

communities. I am against the segregation of land from the local population without solving their problem. Deep ecologists did not clearly show how developing countries could alleviate poverty and prevent further environmental degradation. As has been stated earlier, in many developing countries, the problem is not lack of environmental consciousness. The point is that the people cannot protect the environment at the expense of their survival. They have no choice other than to continue to use the already degraded environment. I believe that without paying attention to the needs of the present generation, we cannot consider the needs of future generations, for the future generations are unthinkable without the survival of the present generation. To put matters another way, we have to pay attention to issues of justice in the distribution of resources between the present and future generations.

Social ecologists rightly suggest that decentralization of power, where real authority and resources devolves to local communities, can accelerate the process of development, since it provides greater opportunities for people to participate in decisions that affect their immediate environment. This is fine enough, but the proposals of social ecologists do not seem to go beyond theoretical speculation in a world, which is dominated, by powerful capitalist countries and transnational corporations.

On top of that although one can maintain that indigenous belief systems can be either environmentally friendly or destructive, some Western and Eastern environmental ethicists including, Callicott 1982; Hargrove 1989; Ip 1993; Patterson 1994; Momaday 1994; Marshall 1995; Sessions 1995 and others have overlooked the contribution of Africa to environmental ethics. They either kept quiet or what they said about Africa was rather thin compared with what they said about Native Americans and Asians. Hargrove, for instance, did not say anything about African traditions when he boldly asserted that "[a]n open-minded comparative study of Eastern environmental attitudes and values will enable Western environmental philosopher better to recognize and criticize their most ingrained and otherwise unconscious assumptions inherited from the long and remarkably homogeneous history of Western thought" (Hargrove 1989, xx). I would like to underline that anyone who believes that there is nothing to be learned from Africa is terribly ignorant of Africa or possibly a racist. There is a lot to be learned from those who are sufficiently familiar with the ecological insights of African peasants. An environmental ethicist who overlooks African environmental ethics will make his or her subject incomplete.

One may object that Africa has the worst environmental record on earth and therefore has no contribution to make for global environmental management. Africans have not overcome their own environmental and developmental crisis. As it stands, this seems to be the correct assessment of African environmental record. But the real issue is not as simple as that. One has to examine how and why Africa has faced environmental and developmental crisis before concluding that Africans are environmentally unfriendly.

The foregoing discussion about Oromo attitudes towards the environment suggests that Oromo environmental knowledge can offer a good foundation for modern environmental ethics and science. One may argue that this claim would not stand up well for people who do not share Oromo beliefs. Although this could be a valid criticism, my intention

is not to suggest that Oromo environmental ethics can generate universal principles by which worldwide environmental problems will be put under control. What I am suggesting is that modern environmental ethicists can make use of the wealth of biological and ecological insights and sustainable resources management systems developed by the Oromo people and other cultural groups in order to effectively deal with environmental problems. To put matters another way, Oromo attitudes towards the environment may offer insights for redirecting the behavior of neo-technic societies towards a more sustainable path. Better-said, global environmental problems can be tackled through more cross-cultural and interdisciplinary approaches.

Modern environmental scientists can enrich their knowledge by making systematic ethical inquiry into environmentally sound practical experiences and religious beliefs of Oromo and other cultures. Although moral and empirical claims seem to be of logically different sorts, empirical facts about the natural environment is important for modern environmental ethics. In fact, Hume asserts that we cannot rightly infer any normative claim from any set of purely empirical premises. He was concerned with the distinction between fact and value. He seemed to argue that science cannot be a basis for ethics, and normative policy recommendation cannot be grounded on science. However, experience confirms that "empirical suppositions play a crucial role in moral argument" (VanDeVeer and Pierce 1994a, 9). Science is useful to explore particular issues in applied ethics. "Thus, many explorations in environmental ethics must make good use of the results of biology, botany, chemistry, geology, climatology, marine science, forestry, and so on (both basic and derivative and mixed fields)" (VanDeVeer and Pierce 1994a, 9). Likewise, modern environmental ethics and science may make use of peasant's environmental and agricultural science. As I have argued elsewhere, modern environmental scientists can derive the following lessons from the Oromo environmental ethic: the ethics of preservation, an ethic of production--the fact that without production and transformation of nature human life is unthinkable; the green environment is a *sine qua non* for the survival of all living things; the positive relationship with the environment and the appreciation of the earth as a mother of life (Workineh 1995b, 1997a). Western and other modern scholars should also take cognizance of the fact that mental knowledge, which came from communing with nature, is equally significant for the health of the environment. Hence, "[o]ne thing Western man must learn from the African is that mental analysis and generalizations must come last rather than first in our knowledge of anything, we must first live and tangle with that thing" (Kaboha 1992, 76).

Moreover, modern environmental ethicists and scientists can learn about the nature and specific features of the local flora and fauna, climates, diseases and other threats to health, pharmacological remedies, beekeeping, agricultural and fishing practices from Oromo peasants and other local communities.

The foregoing discussion about Oromo environmental and agricultural sciences suggests that protection of the environment and promotion of economic development are complementary; they are the basis of sustainable development. Peasants use various modes of sustainable resource management, various sustainable methods that enable them to secure food, income, employment, social welfare, diversification of crops, and

preservation of animal and crop species. As a matter of fact, the social and economic activities of traditional societies correspond to many key goals of sustainability. The evidence indicates that many regions of the South contain the seed of their own sustainable future (Noerberg-Hodge and Goering 1995, 23). Furthermore, many writers confirmed the positive role of indigenous knowledge in sustainable agricultural development (Brokensha *et al* 1980; Norgaard 1984; Thrupp 1989; Waters-Bayer 1992; Medani Mohamed Ahmed 1994).

There have been well organized rural institutions from which all members more or less equally benefit in rural Ambo in particular and Ethiopia in general. Indigenous mutual aid associations involve *Eddir* (neighborhood burial associations) and *Iquub* (savings exchange groups). *Both women and men can form Eddir*. The rich and poor individuals have the same status in the *Eddir*. It operates on the basis of elaborate written by-laws. *Iquub* is a saving association where each member agrees to pay periodically into a common pool a small sum so that each, in rotation, can receive one large sum. In rural areas *Iquub* has many economic advantages. When a member faces economic crises he/she will be allowed to collect the pool free of charge. As Dejene suggests, "[t]he *iquub* could be used as a launching pad for savings mobilization schemes (such as savings and credit cooperatives) in the rural areas. Such savings may help the promotion of small and micro enterprises in rural areas where banks are not available" (Dejene 1993, 259). *Deboo*, the village-based mutual help arrangement, is also practiced in Ambo. It is a tradition of supporting each other, especially elders, sick peasants who do not have their own oxen, by groups of friends and neighbors. What interests me is that the social interactions among the members of mutual help organizations are strong. I think that these organizations can be used to enhance environmentally sound development. "Cooperatives which grow out of mutual aid organizations may be better equipped to mobilize the energies of the rural population, and may therefore also achieve better economic results" (Pausewang *et al* 1990, 8). Popular participation in local organizations is essential for self-reliant economic development. Environmentally sound development can be maintained through optimum use of resources, adoption of an integrated development strategies, implementation of local level land use planning, adoption of appropriate farming practices, promotion of public cooperation and environmental education.

However, we need to approach indigenous knowledge and its possessors with caution. As has been stated earlier, many writers have identified the negative aspects of the knowledge of various cultural groups in the world. One might want to look at how things developed in Japan where the dominant religion--Shinto--is basically animistic and would, therefore, be expected to have had a more positive impact on human-environment relations. But, it has, in fact, hardly prevented Japanese industrial development from being exceedingly destructive.

Personally, I do not think that Oromo indigenous environmental knowledge is perfect. It has certain limitations. For instance, in the Oromo culture, women do not have equal status with men. They were considered as weak and ignorant. In most cases, higher education is restricted for males. The Oromo culture supports polygamy, which again restricts the rights of women. This attitude needs to be changed. I think that

environmentally sound development cannot be materialized without active participation of women. In some cases, depending on their wealth and power, some elders and religious leaders may appear as autocratic elitists. They may use their knowledge against their opponents by violating the principles of Oromo religion and ethics. The informants, for instance, report that some *Qaalluu* leaders ask the poor people to provide them with bull and heifer and thereby compel the poor to avoid traditional Oromo religion. The *Qaalluu* also asks the children of the dead persons to be responsible for the mistakes committed by their fathers and grand fathers during their lifetime. Also, some individuals who are responsible to present the case of believers to *Ayyaana* need bribe. The informants suggest that all this should be changed (Infs: Berhanu; Takele). In fact, as Lewis noted, “[t]roubled people bring cattle, money, food, liquor, grain, clothing, pots, kerosene, and all manner of goods to the spirits” (Lewis 1970, 176). Some *Qaalluu* leaders associate themselves with politicians and help the latter to exploit the people (Inf: Merga Anga’a) although the *Qaalluu* does not possess political power. In fact, in the past candidates for the *Gadaa* offices are required to participate in political debates at the *Qaalluu* village since the latter is the spiritual center.

Some peasants and Oromo intellectuals doubted whether *eker-dubbiftuu* could really communicate with the spirit of the dead persons. They said that the so-called *eker-dubbiftuu* is a deceiver (Infs: Dagaga Cuche; Gamtessa) .

Development agents in Ambo and Oromo intellectuals argue that the position of peasants towards holidays should be changed. Most Orthodox Christian peasants don’t work on saints’ days. This tradition hinders the process of development and needs to be changed (Infs: Adanu; Hailemariam). Also, Oromo intellectuals criticized the followers of traditional Oromo religion for sacrificing animals during religious rituals. This, they said, is economically harmful. It does not change anything.

Moreover, although there are exceptions, some peasants hesitate to adopt new technologies, particularly the poor peasants are the last to adopt modern agricultural knowledge. Peasants may not easily adopt new varieties of crops (Infs: Haileyesus; Tujuba). On top of that, indigenous knowledge may not solve wide range problems of the society. It may easily solve local problems. Indigenous technologies are not universally applicable, but are locally grounded.

Thus, peasants can make use of the knowledge of environmental ethicists. Environmental ethicists may alert peasants to understand the long-range effects of environmental degradation which are beyond the purview of local peasants and otherwise unavailable. Peasants by themselves may not meet the growing demands of population on the basis of local knowledge. Modern science and technology are required to increase productivity and to satisfy the growing demands of population.

In any case, indigenous environmental knowledge should be given due attention if we are to promote sustainable development in developing countries. Concern about sustainable development should focus on the environments in which the poor live and from which they draw their sustenance (Adams 1990, 87). The empty talk about sustainable development which has been so far the concern of environment and development theorists should be replaced by concrete measures that will satisfy the

needs of local peoples, and improve environmental quality for both the present and future generations. Development agents in Ambo realized that without taking the knowledge of peasants into account development and environmental plans couldn't be translated into practice. Some development agents reported that initially they tried to impose their ideas on peasants and failed to appreciate their knowledge. Their advice resulted in crop failure. Because by ignoring the basic features of the local soils and crops, they forced peasants to apply the knowledge they received from schools. They now realized that peasants are scientists themselves and can teach development agents and also receive knowledge from the latter. It is noteworthy that development agents and Oromo intellectuals agree that indigenous knowledge should be integrated into modern environmental protection efforts. Unfortunately, the instruments to realize this wish are not in place. I have been informed that in addition to their own duties, development agents are forced to collect tax and promote the political ideology of the ruling party in Ambo. In fact, peasants do not trust development agents and are not willing to cooperate with them. Development agents and their leaders lamented that they faced the same problem during the military government. This suggests that development agents should not be forced to participate in unnecessary activities that may isolate them from the majority of peasants. Both development agents and peasants can learn from one another. The respondents themselves suggested that environmental and developmental problems could be solved through the joint efforts of government officials and peasants, environmental education, protection of natural resources, population control and so on. For this purpose, we need to ask environmentally sound development for what? for whom? run by whom? for the benefit of whom? Can we go beyond utilitarian, economic and anthropocentric definitions of sustainability? How can we integrate ecological sustainability and economic development? How much resource utilization is consistent with conservation?

11. CONCLUSION

Oromo traditional attitudes towards the environment have enabled the Oromo to consider themselves as part of the natural environment and take care of it. It is believed that the Earth is the mother of all living things and demands a proper care. The rationale behind Oromo traditional religion has important message for modern environmental ethicists. In many respects, Oromo traditional religion is environmentally friendly, and fosters positive relationship with the environment. The preceding discussion makes it clear that for the Oromo, land is not only a resource for man's utilitarian ends, but also it needs care because it has been given to them by their ancestors, and has its own value given to it by *Waaqa*. Accordingly, the present generation is obliged to preserve it and hand it over to the future generation. The essence of this religious tradition is to live in partnership with the natural environment. It should be stated that this harmony with the natural environment does not rule out the fact that the Oromo have been using it. The fact of the matter is that most of the Oromo people do not abuse nature's generosity by consuming more than what is needed. The Oromo thus believe that the natural environment and human beings are linked together in a web of relationships. There is no unbridgeable gap between humans and supra-humans, *Waaqa* and the Earth.

It is worth noting that although the Jewish and Christian doctrine of creation is presented as one of the major causes of the present ecological crisis (White 1994), some churches in the West call for a relationship of respect and care for nature and ecological system in the last quarter of the twentieth century. I think this is a promising move and conform to the general principle of Oromo religion. As Attfield suggested, "[i]n the United States, most of the Churches are nowadays strongly environmentalist and strong enough to exercise considerable political influence, and even philosophers and ethicists committed to the independence of ethics from religion may need to take all this into account, if only in pragmatic grounds" (Attfield 1998, 79). Therefore, the dialogue between traditional and modern religion can serve as the basis for constructive borrowing to the benefit of both the local people and modern environmental theorists.

It has been shown that peasants in the study sites have perfected indigenous methods of environmental protection through their prolonged struggle with their natural environment. Generally, peasants have been sharp-eyed, open-minded, experimentally oriented and innovative producers. They do not merely transmit ancient traditions from one generation to another generation. They observe, experiment, interpret, and evaluate their own traditions and externally borrowed practices and traditions. In some instances, peasants who live on and by the land are more knowledgeable than modern technocrats about the natural environment. As has been indicated earlier, there are a wide variety of indigenous experts in the fields of agriculture, medicine, climate and so forth.

Not all practices of peasants are environmentally friendly. Some practices should be changed in order to avoid their negative effects on the natural environment. The negative attitude towards women and the attempt to exploit the people in the name of Oromo traditional religion are so destructive and must be changed. To put matters another way, certainly Oromo environmental knowledge is capable of improvement. The possibility of such improvement requires the cooperation of peasants, intellectuals, and government.

Maximum attention should be given to knowledge and skills of peasants in conservation and natural processes in order to promote environmentally sound development. I sincerely think that promoting maximum self-reliance, economic and political control, and environmental sustainability can revitalize local economies. Without the transfer of power and wealth to the rural poor, it will be difficult to avoid environmental degradation and promote conservation based development in the world in which the international political economic system is committed to growth and great inequality.

I would like to argue that peasants should play a role in environmental protection and development efforts. Only by involving peasants at the grassroots level will we have the political strength and will to implement serious changes needed to address serious environmental and developmental problems. Peasants should be encouraged to use appropriate and alternative technologies, renewable resources, organic farming practices rather than chemical based agriculture, drought resistant and the most productive species, and perennial herbaceous vegetation, to maintain biodiversity, adopt new varieties, improve indigenous environmental science and to manage their bees in a more efficient way than with the traditional fixed-comb hives and thereby optimize yields of honey and beeswax. I am not suggesting that indigenous practices should be

romanticized and maintained forever. Rather I would like to underline that we can make use of environmentally friendly indigenous practices.

This study also suggests that those peasants who are exemplary in the area of environmental protection should be given remuneration by the government and possible donors. They should be given the chance to visit peasants in other places to improve their knowledge through mutual exchange. On top of that, the government should financially and technically support peasants to conduct their own research on their environment and to use the land and trees. Modern scientists with varied backgrounds can join peasants who have multidimensional knowledge of the natural environment. Thus the establishment of a research oriented traditional institution is imperative in Ethiopia. Beijing's Institute of Indigenous Medicine and New Center for Ayurvedi Medicine are the two examples outside Africa. Also, the Nigerian Association of Medical Herbalists (NAMH) and the African Traditional Medical Association (ATMA) in Nigeria have played a considerable role in improving traditional medicine. They teach individuals and issue a fellowship certificate to distinguished herbalists (Makinde 1988, 104-105). The law should support the achievements of peasants. That means, the principle of intellectual property rights should be revised and involve all kinds of knowledge.

This study suggests that we can overcome the dichotomy between indigenous and modern environmental knowledge. It gives the clue that the combination of indigenous and modern environmental knowledge may facilitate cross-cultural understanding and thereby enhance the process of development and local and global environmental management. I would argue that the kind of ethic embodied in indigenous beliefs and values does not contradict the kind of ethic found in modern beliefs and values. But these kinds of ethic complement each other, and in some instances one is superior to the other.

Indigenous systems of production and environmental protection need to be integrated into food and environmental policies in Ethiopia. Isolated attempt of the rural poor or modern technicians and environmental theorists alone hardly avoid threats to the environment. Thus, I would argue that peasants' knowledge should be linked with modern science and technology. To achieve this, all parties should avoid prejudices. Prejudices can be blinding or enabling.

This study specifically recommends further investigation of indigenous environmental ethic in Oromiya in particular and in Ethiopia in general.

NOTES

The origin of the name *Galla* is unknown. Many writers and travellers offered different and contradictory hypotheses. Huntingford (1969) assumed that the name *Galla* was probably given to strangers by the Sidamas, since the Sidama word Galo means stranger, that is, non-Moslem. Cerulli (1992) interpreted the phrase "Gala-lencada" as wandering lion. The Jesuit historian Father Balthezar Tellez thought that the name *Galla* was derived from Hebrew and Greek word "milk" (Beke 1848, 3). Beke thought that it was probably because of the fairness

of the *Galla* that the Jesuits designated them as milk. According to Braukamper "the name *Galla* was not restricted to the Oromo, but was also transferred by the Amhara and European authors to a number of neighboring groups such as Hadiya--Kambata--East Gurage" (1986, 1). Although there is no evidence that indicates that the word *Galla* is a bad word, it was given negative and derogatory meanings by Abyssinian rulers. The Oromo "usually adopt the proud title of 'Ilm Orma' the son of men; and they call their language Afan Oromo" (Beke 1848, 3).

- 2 The "Modern" period in the history of philosophy is conventionally supposed to begin in the 17th Century with the works of Sir Francis Bacon (C. 1561-1626) and of Rene Descartes (1596-1650). Bacon and Descartes initiated modern philosophy by destroying the previous philosophical assumptions and methods which had been dominant since the early Middle Ages. In this paper, however, modern environmental ethics does not refer to ideas or systems originating in the period from the time of Francis Bacon and Rene Descartes to the present period. Although many writers have already raised environmental issues in different ways, it is only in the 20th Century that Aldo Leopold and other environmental ethicists proposed an extension of ethics to cover all the species of the living systems of the Earth. Consequently, modern environment ethics appeared as a distinct branch of ethics in the 20th Century. Thus, I use the phrase "modern Environmental ethics" to refer to twentieth century ethical theories relating to the human relationship to the natural environment.
- 3 The indigenous knowledge Vs modern scientific knowledge is an ideological construction. Some western scholars and modernizing groups consider modern knowledge as a universal horizon for humanity. On the other hand, they marginalized and disenfranchised indigenous knowledge. In this study, my intention is not to reverse the binary opposition and to favor tradition over modernity. Instead, I would argue that indigenous and modern knowledge are not rigidly hierarchical and mutually exclusive. Modern knowledge is an extension and development of indigenous knowledge. In some instances, they are parallel and convergent.
- 4 Environmental ethics is a critical study of the normative issues and principles relevant to the relationship between human beings and the natural environment. It is primarily concerned with how human beings can live responsibly with the natural environment. "The scope of environmental ethics is as extensive as its sphere: the realm of actions, policies, and lifestyles which impact on the natural environment, together with their contexts and their consequences, and the principles and attitudes which underlie these actions, lifestyles, and policies" (Attfield 1998, 74).

There are two main approaches in modern environmental ethics: human-based (anthropocentric) and non-anthropocentric. The adherents of these approaches disagree on the question as to whether there is value beyond human environment. Environmental theorists have made a distinction between intrinsic (non-instrumental, non derivative) and instrumental value. "The distinction between these two kinds of value has intersected interestingly with two general approaches to value theory, on human-centered and the other not" (Brennan 1995, xxi). A thing is of intrinsic value if it has value in its own right, or for its own sake. Intrinsic value depends on the nature of its bearer. A thing is of instrumental value if it serves as a means to some other ends. A thing that serves as a means to release to some other value

may also be of value in its own right. Thus, "the categories of instrumental and intrinsic value are not exclusive" (Brennan 1995, 563).

According to the human-based ethics, all, and only, humans count or are valuable in themselves. Human beings are both the actors and the proper subjects of morality. In this case, then, the natural environment has instrumental value. In contrast to the human-based ethics, the non-anthropocentric ethics stresses that things, apart from humans, should be the proper subjects of moral concern. There are different strands of thought within the two approaches. A detailed study of these strands is beyond the scope of the present study. Readers are advised to read the works of some environmental ethicists that are listed in the bibliography.

In this study, I will discuss how modern environmental ethicists treat the concept of sustainable development, and the lessons to be derived from indigenous environmental ethics.

Some people might debate whether there is such a thing as indigenous environmental ethics. The evidence at our disposal confirms that indigenous knowledge is not just a passing on of folk wisdom in a static way from one generation to the next. Peasants do not passively follow the course of nature. Many peasants critically and rationally evaluate the commonly accepted opinions and practices of their people and thereby develop their own independent views about society and the natural environment. When they are affected by what is going on in the society, they come up with quotable proverbs, which originate from their reflective remarks. There are principles of thought in peasants' knowledge. It is on this basis that one can talk about indigenous environmental ethics.

The cleavage between developed and developing countries is misleading. I acknowledge what David Slater refers to as a "persuasion of the post-modern turn" which contends that in a world of fragmentations, pluralities and hybridization, the older, modern terms of North and South, West and East, First World and Third World, Developed and Underdeveloped, seem intrinsically obsolete. However, throughout this study, I will interchangeably use this "old and modern" terms both because of a lack of better terms and, as many writers stress, because I need to re-think patterns of inequality and power relations, rather than neglect or deny their continuing significance under the guise of plurality and difference.

Unless otherwise stated, all proverbs in this study were gathered from the study sites.

It may be argued that the very word "*Mowata*" is derived from the Gurage word "*Mweyata*" though the two words do not seem to convey the same meaning. In Gurage culture, "the passage of girls into adolescence is signaled by initiation into an age group called *mweyat*...The initiation ceremony which, expressed in Gurage linguistic idiom, is to 'throw the *mweyat* girls', is conducted yearly in each maximal lineage distinct by the Fuga chief *mweyat*. Once the chief has 'thrown' the girls, they remain under his ritual authority, and together with his Fuga assistants they attend the ritual needs of women" (Shack 1966, 132-133). It is worth mentioning that the *Fugaa* can also be the ritual leader of *Mowata* cult.

Participants in *Mowata* spirit possession also use the word *Damaamitii* that is close to the

Gurage word *Damwamwit*. For the Gurage, *Damwamwit* is a female deity, which can be called a 'guardian spirit', which concerns the welfare of the Gurage. "The Gurage concept of *Damwamwit* is realized in the manifold expressions of her supernatural power to inflict harm; the consequences evoked if anyone fails in his or her social and ritual duties are epitomized and manifested in the ritual illness of the *zitana*" (Shack 1966, 185). The fact that the relatively disadvantaged *Fugaa* has participated in both the *Mowata* cult in Ambo and the *Mweyat* in Gurage gives the clue that probably the *Mowata* cult is rooted in *Mweyat* initiation rites. Further anthropological study is required to understand the differences and similarities between the two traditions.

The occupational specialists of the Gurage, collectively known as *Fuga*, are divided among themselves into woodworkers (who fell trees, chop wood, assist in house building, and aid in burials and other important rituals), blacksmiths, and tanners (Shack 1964, 50-52).

- 8 It is worth noting that among the Amhara people there is a tradition of hiring women whose job is to stimulate crying at a funeral.
- 9 Similarly, the Qaalluu leaders and the Gadaa officials consider a whip made from the skin of a hippopotamus sacred and used during religious, social and cultural ceremonies. They are not allowed to use other types of whip.
- 10 Fichti and Adi (1994) identified 400 herbs and shrubs for bees and 100 trees for bees in Ethiopia from about 6000-7000 species of the flora of Ethiopia.
- 11 Genetic erosion is also caused by the replacement of native seed stocks by the grains introduced as food aid by relief agencies in the places hit by drought (Melaku 1992, 83).

Shiva also identified habitat destruction due to internationally financed mega projects, such as the building of dams, highways, mines, and aquaculture, in areas rich in biological diversity, and the technological and economic push to replace diversity with homogeneity in forestry, agriculture, fishery, and animal husbandry as the two primary causes for the large-scale destruction of the tropics' biological diversity. In particular, biological diversity was replaced with biological uniformity and monocultures through the green revolution (Shiva 1997, 65).

- 12 For instance, Mbiti reports that Africans conceive time as a composition of those events, which have occurred, those, which are taking place now, and those, which are immediately to occur. For him, the Africans do not seem to have the concept of the distant future. For traditional Africa, time is only a two-dimensional phenomenon, with a long past, or *Zamani*, a present, or *Sasa* (Mbiti 1969). As Masolo (1994) noted, Mbiti's view endorsed Levi-Bruhl's view that the concept of the future is indifferent to primitive people because of their inability to abstract from the series of events of experience in order to conceive a lineal order of succession, in which such events occur (Levi-Bruhl 1923, 123-24, 445-46). The theory advanced by the proponents of this line of thought is at variance with the evidence at our disposal. As I will show further down, the Oromo have the concept of distant future.
- 13 Arne Naess, the Norwegian philosopher, coined the term "deep ecology" in 1972. Naess reported, at the Third World Futures Conference in Bucharest in 1972, that there were two

environmental movements in the 1960s: a shallow anthropocentric technocratic environmental movement and an eco-centric deep, long-range ecology movement (Sessions 1995, xii). Naess explains that shallow and deep ecology are different in the sense that the former is concerned with the traditional moral framework--avoiding pollution to our water supply and preserving wilderness for man's use. Deep ecology, however, stresses that the biosphere has intrinsic value independent of human beings.

Social ecology appeared earlier than deep ecology. The American ecologist E. A. Gutkind used the term social ecology for the first time in 1954. Social ecology is conceived as comprehensive *holistic* conception of the self, society and nature (Bookchin 1982; Clarke 1992).

Francoise d'Eaubonne, the French feminist writer, coined the term "eco-feminism" in 1974. She advocated that women could lead an ecological revolution, and contribute to the protection of the Earth. Eco-feminists believe that patriarchy is the root cause of exploitation and the environmental crisis. They propose that the social and political institution should be radically restructured in order to solve environmental problems (Merchant 1992).

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