

Chapter 1

Philosophy and Background of Biocultural Landscapes

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Abstract Distribution of biological organisms and human's utilization is significantly related and its interaction between nature and human creates culture. However, ecosystems and habitats will disappear by reckless development and climate change. Unique biological creatures that had been contributed to maintain the traditional ecological culture are drastically disappearing. Although interesting in biodiversity is focused on species, habitat and ecosystem levels, human scale should be considered to understand recent global change and environmental issues on biodiversity loss. Therefore, it is necessary to strength and expands new paradigm on biocultural diversity beyond biological concept on biodiversity. Diversity of landscape (land or island) that had created biological and cultural diversity, however, is influencing both human tradition and life. Through the landscape, biological diversity can be structured, developed and changed.

Keywords Bioculture • Biodiversity • Biocultural diversity • Biocultural landscape • Ecosystem • CBD • UNESCO

1.1 Background

Ecologists request that recognition of economic professionals and politicians in advanced countries should be changed to solve the problems of serious climate change and indiscreet overdevelopment. Various cases have been cited to explain how much mankind has been dependent upon creatures and the ecosystem, how culture has been connected with biodiversity, and how culture has been generated. 2010 is the International Year of Biodiversity and the International Year of Rapprochement of Cultures designated by the UN. It is very significant to designate

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2010 as the year of bio-diversity and cultural rapprochement, at a time when the global ecosystem is being destroyed and the value of biocultural diversity is decreased due to climate change, thoughtless overdevelopment, our original ecosystem being destroyed for the sake of the appropriation of resources, environment pollution, and others. Various commemorative programs were implemented across the world and an international academic meeting (Convention on Biological Diversity, CBD) was held in Montreal, Canada between June 8 and 10, 2010 (International Conference on Biological and Cultural Diversity 2010a). The convention is an agreement among UNEP member countries made in 1993 in order to ensure that biodiversity is preserved, various species of creatures are used in a sustainable manner, and profits from commercial and other uses of genetic resources are divided and shared. In particular, it is very meaningful that the international meeting was held by both economic professionals and UNESCO on the topic of “*Biological and Cultural Diversity for Development*.” A conference on “*Diversity for Development*” was attended by North America-based environmental development companies, energy-related international organizations, politicians, and others who discussed how to improve world economic professionals’ recognition about global environment change and biodiversity crisis, with a focus on the role and cooperation of economic professionals and environmental policy makers in connection with diversity, green economy, and new models of growth. Many people’s concern was drawn more than anything else to UNESCO, UNDP, and politicians’ discussion about “energy, sustainable development, and diversity” and “biological and cultural diversity for sustainable development.” Thus, the importance of biodiversity and cultural diversity is already internationally recognized and concerned, as an index necessary to discuss the sustainability of global environment and society. The 5th World Natural World Conservation Congress held in Jeju, in September 2012, discussed the preservation of biodiversity and sustainable utilization of cultural resources on islands and coastal regions, which are an ecosystem very vulnerable to climate change and the development process; they suggested and adopted a proposal on “*Strengthening Biocultural Diversity and Traditional Ecological Knowledge in Asia-Pacific Island Regions*.” Moreover, *Island Biocultural Diversity Initiative* was formed through a workshop during the period of WCC.

1.2 Bioculture and Biocultural Diversity

Culture describes how creatures use their environment, a peculiar manner of adaptation of each race in each region, how to use resources derived from an ecosystem, a life style including how to dress, survive, dwell and communicate. UNESCO and IUCN utilize the term bioculture based on the characteristics of creatures, cultures, and languages in order to conceptualize the features of the life of men adapted to their various biological environments from ecologic, cultural, and anthropologic standpoints (Pretty et al. 2009). The academic circles use the term in a wider sense (Table 1.1). Thus, such a system of ‘*bioculture*’ is defined as

Table 1.1 Possible cooperation of interdisciplinary research fields concerned with the intersection of nature and culture (Pretty et al. 2009)

Biological diversity	Ethnobotany
Cognitive anthropology	Ethnoecology
Commons studies	Enthnolinguistics
Cultural anthropology	Ethnoscience
Cultural geography	Historical ecology
Cultural (landscape) ecology	Human ecology
Deep ecology	Human geography
Descriptive historical particularism	Indigenous knowledge
Development studies	Intercultural education
Ecofeminism	Landscape ecology
Ecological anthropology	Nature society theory
Ecological design	Political ecology
Ecological economics	Resilience sciences (ecological and cultural)
Ecosystem health	Science and technology studies
Environmental anthropology	Social-ecological systems
Environmental education	Sustainability science
Environmental ethics	Symbolic ecology
Environmental history	System ecology

‘*biocultural diversity*’ of an overall meaning, which comprises the characteristics and attributes of creatures supporting the system, cultural spectrum, co-existence of biological diversity and cultural diversity, and interactions between traditional knowledge (International Conference on Biological and Cultural Diversity 2010b). Bioculture and biocultural diversity are already defined by UNESCO, IUCN, and CBD and being spreading to each corner of the world by Luisa Maffi and many researchers (Maffi 2001; Pretty et al. 2009; Maffi and Woodley 2010). In particular, value and importance of biological and cultural diversity had been known since Declaration of Belém 1988 (<http://ethnobiology.net/what-we-do/core-programs/global-coalition/declaration-of-belem/>).

Since a proposal for bioculture diversity and traditional knowledge on islands in Asia and pacific regions prepared by the present author and others was submitted to and adopted by IUCN World Conservation Congress convened in Jeju in September 2012, the importance of biocultural diversity (especially on island) shall be internationally recognized and various projects developed. Table 2.2 summarized important keywords relating biocultural landscape.

Table 2.2 Definitions of major terminology concerned with biocultural landscape (Cited from International Conference on Biological and Cultural Diversity 2010b)

<p><i>Biological diversity</i></p> <p>The Convention on Biological Diversity (CBD) defines biological diversity as: “The variability among living organisms from all sources, including inter alia terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.” The Ecosystem approach of the Convention makes it clear that biological diversity has to be seen in the context of peoples relations with nature, and that people are part of biodiversity.</p> <p><i>Cultural diversity</i></p> <p>According to the UNESCO Declaration on Cultural Diversity (2001) “Cultural diversity is considered to encompass “all communities in the world, each of them with their own identity determined by ethnicity, history, language, religion and art”. It “widens the range of options open to everyone; it is one of the roots of development, understood not simply in terms of economic growth, but also as a means to achieve a more satisfactory intellectual, emotional, moral and spiritual existence.” Cultural diversity may be understood as, but not limited to, diversity in: (1) practices (rituals, production systems and knowledge transmission systems); (2) ways of living together (social systems including institutions, legal systems, leadership and tenure systems); (3) value systems (religion, ethics, spirituality, beliefs and worldviews); (4) knowledge (know-how and skills); (5) languages; and (6) artistic expressions (art, architecture, literature and music).</p> <p><i>Local, Indigenous or Traditional Knowledge</i></p> <p>Local, indigenous or traditional knowledge systems bridge the gap between biological and cultural diversities. These complex and dynamic arrays of knowledge, know-how, practices and representations guide human societies in their innumerable interactions with the natural milieu (Nakashima and Roué 2002). Article 8(j) of the Convention on Biological Diversity gives particular recognition to this cultural dimension of biodiversity, as do all of UNESCO’s cultural conventions.</p> <p><i>Landscape</i></p> <p>The landscape concept recognizes the constant interplay between people and their natural surroundings, and more specifically the manner in which human societies shape the land and are in turn, shaped by it. The concept of <i>cultural landscapes</i> as recognized within the framework of the World Heritage Convention, underlines the significance of this encounter between biological and cultural diversities.</p> <p><i>Biocultural diversity</i></p> <p>The inextricable link between biological diversity and cultural diversity received international recognition through the Declaration of Belem (1988). Loh and Harmon (2005) define Biocultural diversity as the total sum of the world’s differences, no matter what their origin. This concept encompasses biological diversity at all its levels and cultural diversity in all its manifestations. Biocultural diversity is derived from the myriad ways in which humans have interacted with their natural surroundings. Their co-evolution has generated local ecological knowledge and practices: a vital reservoir of experience, methods and skills that help different societies to manage their resources. Diverse worldviews and ethical approaches to life have emerged in tandem with this co-evolution of nature and culture. The biocultural concept is critical to making progress on building mutual understanding and support between these two diversities.</p>

1.3 Spreading the Biodiversity Concept to Biocultural Landscapes: The Case of the Archipelago in Southwestern Korea

The Southwestern Sea, which is a representative island-coastal region in Korea, was designated as the 3rd Biosphere Reserve in Korea in 2009 by UNESCO because the region has a unique ecosystem, superior bio-diversity, and peculiar ecologic and cultural values (Hong 2010, 2011a). The archipelago region, which has been continuously preserved for scores of years, maintains a peculiar ecosystem and an ample amount of traditional ecologic knowledge of local residents adapted to their

ecosystem. In recent days, when the extent of environmental development has widened, not only biodiversity, which has been an index to the evaluation of the soundness of an ecosystem, but also cultural diversity need be considered to understand the soundness of an ecosystem network or a landscape system. For a long time, men have utilized adjacent landscape and creatures as life resources and, if necessary, cultivated and developed new species. Utilizing biodiversity has been a basis for promoting cultural diversity, which comprises food culture and residence culture; such ecologic knowledge is spreading beyond neighboring regions to counties (Huntington 2000). In recent days, the climate has changed on archipelago, changing fishing grounds due to excessive human intervention and oceanic pollution, which result in rapid change of the island ecosystem that has been maintained soundly for a long time. This environmental incident warrants significant concern from humans, and simply shows that the imbalance of man and nature is affecting biodiversity, landscape diversity, and cultural diversity.

Not only the values of landscape but also the languages and dialects of minority races are very vulnerable to westernization and quickly disappearing. Native knowledge on the use of natural resources is endangered in the same manner as biodiversity is driven out by thoughtless overdevelopment of energy and indiscreet use of land (Hunn 2001). A major concern is about how to preserve disappearing native knowledge as historic materials. As was in the past, the survival of mankind will be greatly dependent upon biodiversity in the future as well; ecologic and cultural flexibility and sustainability, which are revealed in an interactive relationship between biodiversity and cultural diversity, are used as a model for harmonious coexistence of man with their ecosystem, since the co-existence will support the existence of man in the future (Hong 2011b). Therefore, '*biocultural landscape*' may be defined as the overall and cyclic characteristics of: a space that acts as a buffer so that biocultural diversity (which is rapidly diminishing but deserves to be preserved) may be developed in a sustainable manner, ecological knowledge utilizing diversity and dynamics of the space, mechanisms to maintain the landscape development process, and an ecosystem which has an influence on the space (Hong 2007, 2011b).

1.4 Necessities and Goals of the Concept of Biocultural Landscape

Creatures and cultures have different attributes, but it seems that the term biocultural landscape was coined to stand for a space where natural and human systems coexist, since men have developed depending on nature and cannot exist without utilizing natural resources. Thus, it is undeniable that men and nature have interactively depended upon, contacted, and complemented each other in their ecologic system. Yet, it is necessary for government officials, researchers, citizens, and professionals to deeply understand that, recently, the connection between men

and nature is gradually dwindling due to rapid change of the globe environment, overdevelopment, decreased biodiversity, and others. As is attested in the history of mankind, the survival of men greatly relies upon biodiversity, and ecologic and cultural flexibility and sustainability based on such an interactive relationship between biodiversity and cultural diversity will be used as a model for mankind's harmonious co-existence with its ecosystem, which can support the future of mankind.

International organizations like IUCN, UNEP, UNESCO, and CBD deeply recognize the interactive relationship between biodiversity and cultural diversity. From the standpoint of anthropology, the organizations have utilized the term bioculture so as to conceptualize the characteristics of the life of men who adapted to various biological environments, and academic circles use the term in a wider sense. UNEP GEO-4 (2007) defines that the concept of biodiversity should include human cultural diversity, which has an influence on an ecosystem and species diversity; UNESCO has summoned an expert conference on Main Line of Action on Biodiversity and Cultural Diversity in Aichi, Japan (April 2004) and Paris, France (September 2007). Article 8j of CBD clearly describes the importance of traditional knowledge for sustainable use and preservation of biodiversity. IUCN's 4th World Conservation Congress held in Barcelona had a conference on "biodiversity and native peoples" and, after the conference, the 2009–2012 IUCN program was approved so as to recognize the importance of cultural diversity and cultural values connected to nature and of native residents and native knowledge of the connection. IUCN's Commission on Environmental, Economic and Social Policy (CEESP) is promoting related projects, recognizing that the world is intertwined with biodiversity and cultural diversity.

The importance of biodiversity and cultural diversity is already internationally recognized and concerned as an index necessary to discuss the sustainability of global environment and society, since CBD, in collaboration with economic professionals and UNESCO, hosted a meeting on the topic of "Biological and Cultural Diversity for Development" in June 2010, which was the Year of World Biodiversity. The 5th World Conservation Congress organized by IUCN held in Jeju, Korea in September 2012 discussed the preservation of biodiversity and sustainable utilization of cultural resources on islands and coastal regions, which are an ecosystem very vulnerable to climate change and the development process, and suggested and adopted a proposal on "*Strengthening Biocultural Diversity and Traditional Ecological Knowledge in Asia-Pacific Island Regions.*" It demonstrates that governments and civic groups across the world understand ecologic and cultural characteristics of mechanisms for developing and maintaining biocultural diversity on the basis of ecologic knowledge utilizing biodiversity on islands and coastal regions, which are an ecosystem very vulnerable to climate change and the development process.

IUCN is concerned about various problems of islands and oceans, including climate change, population on islands, poor fishing villages, and ecosystems threatened by commercial fishery. IUCN has established and operated THE GLOBAL ISLAND PARTNERSHIP (GLISPA), which educates and trains such leaders that can tackle and resolve various environmental and resource problems. Also, a

number of programs are operated so that people may be adapted to climate change on islands, and long-term programs for restoring, preserving and managing islands, which are ecologically very important, are operated so that islands may be developed in a sustainable manner (Ex.: a project entitled Mangrove Ecosystem Climate Change Adaptation and Livelihood (MESCAL)). Furthermore, IUCN in cooperation with UNESCO, is involved in the designation and management of world natural heritages. Besides, CBD-COP11 already recognizes the importance of biocultural diversity and traditional ecologic knowledge, which may be considered the core of the proposal in question, and SCBD-UNESCO Programme helps conduct various activities.

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