

## LOCAL KNOWLEDGE AND COMMUNITY SECURITY

**Maj-Lis Follér**

*The Institute of Ibero American Studies, Göteborg University, Sweden*

**Keywords:** Security, local knowledge, community, indigenous peoples, sustainable future

### Contents

1. Introduction
2. Natural and Social Prerequisites for a Sustainable Future
3. Security and Sustainable Development
4. Local Knowledge
  - 4.1. Ethnoscience
    - 4.1.1. Ethnomedicine
    - 4.1.2. Ethnoecology
    - 4.1.3. Ethnopharmacology
5. Overlapping Knowledge Systems
6. Case Studies
  - 6.1. The Cholera Epidemic among the Shipibo-Conibo
  - 6.2. Ecological Awareness among the Kayapó
7. The Future of Local Knowledge for Survival on a Community Level
8. Conclusions
- Glossary
- Bibliography
- Biographical Sketch

### Summary

This article deals with the importance of local knowledge in ensuring the security of rural communities, with examples from indigenous peoples in the Amazonian region. Concepts such as sustainable development, local/global, and community security are discussed. Security is not only a question related to nation-states and military power, but also ecological security and human security are included in the debate. Examples from indigenous peoples in the Amazon are given to articulate the importance of local knowledge as a complex entity. Research and engagement on the connection between global environmental issues and local peoples' needs for long-term security is seen as an important part of ensuring a sustainable future for all.

### 1. Introduction

The most serious potential consequences of global environmental change are the threats to Earth's life-support systems. The threats are on a global, regional, and local level and many of them are interconnected in a complicated web. This article deals with the importance of local knowledge in ensuring the security of rural communities and more specifically on rural indigenous communities. The emphasis is on Africa, Asia, and Latin America—the continents often grouped together as the developing world, the third

world or “the south.” The focus is on what can be dealt with as local knowledge systems and how this can be a tool for securing a sustainable future.

The concept “sustainable development” was enunciated in the Brundtland Report (*Our Common Future*), which was the preparatory document for the United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro in 1992. Sustainable development aims to improve the quality of life without endangering the well-being or threatening the rights of future generations. At the UNCED, also called Earth Summit, a program, known as *Agenda 21*, was set up for the twenty-first century directed towards sustainable development. It says, among other things, that a new ethics is required, a plan for global cooperation. It involves democracy in the deep sense of the concept and the extension of human rights to everyone on the planet. Also technology, science, social sciences, and humanities are institutions that have to work within the framework for securing a sustainable future. These perspectives demand new foundations for human responsibility towards the global environment. One part of the related discussion is how we can define and value different knowledge systems in the light of these aims.

One step forward in the implementation of *Agenda 21* was Earth Summit +5, a United Nations follow-up meeting in New York in 1997. Another important step in stressing the symbiotic relationship that exists between biological and cultural diversity was the UNESCO report *Our Creative Diversity*. The integration of cultural factors in ecologically sustainable thinking, and then moving from global agreements to agendas on community levels has to be analyzed and implemented. The local reality is the point of departure but the global processes are considered and integrated.

## **2. Natural and Social Prerequisites for a Sustainable Future**

When discussing the future for life-support systems the social, cultural, and ecological dimensions have to be approached simultaneously. Human beings are perceived not only as cultural and social beings but also as biological ones that, like all living things, survive through the use of resources drawn from the surrounding environment. Human resource use is thus a part of the energy flows and biogeochemical cycles that characterize all ecosystems. Energy fixed in plants through photosynthesis is transferred through successive trophic levels to herbivores that eat the plants to carnivores that eat the herbivores. In the process, it becomes degraded through metabolic reactions and is eventually lost from the system as radiated heat. Carbon, oxygen, hydrogen, nitrogen, and other chemical substances show a different kind of behavior—rather than flowing in one direction they circulate. A molecule in the non-living component of the ecosystem becomes incorporated into an organism, possibly passes into other organisms through the movement of food from one trophic level to another, is released again into the abiotic part of the system, and so on ad infinitum. This view of humankind as an integrated part of the web of life is a prerequisite for sustainable development. This does not mean, and this has to be emphasized, biological determinism or a romantic view throwing human beings back to a Stone Age level, nor that we should live like “noble savages” in paradise or start a nomadic life. With six billion people living on Earth and some more billions in the near future we have to think in terms of how to use

technology, science, and social science in combination with local knowledge and wisdom for a sustainable future.

We can today, in our civil society, perceive a tension between two forces—romanticism and enlightenment. There are scientists, forest and agricultural engineers, planners, politicians, and others willing to listen and learn from indigenous peoples' ways of interacting with nature, how to build their houses, and ways to utilize wild and cultivated plants for medicine, etc. But, the tension is that some tend to throw the knowledge from Western society away and see it only as destructive and negative. The development from ethnocentrism (that is a Western-biased perspective) to exocentrism (that everything is just as good as anything else), a total cultural relativism, is not the solution. For a globally sustainable future we need both the wisdom and experience of people living close to nature and the technology and rational criticism developed through the scientific way of accumulating knowledge.

From an ecological perspective, traditional human societies have been quite well adapted to their ecosystems. They have used resources from those systems at rates that did not disrupt natural flows and cycles, and, in cases where their use of resources might have endangered the natural system, adaptation such as nomadic lifestyles have often facilitated ecosystem recovery and maintenance. Their populations have been small, at least in part due to the factors that naturally limit other animal species, including communicable and parasitic infections and a high mortality rate among the youngest members of the group.

What we see today is a compression of time and space in processes named modernization and globalization. One of the major current forces of change shaping human societies is modernity. It had its origins in Europe, but spread to all parts of the world during the nineteenth and twentieth centuries, often in conjunction with economic development, and has brought about worldwide cultural transformations. Some aspects of modernization are clearly beneficial to human beings, such as advances in health care, hygiene, new crops, technological, and scientific knowledge, that lead to, for example, longer life spans. It is more difficult to measure changes in the quality of life and security aspects due to modernization. Several consequences of modernization are both the solutions to many of today's problems and part of the problem. Without modernization, the world population would not have risen to six billion. The current ecological problems—global, regional, and local—can also be seen as a continuation of the rationalization and modernization process. They are socially constructed and deeply embedded in the cultural setting of the modern industrialized world society.

To indigenous peoples, modernization signifies that they are suddenly catapulted from their traditional ways of life into tension and conflict, both within their own group and in their interaction with other cultural groups. All societies have lived in interaction with peoples that have other traditions, languages, and behavior, but today with new ways of transportation and communication through television, telephone, and the Internet the changes are more apparent. With globalization, the dominant cultures of Europe and the United States are penetrating the local world. Complex relationships are developing between local activities and interaction across distances.

In the Amazon, there are interventions by global actors such as transnational timber logging and bioprospecting activities, oil drilling by national and international companies, narco-traffic alongside missionaries from the Catholic, Protestant, and other churches, and nongovernmental organizations (NGOs), mainly affecting health issues, ecological degradation, and conservation of nature. As well, international television programs, telephones, computers, and electronic networks are reaching distant and previously isolated communities. The two case studies in Section 6 will give examples of traditional health knowledge (THK) and traditional ecological knowledge (TEK) in today's globalized Amazon.

The people living in a certain community, as part of an indigenous group, often have their own language, traditions, myths, and ways of perceiving the world. They also have their own ways of dealing with issues related to health and disease and interacting with nature for the livelihood of the group. The local knowledge system has been developed over thousands of years by people united in a society and forming a common culture (see *Ethics and Justice Needs for Sustainable Development*; *Human Resource Development: Ethics and Justice Needs for Sustainable Development*; *Environment Well-Being and Human Well-Being*; and *Environmental Security*).

### **3. Security and Sustainable Development**

Discussions on security can be found on all levels in society. Security issues have mostly been related to nation-states and military power. There are discussions of global risks related to nuclear power, conflicts in and between countries, and global wars. Today new notions such as ecological and environmental security have emerged and they can be related to various levels of society. The environmental problems can be on global, regional, and local levels simultaneously; greenhouse effects, ozone depletion, loss of biological diversity, water scarcity, erosion, desertification, etc. They might all be discussed in relation to environmental security and their impact at a community level.

Human security is another notion that on a community level deals with economics, food, health, and the environment. The security of individuals is related to their social and ecological context. All societies consist of individuals who, in a variety of ways, build their primary security network, family, extended family, or other forms of kinship or affinity and create some form of what will be referred to as community. When security is focused on natural resources for a sustainable use it deals with how natural resources are perceived and how they are dealt with. This is what is meant by environmental security. The underlying perceptions of people in a certain group or community are not homogenous and therefore priorities related to security for the individual have to be negotiated. Negotiation and power aspects are interrelated on all levels in society. The negotiation on issues that should be decided by people in a community is mobilized through social strategies. These involve local knowledge, values, and social institutions. Environmental security for a sustainable future includes, at the community level, sustainable resource management based on three components: knowledge, values, and institutions. In the scientific literature, NGO documents, and other records from Africa, Asia, and Latin America, systems well adapted to local environments and social and cultural conditions are described. It is interesting to

establish which conditions enable people in a certain community, often consisting of a group of people with the same language and culture, to utilize natural resources on a sustainable basis. What has to be kept in mind is that even on a community level there are power aspects and certain decisions might be more or less beneficial for women and men, young and old, and for individuals in different social strata.

Colonialism and modernization have changed many of the traditional resource management systems and institutions that once functioned as a self-supporting unit. Mechanisms for decision making and foreign norms were imposed on local communities. Tenure, land use, crops, religions, and health systems are just some examples of cultural aspects that the colonizers brought with them. These developments have disrupted long-established resource management systems. Today's situation with population pressure on many places such as the nutritional alluvial riverbanks in Bangladesh, the tributaries and shores of the lakes in the Amazon, eroded hillsides in Rwanda and the Himalayas, and overexploited dry lands in Africa are all examples of environmental degradation. The economic structure that began during the colonial and post-colonial period regarding cash economy and export crop production has been intensified. Traditional food crops such as sorghum and millet in Africa and *quena* in the Andes have been neglected and replaced by the cultivation of groundnuts, cotton, coffee, tea, and other export crops.

The modernization process has, as a consequence, marginalized rural communities and seasonal and permanent migrants to cities and towns in their own country, but also across borders to neighboring countries and from countries in Asia, Africa, and Latin America to Europe and the United States. This urbanization has resulted in 50% to 70% of the world's population living in urban areas. Migration from the periphery, caused by war, environmental degradation, or socioeconomic reasons, is a characteristic feature of today's world society. These processes are in tension with local sustainable community development.

In many cases, indigenous peoples are in various ways not fully integrated into the surrounding society. It might be that within the juridical system they do have not the same rights and the same access to education, health care, employment, and political representation. Causes can also be found in the differences of praxis in everyday life. The key concept here is "empowerment," which means a mobilization of human values and consciousness. Empowerment is often discussed in relation to women's subordination and issues related to poverty and the uneven distribution of power and welfare. Empowerment and human security are intimately interconnected (see *Global Ethics*).

-  
-  
-

TO ACCESS ALL THE 12 PAGES OF THIS CHAPTER,  
Visit: <http://www.eolss.net/Eolss-sampleAllChapter.aspx>

## **Bibliography**

United Nations (1993). *Agenda 21: Programme of Action for Sustainable Development*. New York: United Nations.

United Nations. Department of Public Information (1998). *Programme for the Further Implementation of Agenda 21: Adopted by Governments at Earth Summit +5, Special Session of the United Nations General Assembly, 23–28 June 1997, New York, 95 pp.* New York: United Nations.

United Nations Environment Programme (UNEP) (1992). *Convention on Biological Diversity, June 1992, 52 pp.* Nairobi: UNEP, Environmental Law and Institutions Programme Activity Centre.

UNEP (1999). *Cultural and Spiritual Values of Biodiversity* (comp. and ed. D.A. Posey). London: Intermediate Technology. [The case study on the Kayapó is drawn from Posey's extensive publication on them.]

World Commission on Culture and Development (WCCD) (1996). *Our Creative Diversity: Report of the World Commission on Culture and Development*, 2nd ed. rev., 309 pp. Paris: UNESCO.

World Commission on Environment and Development (WCED) (1987). *Our Common Future* [The Brundtland Report], 383 pp. Oxford: Oxford University Press.

## **Biographical Sketch**

**Maj-Lis Foller** is director of the Institute of Ibero American Studies at Göteborg University, Sweden. Her doctoral thesis is in human ecology. Since 1985, Dr. Foller has conducted research among indigenous peoples in the Amazonian part of Peru in relation to human ecology and health. Her research has focused on their use of medicinal plants, local knowledge, and, in particular, local health knowledge and local environmental knowledge. Dr. Foller is also interested in the effect of globalization on indigenous peoples and on the health situation in the Amazon.