described by previous botanists (Nasir & Ali, 2001; Ishtiaq et al., 2007a). Plants with their correct nomenclature were arranged alphabetically by family name, vernacular name and ethnomedicinal uses. Some data was collected in such a way that collected specimens were carried to old men (age above 60) and sometimes old ladies and hakims and asked them their uses as medicinal purposes. There were five informants for each plant (Heinrich et al., 1998; Fisseha et al., 2009; Ishtiaq et al., 2010).

Data analysis: Statistical methods were employed to get results from the observations and data collected from the study area. The data were grouped into 2 categories based on the information gathered from the interviewees. Information consensus factor (ICF) was calculated for each category to identify the agreement of the informants on the reported cure. ICF was calculated by equation and method described by Ishtiaq *et al.*, 2012. [Equation: ICF = nur-nt/nur-1] where Nur= number of use citation in each category and Nt= number of species used.

The fidelity level (FL) which is percentage of informant's claims for the use of a certain plants in the same major purpose. [Equation: FL (%) = Np/N×100], where Np= number of informants that claim a use of plant species to treat a particular disease and N= number of informants that use the plants as a medicine to treat any given disease. Data Matrix Ranking (DMR) of plants with different uses other than medicinal value was calculated. Priority Ranking (PR) of plants was also calculated to determine biotic pressure on the flora and show correlation between BD and CD (Ishtiaq *et al.*, 2012).

The index of biocultural diversity (IBCD) has been formulated and determined by Harmon & Loh in 2002. The data of BCD has been generated from (a) number of languages (LD) (b) number of religions (RD) (c) number of ethnic group (ED) (d) number of bird/mammal species (MD) and number of plant species (PD). First, CD of an area or region was calculated by using equation: CD=(LD+RD+ED)/3; and BD was determined by formula: BD=(MD+PD)/2. Finally, the IBCD value of an area or country is determined by using its average CD and BD by equation: IBCD= (CD+BD)/2 (Harmon & Loh, 2002).

Results

The Ethnobotanical survey yielded various data which demonstrates that plants are integral part of humane life. The research produced useful informations which are elaborated and discussed in coming sections. Some medicinally important flora is only described here and other will be presented elsewhere. The quantitative assessment produced 60 plants are used in different botanics as folklore therapies, as for fodder and as construction and as ethnoveterinary medicaments.

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Enumerations:			
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tatus:	Herb
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thnomedicinal uses:	It is used against stomach disorders, headache, and constipation

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14. Botanical name: Canabias sativus L. 20. Botanical name: Citrus medica L. Local name: Bhang Local name: Local name: Locality: Part used: Whole plant Family: Rutaceae Herbarium No: MUH-1217 Betancel aname: Fruit Ethnomedicinal uses: It is used against cough, headache, depression and abdominal pain Fruit Herbarium No: MUH-1223 Ethnomedicinal uses: It is used against cough, headache, depression and abdominal pain 21. Botanical name: Orange Locality: Chaii Chaii Citrus sinensis L. Local name: Mirch 21. Botanical name: Orange Locality: Chaii Chaii Status: Tree Part used: Fruit Locality: Chaii Chaii Status: Herb Locality: Chaii Status: Tree Part used: Fruit and peel Herbarium No: MUH-1218 Herbarium No: MUH-1224 Ethnomedicinal uses: It is used against earache, kidney problems, vermifuge and cancer Status: Tree Part used: Family: A				
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Herbarium No: MUH-1225 and insects sting and snake biting. Fruit is used against stomach disorders and jaundice	Fthnomedicinal uses	Its latex is used against scorpions	Part used:	Whole plant
Fruit is used against stomach disorders and jaundice	Lunomeneniai uses.	no mor is used against scorpiolis	Herbarium No:	MUH-1225
disorders and jaundice blood cholesterol and dyspepsia		and insects sting and snake hiting		
		and insects sting and snake biting. Fruit is used against stomach	Ethnomedicinal uses:	It is used against small pox, pimples,

23. Botanical name:	Cymbopogon citratus (DC) Stapf.	29. Botanical name:	Eriobotrya japonica Lindl.
Local name:	Lemon grass	Local name:	Lokat
Family:	Poaceae	Family:	Rosaceae
Locality:	Chan	Locality:	Chaii
Status:	Herb	Status:	Tree
Part used:	Leaves	Part used:	Fruit
Herbarium No:	MUH-1227	Herbarium No:	MUH-1232
Ethnomedicinal uses:	Its decoction is used against sore	Ethnomedicinal uses:	It is used against liver problems,
	throat, obesity, flue and fever		thirst
24. Botanical name:	Cynodon dactyolon L.	20 Potenical name:	Euclyptus situidana Darkor
Local name:	Khabal	Jocal name:	Safaida
Family:	Poaceae	Eocal name.	Myrtaceae
Locality:	Uarh	Locality:	Chaii
Status:	Hero Desta	Status:	Tree
Fait used.	KUUIS MUUL 1227	Part used	Leaves
Ethnomedicinal uses:	Its roots are used against skin	Herbarium No:	MUH-1233
Eunometicinal uses.	problem enlarge spleen piles and	Ethnomedicinal uses:	It is used against flue, fever and
	wounds		pneumonia
25 Deteriori more		31. Botanical name:	Euphorbia helioscopia L.
25. Botanical name.	Shasham	Local name:	Cat's milk
Eocal hame.	Pappilionaceae	Family:	Euphorbiaceae
Locality:	Chaii	Locality:	Chaii
Status:	Tree	Status:	Herb
Part used	Leaves	Part used:	Seeds and stem
Herbarium No:	MUH-1228	Herbarium No:	MUH-1234
Ethnomedicinal uses:	It is used as blood purifier skin	Ethnomedicinal uses:	Its seeds are used against cholera.
Etimomedicinar uses.	problems and abscesses		Its latex is used against eruption and scorpion stings.
26. Botanical name:	Datura alba L.	32. Botanical name:	Ficus carica L.
Local name:	Datura	Local name:	Phakwar
Family:	Solanaceae	Family:	Moraceae
Locality:	Chaii	Locality:	Chaii
Status:	Herb	Status:	Tree
Part used:	Leaves	Part used:	Stem and fruit
Ethnomodicinal yaaa	MUH-1229	Ethnomodiainal yaaa	MUH-1235
Etimomedicinal uses.	and arthritis	Ethnomedicinar uses.	infection, pain and suffocation in chest. 1111
27. Botanical name:	Dodonia viscosa L.	22 D 1	.
Local name:	Santha	33. Botanical name:	Justicia adhatoda L.
Family:	Nyctaginaceae	Local name:	Benkar
Locality:	Chaii	Failiny.	Chaii
Status:	Shrub	Status:	Shrub
Part used:	Leaves	Part used:	Leaves
Herbarium No:	MUH-1230	Herbarium No:	MUH-1236
Ethnomedicinal uses:	It is used against arthritis, wounds,	Ethnomedicinal uses:	It is used against arthritis, wounds,
	tooth ache and inflammation		suffocation and pain in chest
28. Botanical name:	Emblica officinalis L.	34. Botanical name:	Lawsonia inermis
Local name:	Amla	Local name:	Mehndi
Family:	Euphorbiaceae	Family:	Lythraceae
Locality:	Chaii	Locality:	Chaii
Status:	Tree	Status:	Shrub
Part used:	Fruit	Part used:	Leaves
Herbarium No:	MUH-1231	Herbarium No:	MUH-1237
Ethnomedicinal uses:	It is used for treatment of anemia,	Ethnomedicinal uses:	It is used against baldness,
	urinary disorders, stomach disorders		jaundice, skin burn and boils and
	and tonic for diabetes		sore throat

35. Botanical name:	Luffa cylindrica L.	41. Botanical name:	<i>Momordica charantia</i> L.
Local name:	Tori	Local name:	Karela
Family:	Cucurbitaceae	Family:	Cucurbitaceae
Locality:	Chaii	Locality:	Climbing hash
Status:	Climbing herb	Status:	Climbing nerb
Part used:	Fruit	Part used:	Fruit MUUL 1244
Herbarium No:	MUH-1238	Ethnomodiainal usasi	MUH-1244
Ethnomedicinal uses:	It is used against jaundice, skin	Etimomedicinal uses:	and joundies
	irritation, constipation and piles		and Jaundice
36. Botanical name:	Lycopersicum esculentum L.	42. Botanical name:	Moras alba L.
Local name:	Tamatar	Local name:	Toot
Family:	Solanaceae	Family:	Moraceae
Locality:	Chaii	Locality:	Chaii
Status:	Herb	Status:	Tree
Part used:	Fruit	Part used:	Fruit, leaves and stem
Herbarium No:	MUH-1239	Herbarium No:	MUH-1245
Ethnomedicinal uses:	It is used as tonic for heart attack. It	Ethnomedicinal uses:	Its fruit is used to treat nose bleed,
	acts as a blood purifier and liver		anemia and constipation. Dry leaves
	disorders		are used to treat cough, rheumatic
			pains and stem is used as tonic for
37. Botanical name:	Malva preflora L.		toothache
Local name:	Sonchal		
Family:	Malvaceae	43. Botanical name:	Nercissus tazetta L.
Locality:	Chaii	Local name:	Nurgis
Status:	Herb	Family:	Amaryllidaceae
Part used:	Leaves	Locality:	Chaii
Herbarium No:	MUH-1240	Status:	Herb
Ethnomedicinal uses:	It is used to treat depression, dry	Part used:	Flower and leaves
	cough and scurvy	Herbarium No:	MUH-1246
	с .	Ethnomedicinal uses:	It is used against flue, gastritis and
38. Botanical name:	Mangifera indica L.		cougn
Local name:	Mango	44. Botanical name:	Nerium indicum L.
Family:	Anacardiaceae	Local name:	Gandeera
Locality:	Chan	Family:	Apocynaceae
Status:	Tree	Locality:	Chaii
Part used:	Fruit	Status:	Shrub
Herbarium No:	MUH-1241	Part used:	Flower and leaves
Ethnomedicinal uses:	It is used to gain body weight called	Herbarium No:	MUH-1247
	skinny, heart disorders and fever	Ethnomedicinal uses:	It is used against snake bite
			scorpion biting and baldness
39. Botanical name:	Melia azadarach L.		seerpron onling and caraness
Local name:	Draik	45. Botanical name:	Nicotiana tobaccum L.
Family:	Meliaceae	Local name:	Tobacco
Locality:	Chaii	Family:	Solanaceae
Status:	Leeve	Locality:	Chaii
Harbarium No:	Leaves MULL 1242	Status:	Herb
Ethnomedicinal uses:	MUH-1242 It is used against diabetes joundice	Part used:	Flower and leaves
Eunometicinal uses.	healing of wounds pimples and	Herbarium No:	MUH-1248
	nearing of wounds, prinples and		
	inflammation	Ethnomedicinal uses:	It is used for smoking against
10 D 1 1	inflammation	Ethnomedicinal uses:	It is used for smoking against depression
40. Botanical name:	inflammation Mentha longifolia L.	Ethnomedicinal uses:	It is used for smoking against depression
40. Botanical name: Local name:	inflammation <i>Mentha longifolia</i> L. Podina	Ethnomedicinal uses: 46. Botanical name:	It is used for smoking against depression Ocimum bacilicum L.
40. Botanical name: Local name: Family:	inflammation <i>Mentha longifolia</i> L. Podina Apiaceae	Ethnomedicinal uses: 46. Botanical name: Local name:	It is used for smoking against depression Ocimum bacilicum L. Niazbu
40. Botanical name: Local name: Family: Locality:	inflammation <i>Mentha longifolia</i> L. Podina Apiaceae Chaii	Ethnomedicinal uses: 46. Botanical name: Local name: Family:	It is used for smoking against depression <i>Ocimum bacilicum</i> L. Niazbu Lamiaceae Choii
40. Botanical name: Local name: Family: Locality: Status:	inflammation <i>Mentha longifolia</i> L. Podina Apiaceae Chaii Herb	Ethnomedicinal uses: 46. Botanical name: Local name: Family: Locality: Status:	It is used for smoking against depression <i>Ocimum bacilicum</i> L. Niazbu Lamiaceae Chaii Herb
40. Botanical name: Local name: Family: Locality: Status: Part used:	inflammation <i>Mentha longifolia</i> L. Podina Apiaceae Chaii Herb Whole plant	Ethnomedicinal uses: 46. Botanical name: Local name: Family: Locality: Status: Part wead:	It is used for smoking against depression <i>Ocimum bacilicum</i> L. Niazbu Lamiaceae Chaii Herb Scad
40. Botanical name: Local name: Family: Locality: Status: Part used: Herbarium No:	inflammation <i>Mentha longifolia</i> L. Podina Apiaceae Chaii Herb Whole plant MUH-1243	Ethnomedicinal uses: 46. Botanical name: Local name: Family: Locality: Status: Part used: Hacharium Na:	It is used for smoking against depression <i>Ocimum bacilicum</i> L. Niazbu Lamiaceae Chaii Herb Seed MUH 1240
40. Botanical name: Local name: Family: Locality: Status: Part used: Herbarium No: Ethnomedicinal uses:	inflammation <i>Mentha longifolia</i> L. Podina Apiaceae Chaii Herb Whole plant MUH-1243 Its decoction is used against	Ethnomedicinal uses: 46. Botanical name: Local name: Family: Locality: Status: Part used: Herbarium No: Ethnomedicinal uses:	It is used for smoking against depression <i>Ocimum bacilicum</i> L. Niazbu Lamiaceae Chaii Herb Seed MUH-1249 It is used to treat urinery disorder.
40. Botanical name: Local name: Family: Locality: Status: Part used: Herbarium No: Ethnomedicinal uses:	inflammation Mentha longifolia L. Podina Apiaceae Chaii Herb Whole plant MUH-1243 Its decoction is used against vomiting, gastritis, abdominal pain,	Ethnomedicinal uses: 46. Botanical name: Local name: Family: Locality: Status: Part used: Herbarium No: Ethnomedicinal uses:	It is used for smoking against depression <i>Ocimum bacilicum</i> L. Niazbu Lamiaceae Chaii Herb Seed MUH-1249 It is used to treat urinary disorders, stomach problem and ckinpy

47. Botanical name: Local name: Family: Locality: Status: Part used: Herbarium No: Ethnomedicinal uses:	Oxalis carniculata L. Khati boti Oxalidaceae Chaii Herb Whole plant MUH-1250 It is used against jaundice, scorpion stings, and snake biting and liver disorders	Family: Locality: Status: Part used: Herbarium No: Ethnomedicinal uses: 54. Botanical name:	Rosaceae Chaii Tree Fruit and leaves MUH-1256 It is used against constipation, skin problem, cough, arthritis, diarrhoea and vomiting
48. Botanical name: Local name: Family:	Pandanus odoratissmus L. Kewra Liliaceae	Local name: Family: Locality: Status:	Apricot Rosaceae Chaii Tree
Status: Part used:	Herb Leaves	Part used: Herbarium No:	Fruit MUH-1257
Herbarium No: Ethnomedicinal uses:	MUH-1251 It is used to treat epilepsy, fever and heart problem	Ethnomedicinal uses:	It is used against cough, constipation, skin problem and stomach disorders
49. Botanical name: Local name: Family:	<i>Pennisitum typhoides</i> Burm. Bajra Poaceae	55. Botanical name: Local name: Family:	<i>Psidium guajva</i> L. Amrood Myrtaceae
Locality: Status: Part used:	Chaii Herb Seeds	Locality: Status: Part used:	Chaii Tree Fruit
Herbarium No: Ethnomedicinal uses:	MUH-1252 It is used for heart disorders, migraines, asthma and cancer	Herbarium No: Ethnomedicinal uses:	MUH-1258 It is used against diarrhoea, vomiting, scurvy, rheumatic pain and inflammation
50. Botanical name:	Phoenix dactylifera L.		
Local name:	Khajoor	56. Botanical name:	Punica granatum L.
Family:	Arecaceae	Local name:	Anar
Locality:	Tree	Family:	Punicaceae
Dart used	Fruit	Locality:	Chan
Herbarium No:	MUH_1253	Status:	Tree
Ethnomedicinal uses:	It is used against heart attack night	Part used:	Fruit
Etimometicinai uses.	blindness and bronchial asthma	Herbarium No: Ethnomedicinal uses:	MUH-1259 It is used against dry cough and fever. It acts as a blood purifier
51. Botanical name:	Pinus roxburgii Sargent		
Local name:	Cheerh	57. Botanical name:	Pyrus communis L.
Family:	Pinaceae	Local name:	Saib
Locality:	Chan	Family:	Rosaceae
Status:	Tree	Locality:	Chaii
Part used:	Seed, stem	Status:	Tree
Ethnomedicinal uses:	It is used to cure kidney disorders,	Part used:	Fruit
	eruption	Herbarium No: Ethnomedicinal uses:	MUH-1260 It is used to cure anemia, heart attack, blood pressure, constipation
52. Botanical name:	Pisum sativum L.		and arthritis
Local name:	Matar		
Family:	Papilionaceae	58. Botanical name:	Raphanus sativus L.
Locality:	Chaii	Local name:	Moli
Status:	Climbing herb	Family:	Brassicaceae
Part used:	Seed	Locality:	Chan
Herbarium No:	MUH-1255	Status:	Hero
Ethnomedicinal uses:	It is used to cure urinary disorders, skin burns and stomach disorders	Herbarium No: Ethnomedicinal uses:	MUH-1261 It is used to cure stomach disorders,
53. Botanical name:	Prunus persica L.		kidney problem and inflammation.
Local name:	Aru		Its juice is used to treat freckles

59. Botanical name:	Ricinus communis L.
Local name:	Arand
Family:	Euphorbiaceae
Locality:	Chaii
Status:	Shrub
Part used:	Seed
Herbarium No:	MUH-1262
Ethnomedicinal uses:	It is used for hair growth,
	pneumonia, cough and toothache
60. Botanical name:	Rosa indica L.
Local name:	Gulab
Family:	Rosaceae
Locality:	Chaii
Status:	Shrub
Part used:	Flower
Herbarium No:	MUH-1263

Ethnomedicinal uses: It is used against constipation, skin and eye irritation as well

The ethnic survey demonstrated that various languages are frequently spoken in the area. The commons linguistics noted were: Gujari, Pahari, Kashmkiri, Urdu, English, Saraykee, Pashto and Punjabi. This represents LD in study area which is LD=8. The number of religions/ sects practiced in the Samahni valley was: Islam, Christian, Sikh, Sun, Shya, Wahabi and Deyoband (RD=7). The number of ethnic groups residing in study zone was: Gujar, Jat, Syed, Mughal, Mirza, Kamhar, Butt, Kashmiri, Pakhtoon, Sunyara and Moochi (ED=11).

CD = (LD+RD+ED)/3CD = (8+7+11)/3 = 8.66

The various biodiversity aspects were determined for calculation of Biological diversity (BD). The number of plant species was determined by field surveys and previous literature exploration. The plant species were found to be 362 which is indicator of PD of area (Ishtiaq., *et al.*, 2004). The types of fauna and its different species were calculated by forest and domestics expeditions, which are called mammal diversity (MD) with value of 60.

BD = (PD+MD)/2BD = (362+60)/2 = 211

IBCD was determined by using formula as described in the methodology section of the paper.

IBCD = (CD+BD)/2IBCD = (8.66+211)/2 = 109.83 and it is higher that to Pakistan's IBCD which is 75 (Anon., 2010)

Discussion

Human beings are stewards of the land and that is why he should take some processes which are not drastic to the nature and which are religious based thinking. In Samahni there is diverse vegetation but with passage of time it is diminishing due to different factors. Plants are basic need of life. The life on earth is due to plants. Plants are playing important role in providing healthy environment. They are important source of food, fruit and medicines (Ahmad *et al.*, 2008b; Ahmad *et al.*, 2009; Ishtiaq *et al.*, 2009). In this study, an exploratory survey of Samahni valley was conducted in year 2011. The purpose of this study was multifarious including to document flora of the area and impact of anthropogenic activities on it and to define correlation between culture and biodiversity in the area.

Plants are used in different folklore therapies by communities named under umbrella of ethnomedicine, which is basically study of direct interaction between diseases and their treatment in different cultures (Ishtiaq et al., 2006; 2007a). Basically ethnomedicine is medical belief and practices of indigenous cultures. Life and diseases stand side by side, where there is a life, diseases are bound to exist. Dependence and sustainability of men, women, children and animal life were revolving to exit. Traditional uses of natural plants remedies provide potential indicators for biological activities. In the last few decades, there is a resurgence of public interest in medicinal plants and their role in primary health care (Haq, 1983). The study revealed that Anethum graveolense is used to treat insomnia and pimples by people of area. The paste of buds of Bombax ceiba is used against baldness. The plant Carissa opaca is used in snake bite. The roots of Cynodon dactyolon are used in skin disease and spleen enlargement. To treat diabetics people use Emblica officinalis with Ajuga bracteosa roots (Ishtiaq et al., 2007b).

Total 20 different categories of diseases have been studied during the survey of selected area for both tribe's populations individually and then for community (Table 1). Species percentage and use citation percentage have been calculated by Informant Consensus Factor (ICF) method. The highest occurrence of species percentage is 4.98% while lowest occurrence is 0.33%. Similarly, the highest value of ICF is 0.53 for diabetics which depicts prevalence of diseases in the area and lowest value of use citation percentage is 0.23%. It is coincidence with previous findings that large populations or communities originating from two different cultures demonstrate more use and ultimately production, protection and preservation of natural biodiversity. Hence these findings corroborate that biocultural values do assist in flourishing of biodiversity of plants which definitely boost fauna and avian generations in the ecosystems (Mafi, 2001).

Data Matrix Ranking (DMR) of medicinal plants with different uses other than medicinal value was calculated. Ranking shows that *Acacia arabica* is at first number which is frequently being used as fencing, timber, fuel, fodder and furniture. The lowest rank is of *Carrisa opaca* (Table 2). These results present some contradictory scenario as compared with ICF findings, in it community structure analysis revealed that amalgam of two tribes definitely produce biotic pressure on the flora and biodiversity consequently that is supporting the literature (Ishtiaq *et al.*, 2007b; 2012). However, these communities have positive role too for propagation and protection of specific species (Fig. 1). The people of Jat tribes totally relay on agriculture and wait for good yield on mercy of rains. The local plants are used for different purposes such as fodder, fencing, and sheltering and which exert biotic pressure on biodiversity (Table 3). Indigenous biocultural heritage means a wide range of traditional resources that may be tangible or intangible consisting of land, biogenetic resources, traditional knowledge, customary law, spiritual values and landscapes that are transferred from preceding generations and confer to current values (Premchandar *et al.*, 2003).

S No. Catagory		Species	All species	Use citation	% use	I.C.F
5.110.	Category	(nt)	%	(nur)	citation	nur-nt /nur-1
1.	Asthma	5	1.66%	6	1.39%	0.20
2.	Epilepsy	3	0.996%	5	1.15%	0.50
3.	Hair growth	4	1.33%	6	1.39%	0.40
4.	Sore throat	6	1.99%	8	1.85%	0.29
5.	Constipation	13	4.32%	15	3.46%	0.14
6.	Diabetes	9	2.99%	18	4.16%	0.53
7.	Blood pressure	4	1.33%	6	1.39%	0.40
8.	Cholera	4	1.33%	6	1.39%	0.40
9.	Paralysis	1	0.33%	2	0.46%	1.00
10.	Flu	6	1.99%	11	2.54%	0.50
11.	Vomiting	4	1.33%	5	1.15%	0.25
12.	Bald	5	1.66%	6	1.39%	0.20
13.	Obesity	3	0.996%	3	0.69%	0.00
14.	Stomach problem	15	4.98%	22	5.08%	0.33
15.	Skin infection	10	3.32%	16	3.70%	0.40
16.	Jaundice	9	2.99%	13	3.00%	0.33
17.	Heart diseases	7	2.33%	11	2.54%	0.40
18.	Headache	1	0.33%	2	0.46%	1.00
19.	Gastric	6	1.99%	7	1.62%	0.17
20.	Rabies	1	0.33%	1	0.23%	0.00

Table 1. Informant consensus factor (ICF) of Jat & Gujar Tribe population in Samahni.

 Table 2. Data Matrix Ranking (DMR) of medicinal plants with different uses other than medicinal value (total score of 10 informants) in the study area (Samahni).

S. No.	Plant species	Fencing & hedging	Timber	Fuel	Fodder	Fruit/ food	Furnitur e	Total	Rank
1.	Acacia Arabica	3	7	10	6	0	9	35	1^{st}
2.	Zizyphus numularia	2	7	7	5	7	6	34	2^{nd}
3.	Mangifera indica	4	4	7	5	10	2	32	3^{rd}
4.	Pinus roxburgii	2	8	7	0	5	10	32	3^{rd}
5.	Eucalyptus citriodora	4	10	8	2	0	6	30	4^{th}
6.	Dalbergia sisoo	6	7	8	0	0	8	29	5^{th}
7.	Acacia modesta	10	3	5	8	0	2	28	6^{th}
8.	Albizzia juliberism	2	6	9	3	0	6	26	7^{th}
9.	Melia azedarach	2	4	5	8	0	6	25	8^{th}
10.	Carrisa opaca	6	3	5	4	6	0	24	9^{th}



Fig. 1. Plants used as fuel in communities of Samahni Valley.

 Table 3. Priority Ranking of factors perceived as threats to medicinal plants based on their level of destructive effects in the study area, Samahni (values 1-5 were given).

S No	Threat factors		Res	pondents			Total	Total Democrate on	
5. INU.	Threat factors	R1	R2	R3	R4	R5	Total	Percentage	Kalik
1.	Grazing	4	3	2	1	4	14	17.95	4 th
2.	Fire wood	5	3	4	2	4	18	23.08	1^{st}
3.	Construction	5	3	2	1	0	11	14.10	5^{th}
4.	Urbanization	5	4	3	2	1	15	19.23	3 rd
5.	Medicinal uses	5	3	4	2	3	17	21.79	2^{nd}
6.	Hailing	1	0	2	0	0	3	3.85	6^{th}



Threat Factor
🔳 R 1
□ R2
🗖 R3
R 4
🗖 R 5

Fig. 2. Percentage of threat factors.

Priority Ranking (PR) of factors perceived as threats to medicinal plants based on their level of destructive effects in the study area was calculated. It shows that the most destructive factor for forest is fire wood with highest percentage of 23.08%. This demonstrates that there are no fuel resources other than wood of forest or vicinity, which exert pressure on some species too much thrilling to threatened or endangered species zone. Second most destructive factor is collection of plants for medicinal use with 21.79%. Urbanization, grazing and construction are also contributing well with 19.23%, 17.95% and 14.10%, respectively. However, hailing is less destructive because it occurs rare with heavy rains and percentage of hailing is 3.85% (Table 3). This study is proved by previous work descriptions and it was found that when there is huge number of individuals in an area there is definitely more requirements of daily subsistence which are ultimately obtained from the forest and other biodiversity of the nature. Hence, we found that there is reverse correlation between community density and plant biodiversity, and community do have threats on BD of the area (Fig. 2) (Ishtiaq *et al.*, 2010).

The IBCD index of any country and its ranking plays a vital significance for knowing biodiversity (Harmon and Loh, 2004). The Cultural diversity of the area was found 8.66, and we studied spatially two tribes in the area. The BCD value ranged 211 in the research area which is higher than Pakistan's BCD, because this is dense Pinus forest zone, however many factors are impeding limits on BCD. Some factors like natural, historical, cultural and other anthropological factors such as rituals and customs are modifying the use of flora and fauna in the area. Ipso facto, CD has been shedding its impacts on type and propagation of BD in the area (Fernandez, 1998).

The paper demonstrates that loss of BCD is prevailing in the area and is mainly due to migration of different communities from the area due to various factors (Ishtiaq et al., 2010). The loss of BD is posed by fragmentation, degradation, direct loss of forests, wetland's destruction, man made artificial systems, urbanization, agro-expansion and aquatic ecosystems misuse. Some other unseen parameters such as global warming and thinning of ozone layers are causing huge silent damage to BD gradually and will lead the species over the brink. The pinpoints of this loss are due to (1) habitat destruction and (2) invasion of exotic species in an area. Furthermore natural catastrophes are also boosting these parameters of BD destruction such as huge earthquake of 2005 in Azad Kashmir and KPK areas (Cao, et al., 2003; Ishtiaq, et al., 2010).

It will culminate into food species damage and loss and cause famine leading to massive migrations and death of human and animals too. The knowledge and experience of agrosystems of the community (Jat & Gujar tribes) can be employed in protection and conservation of BD in natural ecosystems (forests) of Samahni.

References

- Ahmad, I., M. Hussain, M.S.A. Ahmad and M. Hameed. 2008. Spatio-temporal effects on association of plant species in soone valley of Pakistan. *Pak. J. Bot.*, 40(5): 1865-1876.
- Ahmad, I., M.S.A. Ahmad, M. Ashraf, M. Hussain and M.Y. Ashraf. 2011a. Seasonal variation in some medicinal and biochemical ingredients in a potential medicinal plants *Mentha longifolia* (L.) Huds. *Pak. J. Bot.*, 43(SI): 69-77.
- Ahmad, I., M.S.A. Ahmad, M. Hussain and M.Y. Ashraf. 2011b. Spatiotemporal variations in soil characteristics and nutrient availability in open scrub type semi-arid rangelands of typical sub-mountainous Himalayan tract. *Pak. J. Bot.*, 43(1): 565-571.
- Ahmad, I., M.S.A. Ahmad, M. Hussain, M. Ashraf, M.Y. Ashraf and M. Hameed. 2010. Spatiotemporal aspects of plant community structure in open scrub rangelands of submountainous Himalayan plateaus. *Pak. J. Bot.*, 42(5): 3431-3440.

- Ahmad, I., M.S.A. Ahmad, M. Hussain, M. Hameed, M.Y. Ashraf and S. Koukab. 2009. Spatio-temporal effects on species classification of medicinal plants in Soone valley of Pakistan. *Int. J. Agri. Biol.*, 11(1): 64-68.
- Ahmad, I., M.S.A. Ahmad, M. Hussain, M.Y. Ashraf, R. Ahmad and A. Ali. 2008b. Spatiotemporal variations in physiochemical parameters of *Adiantum capillus veneris* in Soone Valley of Salt Range in Pakistan. *Pak. J. Bot.*, 40(4): 1387-1398.
- Ali, S.I., S. Ome and M. Qaisar. 2001. Flora of Pakistan: In Mohammad Afzal and Shehzad A. Mufti Natural History research in Pakistan. PASTIC, Islamabad.
- Anonymous. 2010. IBCD ranking. www.terralingua.org/projects/ibcd/tables/Table9.pdf
- Baquar, S.R. 1989. Medicinal and Poisonous Plants of Pakistan. Printas Karachi, Pakistan, pp. 343-344.
- Cao, M., W. Kevin and L. Limming. 2003. Biodiversity management and Sustainable Development. Beijing, China. China Forestry Publishing House.
- Fernandez, A.P. 1998. The Myrada Experience Alternate Management Systems for Savigns and credit of Rural Poor, 2nd Edition, Myrada, Banglore, India.
- Fisseha, M., D. Sebsebe and T. Tilahun. 2009. An ethnobotanical study of medicinal plants in Wonago Woreda, SNNPR, Ethiopia. J. Ethnobiol. Ethnomed., 5: p. 28 doi:10.1186/1746-4269-5-28.
- Haq, I. 1983. Medicinal plants-Report of committee on economic of therapeutic importance of medicinal plants. Ministry of Health, Govt. of Pakistan.
- Harmon, D. and J. Loh. 2002. Draft Framework for an index of Biocultural Diversity. Washington, D.C. Terralingua.
- Harmon, D. and J. Loh. 2004. A Global Index of Biocutural Diversity, Washington, D.C. Terralingua. Discussion paper for the international Congress on Ethnobiology, University of Kent, UK.
- Heinrich, M., A. Ankli, B. Frei, C. Weimann and O. Sticher. 1998. Medicinal plants in Mexico: healers' consensus and cultural importance. *Soc. Sci. Med.*, 47: 1859-1871.
- Ikram, M. and S.F. Hussain. 1978. Compendium of medicinal plants. *Pak. Council Sci, Peshawar.*
- Mafi, L., 2001. Introduction: On the interdependence of biological and cultural diversity. In: On Biocultural Diversity: Linking Language, Knowledge, and the Environment. (Ed.): L. Maffi. Washington, D.C. Smithsonian Institution Press, 1-50.
- Muhammad Ishtiaq Ch, Q. He, Y. Wang and Y.Y. Cheng. 2010. A comparative study of chemometric and numerical taxonomic approaches in identification and classification of traditional chinese medicines (TCMs) of genus *Clematis* species. *Journal Plant Biosystems*, 144(2): 288-297.
- Muhammad Ishtiaq Chaudhary, Q. He, P.G. Xiao and Y.Y. Cheng. 2007c. *Clematis huchouensis* Tamura: A traditional chinese herbal medicine and its quality control using a high performance liquid chromatography technique. *Biol. Pharm. Bull.* 30(1): 165-168.
- Muhammad Ishtiaq Chaudhary, Q. He, Y.Y. Cheng and P.G. Xiao. 2006. Ethnobotany of medicinal plants from tian mu shan biosphere reserve, Zhejiang Province, China. Asian J. of Pl. Sci., 5(4): 646-653.
- Muhammad Ishtiaq, Abdul Samad Mumtaz, Tanveer Hussain and Abdul Ghani. 2012. Medicinal plant diversity in the flora of leepa valley, Muzaffarabad (AJK), Pakistan. *African Journal Biotechnology*, 11(13): 3087-3098.
- Muhammad Ishtiaq, P.G. Xiao, Q. He and Y.Y. Cheng. 2007a. Biosystematics and plant proteomics: Role of proteomics in plant phylogenetic analysis. *Pak. J. Biol. Sci.*, 10(20): 3487-3496.

- Muhammad Ishtiaq, Wajahat Hanif, M.A. Khan, M. Ashraf and Ansar M. Butt. 2007b. An ethnomedicinal survey and documentation of important medicinal folklore food phytonyms of flora of Samahni Valley, (Azad Kashmir) Pakistan. *Pak. J. Biol. Sci.*, 10(13): 2241-2256.
- Muhammad Ishtiaq. 2004. Ethnobotanical analysis and conservation status of Samahni valley flora, Distrcit Bhimber Azad Kashmir, M. Phil. Dissertation, 2004, Department of Plant Sciences, Qauid-e-Azam Universirty, Islamabad, Pakistan.
- Nasir and Ali. 970-2002. Flora of Pakistan, National Herbarium, NARC, Islamabad and Department of Botany, University of Karachi, Karachi. Fasc. No. 1-207.
- Premchandar, S., M. Chidambaranathan and L. Jeyaseelan. 2003. In search of water: Natural resources degradation

leading tp livelihood crises in Kopaal District Karnataka, India, Mountain Research and Development, 23(1): 19-23.

- Reijintjes, C. 2010. Ecology, spiritually and the sustainability of the global community of life. Workshop www.preventionweb.net/files/1798_VL102209.pdf.
- Schultes, R.E. 1988. Where the Gods Reign: Plants and Peoples of the Colombian Amazon. Oracle, Ariz.: Synergetic Press. ISBN 0-907791-13-1.
- Tanveer Hussain and Muhammad Ishtiaq Ch. 2009. A Floristic Description of Flora and Ethnobotany of Samahni Valley (A.K.), Pakistan, Journal Ethnobotanical Leaflets, USA, 2009, 13: 873-889.
- Terralingua. 2010. Terralingua website: http://www.terralingua.org/html/home.html.

(Received for publicaiotn 16 April 2012)