HUMAN RESOURCES CHALLENGE: MAJOR POTENTIALLY DISADVANTAGED PEOPLE

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Keywords : human resources, disadvantaged people, environmental issues, youth, women, limits to growth, culture, practice

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Summary

The importance in life support systems of human resources is the starting point of this article. The next step and heart of the theme is that there are human resources in the world that have not yet been tapped for the safety and maintenance of life support systems, namely the indigenous populations in different parts of the world, women, youth, and children. The first two are slowly being recognized, the second two have not yet been sufficiently considered by policy makers.

1. Introduction

The *Encyclopedia of Life Support Systems* (EOLSS) is a useful tool in general terms, especially for people who are not familiar with the various areas covered in the encyclopedia, given the importance of emphasizing the crucial role played by human resources in addressing environmental issues and their many components: from those related directly to nature—water, forests, arable land, to mention just a few—to those that are more technological and have a major impact on nature. In my view, just as important are the human beings and social structures (i.e. the organization of society) that deal with and manage the natural environment. As humans use natural resources, social structures are clearly affected by their destruction. In dealing with the natural environment, the approach of social organizations differs depending, for example, on location or even the historical moment, and may be one of conservation, exploitation, or even destruction.

People and their groupings constitute the human resources necessary for the correct use of existing natural resources and the identification of new ways of enhancing or

destroying life support systems. Human resources are a vital element for an encyclopedia whose objective is to respond to the many questions that arise in situations that endanger life support systems. Such situations are produced, mainly in the developing world, by over production, over exploitation and over use of land to meet the needs of a population that is continuing to increase (unlike that of the developed countries that is slowly diminishing with an aging of the population as a consequence of increased life expectancy as well as a decreasing total fertility rate). In the long term, the population of developed countries will probably start increasing again (albeit slowly, as in the United States of America) due to the growing waves of international immigration for political, economic, and ecological reasons. This phenomenon is a clear example of the extent to which human resources and life support systems are more interrelated in the modern world than in any other period of human history.

According to projections, during the twenty-first century and beyond people will increasingly be forced to leave their countries, not only for economic and political reasons as is evident in the present, but also for environmental reasons, such as desertification, overuse of land, and forest destruction, which in turn provoke environmental disasters such as inundations, higher level of oceans, and earthquakes.

Most of these disasters are man-made or sparked by a social organization that has developed without paying sufficient attention to the consequences of the over use or destruction of the natural environment. Until now, the social organization of countries and even regions has been based on a development geared mainly to economic growth rather than on what, in the last decade, has come to be referred to as human development, which is something that takes into account not only economic growth and the per capita national product, but also education, health, and the capacity of individuals to communicate and participate in decisions that affect them.

The 1999 issue of the *World Disaster Report* (International Federation of Red Cross and Red Crescent Societies, 1999) declared the importance of exploring the ways in which human short-sightedness and environmental change are continuing to foster not only disasters such as earthquakes, hurricanes, and flooding, which provoke an immediate reaction at the global level and the provision of humanitarian aid, but also, and more importantly, the chronic and increasing vulnerability of the poorest countries to great and recurrent disasters. These disasters are accompanied and indeed often aggravated by lack of resources for education and the prospect of never being able to face or even better avoid such disasters. In other words, over and beyond the natural disasters themselves, economic and social resources, as well as political will, are lacking at the regional, local, and global levels.

According to the *World Disaster Report*, scarcity of natural resources can trigger wars. This, therefore, is an example of a human and social issue that is emerging with force and may become extremely serious in the future. Lack of water is an example. Clearly rivers can flow across the borders of several countries, while lakes and underground water sources may also be located in more than one country, with the potential to trigger conflicts between countries and people. Hotter and longer heat waves, such as those in the Middle East and India in 1998, also have severe social consequences, increasing the number of deaths from heart and lung disease. The consequences of heat waves are even

worse when pollution is high. The report predicts a severe crisis for the middle of the twenty-first century, if the current trend continues, with increasing pollution and the general destruction or over exploitation of natural resources.

The section of EOLSS related to what we can refer to as hidden or invisible human resources is also extremely interesting. Although not well known, such human resources may prove vital for the survival of humanity and of the planet, enhancing life support systems, providing they are protected and supported. This is the message contained in the section on potentially disadvantaged human resources that may, paradoxically, be the holders of capabilities able to preserve and, perhaps, even re-develop life support systems.

These human resources are currently involved in saving, increasing the capacity, and promoting the correct use of life support systems, at the group, community, and individual level. Despite this, there is a very real danger that the very people who are the carriers of capacities that are vital for life support systems may disappear unrecognized in the decades to come. The task of this part of the encyclopedia is precisely to shed light on these potentially important human resources and examine their possible contribution.

Given the difficulty of locating these hidden human resources, the identification of scholars and the actions of people who are aware is an important first step, as is the decision to include papers written by them in EOLSS.

The human resources identified by the International Editorial Council are indigenous populations, women, and young people. To this, we add children, given the growing importance of children's rights in present and future society.

2. Indigenous Populations as Human Resources for Life Support Systems

Many authors working in this area link indigenous populations to the colonization process, and their survival to different ways of resisting the intrusion of external values and cultures, or to the capacity of maintaining one's own identity.

Rodolfo Stavenhagen, a scholar who has always supported the need for the survival of the indigenous populations of Latin America, writes that while the process of decolonization in Africa and Asia has assumed various specifications, which we shall describe especially for Asia, the same process in Latin America has specific characters (Stavenhagen, 1983). First of all, in this region the colonial economy developed in the early stages of capitalist expansion, thus greatly influencing in that region those production processes that created the structures for economic relationships of dependency of the indigenous population in regard to the colonizers. The relative economic unity of Latin America produced a fragmentation in the region when the colonial period started to disappear. Still more important in this context "a dominant settler society was superimposed on the native population, thus creating a syncretic culture which resulted in the mixed or *mestizo* societies." Another Latin American author, Alonso Concheiro, writes of a continuous inquiry of what it means to be Latin American, of a constant self-questioning on the part of Latin Americans as to their real

identity (Concheiro, 1992). According to Concheiro in other parts of the world there is not this same obsession, which he attributes to the mestization process that took place after the Spanish conquest, thus creating a duality of origin: the primitive origin that has left a certain nostalgia and a sort of restlessness for having received what could be called universal instruments. Some people in Latin America claim that the indigenous side no longer exists in them.

This attitude, according to many scholars, including Stavenhagen, seems to be changing in the last few years as many recent historical events indicate. The change of the trend may be the reinforcement of other past indicators that are described in the following paragraphs.

There are in fact a few million indigenous inhabitants that only speak an indigenous language and several more millions that are bilingual in their own language and Spanish. Guaranì is the second language in Paraguay and Mayan is the second language in the region of Yucatan. Indigenous languages have also influenced Spanish in many parts of Latin America. Nevertheless, as Rodolfo Stavenhagen says, although indigenous populations used to be considered backward and racially inferior in relation to whites or *mestizos*, this is no longer true as they are considered to be bearers of traditions that are important in the context of the modernization process (Stavenhagen, 1983).

Stavenhagen emphasizes the extraordinary perseverance of indigenous resistance. The history of such resistance, which goes back to the sixteenth century, has still to be written, although more recently historians have been working on its reconstruction. Concerning this aspect, UN awareness certainly has made an important contribution. In the context of this encyclopedia, it is particularly relevant to place the resistance of indigenous people in relation to agricultural systems and forms of production that were previously ignored but are now arousing increasing interest among scholars of different areas. This renewed interest is perhaps in part the result of the problems that have been emerging for modern, technology-driven activities. For sure, at the center of the resistance of the indigenous movements, described by Stavenhagen, is the defense and recuperation of their lands, as the link with land is the major point in indigenous thinking.

As issues of the environment emerge and the damages created by deforestation and rapid urbanization become more apparent in Latin America, the attitude toward many elements of the culture of the indigenous populations in Latin America is changing, with growing awareness of the value of many aspects of that culture, at least among a minority of the world population.

By the early 1970s several militant indigenous organizations had emerged in different parts of Latin America demanding a change of policy and respect for their indigenous identities. This demand was accompanied by claims for a different, not solely economic oriented, development. An interesting change has occurred: areas that seemed to be remote from "national development planning" have now become vast reserves rich in minerals, dam sites rich in water, and land rich in unique plants that are essential and important for the conservation of plant diversity. In this context, principles and criteria for forest stewardship are crucial. A set of indications states that "forest management

operations shall maintain or enhance the long term social and economic well-being of forest workers and local communities." This indeed is a crucial point made for and by indigenous populations in Latin America. This is where the knowledge and long standing experience of the indigenous populations comes into being and may well invert the trend toward ethnocide, which Stavenhagen speaks of. Indications of a change in trend include that of the Chiapas indigenous populations in Mexico where the emeritus bishop of San Cristóbal de las Casas, Monsignor Samuel Riz García, has devoted himself to recovering the dignity of the poorest of the *Indios* population, recognizing their right to their land, and to their activities to save their lands. So much is happening in Latin America, not only in terms of recognizing the dignity of the indigenous populations, but also in supporting their not-yet-lost capacities to save the life support systems.

Tadeu Caldas, a Latin American anthropologist, emphasizes how in Brazil there seems to be separate parallel situations in relation to the indigenous and non-indigenous populations, especially in Amazonia (Caldas, 1988). He also stresses the extent to which the indigenous populations are removed from the state and its decision-making structures, its scientific applications to agriculture, and its technologies. Much state-directed agricultural action has been detrimental for the environment of indigenous populations. At the same time, some small-scale activities are still carried out by the indigenous populations in Amazonia. In a way, says Caldas, this constitutes the last frontier in Brazil of Western ways of thinking or even epistemologies.

Caldas notes that the complexity and variety of situations in Amazonia are so great that it is difficult to provide general methodological guidelines. He warns that his own reading of these situations and his case study approach is personal (albeit rigorous, I would add). Small action groups are operating in the Amazon area in relation to the proposals that he puts forward.

The identification of the actors involved is important in analyzing the action of indigenous (and other) populations in relation to the environment. It is important to remember in this context that although we are talking about indigenous people, there may be external factors to consider.

3. Interconnections Between Culture and Practice in Relation to Nature

Another important point to stress is the interconnection between culture and practice, which in many cases is very important. Concerning Brazil, Caldas stresses that "for the majority of indigenous people their cosmologies are the software which enables the hardware of the land use and, specially their agricultural system." We are dealing here with survival groups, with what Denis Goulet calls "cultures of survival" (Goulet, 1994) that for some intrinsic capacity, which is different in each case, manage to survive even in situations of extreme difficulty, legal, political, or otherwise.

Stavenhagen, Concheiro, Goulet and Caldas all make what I believe is a very interesting point, stressing the importance of understanding historical background and the basic assumptions related to the past that, in one way or another, distinguish them from formal scientific and institutionalized activity (either agricultural or other) related to the

environment. Indeed, this understanding is essential for appreciating the differences that exist in the way different peoples manage their physical landscapes and the cultural behaviors connected to it.

If we now look at Asia it is interesting to stress some general points (although of course it is important to realize that indigenous people are different in different parts of the world and, indeed, extremely different even within the one region). For example, Ashis Nandi and Giri Deshinghar write:

The enlightenment project and a political economy based on science, technology and development continue to be resisted by those who have not yet been massified . . . [R]esistance comes from two sources: (a) there is the loss of community life which is still a living memory in almost all non-Western societies and (b) the nature of work in a massified, atomized society is purely instrumental; machine production has no communicative relationship with nature. In human history, work has always been a cultural activity engaged in transforming nature.

(Nandi; Deshinghar, 1994)

It is clear here that the remnants of indigenous communities are those that may offer an alternative precisely in relation to their relation with nature. Nandi and Deshinghar speak of the resistance of those remaining communities, which we can call indigenous, that though seeming to be invisible may in fact offer an alternative to the way life support systems at present are being attacked by what they call the "massification" produced by the Enlightenment and political economy.

Another important writer from India, Vandana Shiva, emphasizes how in the traditional society of many parts of India the relationship with nature was the prerogative of women as nurturers and protectors of nature, as nature is the source of survival for their children (Shiva, 1990). As soon as that connection disappears, the relationship with nature is destroyed. As an example, Shiva refers to forests: with the start of silviculture, the contribution of women to forests was lost, the relationship with nature disappeared, and life support systems were threatened. Shiva considers the form of development geared exclusively to economic production to be the most damaging to nature and to this important relationship between nature and women. She also stresses the similarity between the exploitation of nature for economic development and the exploitation of women, who become marginalized as nature is marginalized by industrial development. What is important for this writer, who is a physicist and a scientist, is the survival of people within their own culture that conserves and respects nature. She believes that women understand the sources, the capacities, the way to use the land without destroying its richness, using it for food and even clothing. The uprooting of such principles of survival creates misery. She makes a difference between poverty and misery, the latter being the consequence of maldevelopment and the decision to abandon rural areas to live in great cities, and the former being related to resources, capacities, and possibilities of survival.

I think this distinction is important in trying to analyze the contribution that indigenous populations can bring, as invisible resources, to life support systems. On these

principles Shiva has given visibility to the Chipko movement that has become a symbol of the protection of nature all over the world. The Chipko movement is not recent. Its starting point has to be sought 300 years ago when more than 300 members of the Bishonoi community in Rajasthan, lead by a woman, sacrificed their lives to avoid the destruction of their sacred trees by embracing them with their arms. This was the beginning of the documented history of the Chipko movement as related by Shiva. She also cites the great Indian poet Rabindranath Tagore, who wrote that the peculiarity of the Indian culture is in having considered forests as the apex of cultural evolution. All religions and cultures in southern Asia were born in the forests. For indigenous populations in India, forests are the context and the condition of survival. Shiva defines the economic value of forests as "the satisfaction of fundamental needs by the integrated ecosystem managed in a multifaceted use" (translation by the author from the Italian text).

3.1. Nature, Indigenous Populations, and Science Fiction

In this context, I would like to refer to the "science fiction" theory presented by the author of the paper on Australian indigenous populations included in this part of the encyclopedia. It is an interesting theory that is opposite to the position adopted by Shiva. The idea of the savage, ignorant native who inevitably destroys nature continues to be spread by literature and more recently by the media. It seems that different forms of knowledge that undoubtedly do exist are not understood by a culture that is dominated by scientific thinking and is prepared to marginalize any other way of thinking. Specifically, different ways of interrelating with the environment may well be less damaging than the formal scientific forms of agriculture or the use of natural resources.

The author of the Australian paper contends that the land management traditions of the Aboriginal people have been made invisible by law and by what she calls "science fiction." By this she means the categorization of the northern Aboriginal lands as wilderness, having no economic development and no technological infrastructures, referring to the mistaken interpretation of the Aboriginal use of fire, deemed responsible for the prehistoric destruction of the mega fauna and the present destruction of Australian rain forests. In three case studies the author demonstrates that, on the contrary, Aboriginal populations have always taken a great interest in both terrestrial and marine environments. Shiva goes beyond this and shows how the indigenous people, especially women, have on many occasions saved nature, particularly forests, as in the case of the Chipko women's movement.

It is interesting to recall what Susantha Goonatilake has to say in this regard:

[The] formulation of the social and historical nature of modern Western science, despite its original borrowings from Arab and other non-Western societies, such as the Chinese and even the Indian societies, has overwhelmed the scientific traditions of other non-European civilizations.

(Goonatilake, 1984)

From the contributions to this topic, it seems that such traditions could be important in the present and future for addressing the enormous survival problems that exist in different natural environments, as this encyclopedia hopes to discover and bring to the forefront.

In the past, policies were mainly directed toward the integration and assimilation of indigenous populations in relation to nation-building, equity, and development, and also to diversification of industrial production. Technology was seen as the most important mediator, with modernity (understood as based on technology) being opposed to tradition. As a consequence, the ways of life of indigenous populations were considered obstacles to production and modernity, as productivity in general terms was clearly different from industrial production.

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Biographical Sketch

Eleonora Barbieri Masini is a sociologist and scholar in futures studies from a human and social perspective. She was President of the World Futures Studies Federation for ten years (1980–90) and President of the Futures Research Committee (R07) of the International Association of Sociology for twenty years (1973–93). She has been an active member of the Club of Rome since 1976, and holds at present the chairs in Futures Studies from a Human and Social Perspective, and in Human Ecology at the Faculty of Social Sciences, Gregorian University, Rome.