

# Loss of Diversity is a Global Environmental Crisis

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There are many warnings on which high levels of biodiversity and of cultural-linguistic diversity on Earth are under threat. However, is the loss of diversity really a global environmental problem? It is far from self-evident why diversity should be protected for the sake of humanity's survival.

A vast number of species have already become extinct and many languages have been lost. It might be argued that humanity has, nevertheless, prospered. If anything, in agriculture and stock-raising, the introduction of a few species of wheat, corn and rice or cattle and sheep over wide areas of the Earth has raised food productivity and labor efficiency by artificially reducing the diversity of indigenous life-forms. Concerning language, it might similarly be argued that the diversity of languages is a fundamental impediment to mutual understanding among people; and in pursuit of the ideal that the world's people could speak to each other in one language, artificial languages (e.g. Esperanto) were invented.

To answer these doubts, it is necessary to consider three aspects of diversity that make it valuable: the hereditary, the functional and the indicator. These three are neither reciprocal nor complementary but independent assessments of value. I shall relativize the discussion with the utilitarian/practical yardstick of distinguishing utility value which is "useful" and non-utility value which is "useless," and consider from three different standpoints the whole of diversity in which "usefulness" and the "use of uselessness" are intricately intertwined.

The hereditary aspect of diversity

Biodiversity and cultural-linguistic diversity are products of history, and living witness to the histories of the various life-forms and human societies. Once lost, moreover, they are impossible to recover. Each and every species has a characteristic form and physiology, mode of development, and lifestyle, which

were formed in the course of its unique history. Among the species that have not been sufficiently studied and are becoming extinct, it is possible that there may be hidden a big hint to solving present or future problems in biology or medicine. Also concerning language, it may be possible to find linguistic answers to many difficult questions about the origin and spread of language in languages that are presently threatened with extinction. Each and every language is irreplaceable.

#### The functional aspect of diversity

According to the UN's Millennium Ecosystem Assessment, ecosystems provide mankind with four categories of ecosystem services, provisioning, regulating, cultural and supporting. Considering the ecosystem function of biodiversity, a necessary concept is that of functional redundancy: the existence of functional groups, assemblies of species that perform a certain function within an ecosystem. Functional redundancy is not, however, without benefits. The resilience of an ecosystem is intimately related to biodiversity, particularly functional redundancy.

Indigenous peoples account for no more than 4 percent of the world's population but are speakers of 60 percent of living languages and have long lived in ecosystems of high biodiversity practicing sustainable utilization, namely, "wise use," of resources. Because livelihood in most traditional societies depended greatly on local bioresources, sustainable utilization was essential for survival. The present language crisis represents a turning point in the survival of the cultures that play a part in the conservation and sustained utilization of the world's ecosystems, in the continuance of their concrete knowledge and skills.

#### The indicatory aspect of diversity

The notion has long existed of using species that are known to flourish only in limited environments as bioindicators that air, water, soil and other environmental conditions lie within a narrow range. Nowadays, the endangered species can be monitored as indicators not only of environmental pollution in the narrow sense but also of the broader relation of man and nature, namely, whether ecosystems are being suitably managed.

Most of the world's languages are neither written nor officially recognized, their

functions limited to local communities or households, spoken by only an extremely small group of people. However, the fact that multiple languages are respected within a single state system can be regarded as an indicator of a harmonious society where various heterogeneous peoples coexist without suppression of human rights because of differences in ethnicity, culture or thought.

### Conclusion

In the context of the history of civilization, the loss of linguistic and cultural diversity should be seen as part of a large-scale process that threatens biodiversity on Earth, in particular, as part of the global breakdown of man's relationship with nature that has become prominent since the last century. We face a situation in which the cultures and languages that embrace the thinking that have caused today's global environmental problems are expelling from the world the cultures and languages that have embraced "wise use" in harmony with nature. From this, biodiversity and the diversity of cultures and languages can be said to be prime indicators of the state of the world, and the loss of diversity is a global crisis to human-being in the future.