Ambiente & Sociedade
ISSN: 1414-753X
revista@nepam.unicamp.br
Associação Nacional de Pós-Graduação e Pesquisa em Ambiente e Sociedade
Brasil

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Ambiente & Sociedade, vol. XVIII, núm. 3, junio-septiembre, 2015, pp. 121-132
Associação Nacional de Pós-Graduação e Pesquisa em Ambiente e Sociedade
Campinas, Brasil

FROM SOIL CONSERVATION TO LAND HUSBANDRY: AN ETHICAL-AFFECTIVE PROPOSAL OF SOIL USE[1]

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"La ética de la tierra [ ] extiende las fronteras de la comunidad [moral] para incluir los suelos, las plantas, los animales; dicho de un modo colectivo, la tierra".
"Land ethics [...] enlarges the [moral] boundaries of the community to include soils, plants, animals; or collectively: the land".
"A ética da terra [ ] extende-se as fronteiras da comunidade [moral] pra incluir os solos, o matto, os animais; falado de um modo coletivo, a terra".
Aldo Leopold, 2000

Introduction

The earth sustains all forms of life and is the basis of development in human society. On the whole, the parts of the earth useful for development are finite and have to be shared with other species. With the growth of human population and urbanization, land has gone from being a free access common good to becoming a limited resource and a scarce commodity. Society is not only destined to use and share the same Earth, but has to address the degradation caused both by human activity and nature's own dynamics.

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Human population continues to grow and demands for food and other goods and services essential for its sustenance and welfare are increasing, whilst the planet's areas of desert, waste and degraded land are growing. In order for the world to remain habitable, it requires an ethical commitment and responsibility from all the planet's inhabitants: caring for the Earth. It is important to care for the Earth, not only because of utilitarian, productive or economic interests, but because it is part of our moral community. Nature in general and land in particular are new moral objects upon whose ethics it is important to reflect.

Paraphrasing JONÁS (2004), we ask: Does the earth have its own moral rights? In other words, are humans ethically responsible for the earth? There are no doubts in relation to this. The moral community has grown to include the planet and all the living forms of life that inhabit it. It is under our control, and for this reason, it is a good entrusted to our care which may require from us a moral duty, not because of our own interests, for its own sake, its inherent rights. This means not only a search for the good of human beings, but the good of all extra-human things. In other words, caring for the earth and its residents must be incorporated into the concept of human good.

Following this line of thought, and in agreement with SERRES (1991), this involves a return to nature, from where we should never have departed. According to the sacred books, we come from the earth and will return to it: "for dust you are, and to dust you shall return" (GENESIS, 3 - 19). A return to nature implies expanding modernity's social contract to include a natural contract, a symbiosis and reciprocity contract, based on listening, contemplation, admiration, cultivation and affection. "Symbiotes accept the rights of their hosts, whilst parasites - our current status - condemn them to death, ransacking those they live from, without being aware that within a defined amount of time parasites themselves will be condemned to disappearance" (SERRES, 1991, p. 69).

Ethical responsibility in terms of caring for the soil as arable land is not a technical matter that only concerns farmers, agronomists and soil science researchers. It affects all human beings. This is because from a utilitarian technical point of view, in addition to being a resource for producing, among other things, food and fibres, this system has other functions such as supporting biodiversity, regulating the water cycle and mitigating the impacts of human actions. If we understand the soil in this way, no living creature on earth can escape the effects of either the human or natural dynamics on this organism. Within this context, land husbandry has given rise to a sub-discipline of soil science: soil conservation. There is no doubt that there has been progress in this field, but there is still much to do, above all in terms of the conception and objective of soil use, management and conservation, where there is a need for ethical reflection on the implications of land husbandry.

Searching for a humanist perspective from within a scientific point of view, ARNOLD (2007) highlights that soil science operates simultaneously in the realm of ecology and economics. However, many aspects of other sciences, including sociology, are crucial in providing the true relevance of soil science. He warns us about future problems when he claims that if conservation and the rational use of soil resources are not important enough for societies in the next few decades, then a trade-off can lead us towards the "tragedy of

the global commons"; if however, this trade-off is directed at planetary sustainability, then these will be golden opportunities for imparting the knowledge and wisdom of soil science.

According to ARNOLD (2007), imparting knowledge and wisdom of soil science means that we must understand how we learn things and what we need to take from words, signs, sounds, touch, taste and feelings to make them part of ourselves. He is referring both to psychological and physiological reactions and claims that to learn we must be in tune with the message, there must be hooks and niches we can hold them to. If we understand more about how we learn, we may be able to learn to teach well so that others can learn soil science.

Soil scientists must search and build a humanistic vision which should guide soil science in the future so that soil is recognized as a subject which, if it could communicate with us, would say:

> Hello there, folks. Do you know who I am? I am the geomembrane of the Earth. I am your protection filter, your buffer, your mediator for energy, water, and biogeochemical compounds. I am your sustainer of productive life, your ultimate source of elements, and the habitat for most biota. I am the foundation that supports you, the cradle of your myths, and the dust to which you will return. I am a soil. (ARNOLD, 2007)

The issue here is land husbandry and not soil conservation, because to care or to "practice husbandry" means to protect, to provide food, to give affection, a more suitable concept in terms of this new moral responsibility of the human community.

As with medicine, soil conservation is oriented towards recovering and restoring degraded soils[i], or those that are, literally, injured. In our conception, just like in human health, caring for the soil must be a preventive activity. There is not one single land care or soil cultivation theory, but rather theoretical progress and, above all, techniques for using, conserving and restoring the soil. Therefore, within this context, we suggest a discussion involving the concepts of "land husbandry" and "soil conservation". We argue that the former - husbandry - means ethical-affective responsibility towards the land as an end in itself, whereas the latter - conservation - is a technical-instrumental proposal, in as much as the earth is a resource, a means to human ends. In the first part of this article we describe the technical and instrumental focus of soil conservation, in the second we present an anthropological vision of the earth, in the third we analyze the ethical foundations of land husbandry and finally, we end with a few ideas for a new living contract with the earth.

Soil conservation

Planet Earth and its vital casing, the biosphere which includes the soil, is a tangled web of elements and close and permanent relationships where all components and living beings live and to which they are intimately associated. The emergence of life and the organization of the biotic and abiotic community is the product of this complex set of

relationships. There are many problems affecting the health of the planet which are accentuated by population growth and, above all, by the current model of development. In this conception, "man behaves as an intruder who breaks in during the night and extracts whatever he needs. The earth is not his sister, but an enemy, and when he conquers and exploits it, he moves on" (Message to the United States President, Franklin Pierce, from Big Chief Seattle of the Duwamish Tribe, 1854).

Soil degradation is partly the result of this process which conceives and uses the soil only for utilitarian and economic purposes. Agriculture, and more specifically, industrialized agriculture is an extractive and aggressive activity, affecting the land and other forms of life. Although practices to mitigate and correct soil degradation are very old, because of its utilitarian value, soil conservation as a concept is a more recent phenomenon (RIECHMANN, 2000).

Following this line of thought, conservation systems based on economic interests produce irreparable imbalances, because they tend to disregard and eliminate many elements which are part of the earth's community but lack commercial value, though they are essential for its healthy functioning. Forests have been eliminated and river courses changed, fertile valleys and savannahs converted into cement monuments.

According to MILLER (1990), soil conservation is a process oriented by a search for options for the development of human quality of life, in terms of food security, income, health and peace. It seeks to maintain the biological diversity, genetic resources and ecological, economic and hydrological processes of the soil, among other factors which are relevant and vital for humanity. It is, as we have argued, an anthropocentric conception based on human interests. In this conception, development is the transformation of the biosphere and the use of natural, human and financial resources to satisfy the needs and improve the welfare of humanity. Conservation and development, therefore, are both essentially directed at improving human welfare, that is, achieving human objectives. Conservation seeks to achieve these objectives by ensuring that usage and exploration do not exhaust or degrade resources, thus meeting the needs of present and future generations. In this way, it is the predictable consequence of the rational use and management of natural resources for human production ends (BENITES, 1996).

Soil conservation programs and projects across the world have not had the expected outcomes. This is because the productivist point of view predominates in discourses and practices of soil science researchers. A number of studies have concentrated on measuring soil losses and understanding the physical process of erosion (SHAXSON, 1994). However, there has been and continues to be a lack of concern for the quantity and quality of soil that remains which directly affects the micro fauna, root growth, crop cultivation and, therefore, farmers. Technical assistance and capacity have focused on treating the consequences of erosion by building physical infrastructure which is apparently technically appropriate and aesthetically pleasing. These works and developments, although guided by restoration and damage mitigation, have not taken into account ancestral knowledge nor the concerns and interests of peasant populations.

The knowledge peasant farmers have about the land is not considered important in soil conservation projects. Peasant farmers are not conceived as part of the solution,

but as a cause of land degradation. The ethical-affective view of land care or husbandry suggests that the solution for the problem of soil degradation is not on site "soil conservation", as held by the conservationist current of thought within soil sciences, but "land husbandry", as practiced by peasant farmers using their traditional agricultural systems, which could be complemented (when necessary) by suitable soil management techniques and biologically sustainable infrastructure works.

In this way, soil conservation as a discipline has been based on the principles of soil quality and resilience in conservation agriculture. It emphasizes that the soil is a living organism, essential for sustaining quality of life on the planet (DUMANSKI, et al., 2006) and recognizes the importance of the top 20 cm of soil as the most active zone which is, nevertheless, most vulnerable to erosion and degradation. Most of the environmental functions and services which are crucial for sustaining life on the planet are concentrated on soil life interacting in this zone.

According to DUMANSKI et al., (2006) the associated criteria which distinguish conservation agriculture from conventional agricultural systems are: i) permanent soil cover; ii) minimum mechanical soil disruption; iii) judicious selection of cultivation cycles; iv) exact location of inputs to reduce costs, optimize the efficiency of operations and prevent environmental damage; v) promotion of leguminous plants in fallow periods (both herbaceous and shrubs whenever appropriate), composting and the use of organic fertilizers and other soil correctives. These practices improve soil structure, maintain biodiversity and reduce the need for inorganic fertilizers; vi) promotion of agroforestry (trees in the farms) to obtain fibres, fruits and medicinal products. In addition, they contribute to erosion control, biodiversity conservation and increase carbon capture by agroecosystems.

Permanently covering the soil either with living plants (crop or weed cover) or harvest waste and weeds protects the soil against the physical impacts of rain and wind and regulates the humidity and temperature of top soil layers. Organic waste contributes to maintain or increase the activity of various soil organisms from worms and large insects to fungi and bacteria (macro, meso and micro-organisms). The result is the maintenance of the levels and activity of organic materials and their multiple effects in terms of physical, chemical, biological and hydrological characteristics of the soil, including greater nutrient cycling, the restructuring of soil aggregates and the spaces between aggregates where roots grow, water flows and gas exchange takes place (SHAXSON and BARBER, 2003; BLANK, 2008).

A key aspect of agricultural systems conservation, particularly in tropical hillside areas, is that it aims to simulate natural forest conditions. Therefore, they increase the probability of diversification which can result in better soil quality and resilience (SHAXSON, 1999; BROOKFIELD and STOCKING, 1999).

In short, conservation agricultural systems deal with the concerns of farmers by reducing production costs and obtaining high crop yield, as well as meeting the objectives of scientists in terms of maintaining the soil's functional structure. Thus, conservation agriculture is one of the key strategies for maintaining soil quality, understood within the context of sustainable agriculture as the ability to exercise agronomic and environ-

mental functions. In this way, sustainable agriculture falls within a broader conception of "sustainable development" in a more general way by "meeting the needs of the present without compromising the needs of future generations" (BRUNTLAND, 1987). The above reaffirms the utilitarian objectives underpinning the concept of soil conservation.

An anthropological view of land

Ethno-edaphology is a hybrid discipline which is based on the natural and the social sciences. It encompasses the earth and the earth knowledge systems of rural populations, from the most traditional to the most modern. Recently, there has been greater emphasis on more integrated approaches which recognize the importance of the cultural context in sustainable local land management. Ethno-edaphological research encompasses a wide variety of topics based on four main subject areas: (1) classification systems involving local soil structure and land knowledge, (2) the comparison between local soil classifications with techniques, (3) the analysis of local land assessment as a system and (4) the assessment of agroecological management practices.

For BARRERA y ZINCK (2003), the knowledge of indigenous populations about the soil and its management make up a complex system of wisdom with universal principles and categories similar or complementary to those used in modern soil science. Despite the need for an integrated focus for ethno-edaphology in face of the current complex tendencies, it is encouraging that scientists and farmers have been increasingly interested in such an approach. This synergy can be reinforced by applying geographic information systems and systems theory to integrate modern scientific and technical advances to traditional wisdom and local needs.

Ethno-edaphological studies have been unequally distributed across the world. From the continental to the village level, some geographical institutions have been prioritized whilst others have been ignored. The frequency of studies diminishes from Africa to America, Asia, the Pacific and Europe. Large differences in the number of studies occur at sub-continental, country and sub-country levels. The following countries have attracted the interest of researchers and provided a considerable number of references: Mexico, Nepal, Peru, Nigeria and India. Within these countries, most studies occur at the village level, given that most ethno-edaphological studies concentrate on the perception, knowledge and management of soil resources at the local level. Since most of these studies are concentrated in a few countries, some ethnic groups have received more attention than others.

Communities living in hostile environments with limited resources have developed complex water and land management systems so as to compensate for the scarcity of resources. Indigenous communities are often restricted to marginal lands, whilst the best soils are given over to large-scale mechanized agriculture geared towards the production of market goods.

The current research imbalance between Kosmos, Corpus and Praxis, respectively, suggests that more emphasis should be given to the analysis of the role of beliefs, perceptions and rituals in the decision-making process of local populations regarding land

use and management. The change in research emphasis towards Kosmos requires the support of and interaction with local communities, in particular those who have been able to maintain their soil quality and agro-biodiversity preservation systems. Without the input of local actors in forming and executing rural development programs, ethno--edaphological studies will have no practical importance, as has often been the case with conventional soil programs.

Following the conceptions underpinning land ethic (LEOPOLD,2000), land is a non-human individual, another living being, a natural being part of the ethical community, together with human beings, plants, animals and micro-organisms. Or as PRIMAVESI (1984) notes, the soil is a living organism. In biology everything that has its own metabolism is considered an organism, and this is the case with soil which inhales oxygen and exhales carbon dioxide. In other words, soil, or land has its own physiology (GUPTA and YEATES, 1997) and performs certain functions such as supporting biodiversity, regulating the water and nutrient cycles, and mitigating negative environmental impacts.

When the soil is unable to carry out its functions adequately, it is no longer healthy, and therefore lacks the intrinsic condition for sustaining life. Hence, we can ask who is going to care for a sick soil? Or better still, who should prevent it from deteriorating and losing its vital functions? This is the conception that lies behind the ethical-affective proposal of "land husbandry", where it is possible to live in and from the land, without arriving at the situation expressed by Serrat in one of his songs, where he tells white people that the land is sick and will not be able to sustain its people: "flee gentle people, for the land is sick".

Land Husbandry

"Every day the land dies silently, only our voices are left".
Grupo de Estudio Proyecto, 2013

Land is like an open book which holds in its pages the secret we need to know to be able to live in harmony with it. Peasants, indigenous people and afro populations have considerable knowledge about the land. As Latin American agronomists, they know that when the land is no good for bread, it may be good for pasture, coppicing or other activities (COLUMELLA, 1998). They have learnt to live with the land, to decipher its secrets, and that its exploration depends on its nature, its natural vocation. They are aware that with time and intensive exploitation land will become exhausted, tired and lose its inherent productive capacity. They also know that the land should not be abandoned. It requires dedication and loving care, it must be loved as a mother is.

In indigenous cultures, in their vital relationship with the land, there are underlying mythical explanations related to soil dynamics such as the Legend of the seven-headed snake, a myth about erosion, told by the Embera Chamí, belonging to the La Montaña indigenous group, in the department of Caldas, Colombia. The legend says:

> In ancient times, in the highlands forming the limits of El Salado, there used to be a lake, from where came a monstrous snake with seven heads. It slid down the slopes, meandering across the land, tearing it up, cracking it up, weakening it and leaving it to collapse. The large snake went down the Supía River to Cauca. Its bones were found nearby. Ever since then the buildings in El Salado have been subject to dangerous erosion, characterized by landslides and subsidence (BUENO, 1988).

At the root of these myths lies the relationship between some of the original American groups and the soil through their beliefs and culture. In this case they note that erosion is Nature's response to inappropriate farming methods, that is, land has not been duly cared for. The legend demystifies some positions which claim ancestral communities live in harmony and care for land and natural resources, whilst recognizing that their practices have threatened the quality of their lands.

Land care or husbandry emerges from the fact that land is part of our moral community. Together with animals, plants and human beings, it is one more entity amongst moral subjects and objects. In LEOPOLD's (2000, p.135) words: "Land ethics [...] enlarges the boundaries of the community to include soils, plants, animals; or collectively: the land". This is what the Great Chief Seattle had told the President of the United States in his famous 1854 letter, from which we can analyze the aboriginals' relationship to the land and other members of the biotic community.

> Each piece of this land is sacred for my people. Each shining pine branch, each handful of sand on the beaches, the shadows in the thick forest, each ray of light and the buzzing of the insects are sacred in the memory and the lives of my people. [...]The white people's dead forget their land of origin when they journey to the stars. Our dead never forget our beautiful land, because it is the mother of the red skinned people. We are part of the land and it is part of us. The perfumed flowers are our sisters, the deer, the horse, the great eagle - our brothers. The rocky peaks, the wet grooves in the prairies, the heat in the body of a foal and man, they all belong to the same family.

In the terms we have used so far, the land is part of the same moral community. But why should we care for the land? Is it, as in the anthropocentric tradition, out of utilitarian interest, because it provides us with food and other goods? This line of thought arises from proverbs which state that we should not kill the goose that lays the golden egg, or cut the branch we sit upon. This is anthropocentric ethic, where man is not only the owner, but the ruler of the earth. In the biocentric conception, however, the reasons for which land must be cared involve moral considerations which go beyond utilitarian interests associated to its intrinsic value. It must be preserved because it is part of the moral community and therefore, it must be used and protected, respecting its natural conditions. In this conception A owes something positive to B not because of a causal relationship between A and B or any pre-established

agreement, but simply because A is able to benefit B or alleviate its suffering. It is not a question of citizen obligation or duties as the advocates of "ecological citizenship" proclaim (DOBSON, 2010).

This conception is not easy to assimilate or understand. "No ethical conception, with the exception of religion, has prepared us for the role of stewards; much less, the current prevailing scientific vision of nature" (JONÁS, 2004). The dominant vision of development, from which modern industrialized agriculture evolved, is founded on an instrumental rationality based on objectives, and on western science as the hegemonic way of understanding nature which reduces land and cultivable soil as a means or resource to meet human objectives. Nevertheless, new currents of thought, which may not be for altruistic, but selfish reasons, are emerging which advocate a new relationship with the planet and the different forms of lives it sustains, including land.

The current model of society has led us to assume an aloof stance towards nature. Human beings have separated themselves from nature and do not consider themselves part of it. Indeed, most have no idea of the source of water and food we consume daily in our cities. This is because many people are gathered in large cities, and because some, who are nevertheless more vociferous, regard land only as a source of wealth to be extracted in whatever way possible and in the least amount of time. Thus:

> Just as we distance ourselves from nature, we distance ourselves from God. We do not understand the notes of birds. The fox and the deer run away from us, the bear and the tiger rend us. We do not know the uses of more than a few plants as corn and the apple, the potato and the vine. Is not the landscape, every glimpse of which has grandeur, a face of him? (EMERSON, 2000, p. 73).

Land husbandry involves changing the relationship we have with land, starting with the way we appreciate and value it. We must allow our feelings to be awed by its majesty. Who has not felt the fresh smell of soil in the woods, who does not know its intoxicating aroma? Who has not walked barefoot on recently ploughed ground, and experienced the connection with its core. The careful contemplation of the movement of particles wounded by the ploughshare creates contradictory images of pain produced by its open wounds and feelings for a life we discover in front of our eyes. Let us go back to land, let us be part of its being.

Final Considerations: towards a natural contract

Today's moral imperative is to establish a new contract with the land, an extended social contract which encompasses an enlarged moral community - in the words of SERRES (1991), "a natural contract". Above, we have laid out some of the reasons as to why we should seek to do so. Here we describe one of the reasons we believe this to be crucial for our times, associated to the power that modern man has acquired through technology. Thus:

> ... Techne, in the shape of modern technology, has been transformed into an unstoppable force towards the advancement of the species, into its force, into its most important venture. It is from the continuous progress of modern technology - with which human beings are able to supersede themselves and move towards ever greater things - that we try to glimpse humanity's mission, whose ability in achieving maximum control over things and humanity itself is presented as its own fate (JONAS, 2004, p.36).

Or as HEIDEGGER (2003, p. 123) argues in his work on modern technology, The question concerning technology: [modern technology] is the same as ancient technology, but here de-concealment does not lead to production. "The de-concealment of modern technology is a setting upon which challenges forth the energies of nature which can be exploited or stored as such". This is nothing more, nothing less than the difference between traditional and modern agriculture: Let us see:

> ... the field, that the peasant formerly cultivated and set in order, where it still meant: to care and maintain [is declining]. The work of the peasant does not challenge the field. In the sowing of the grain, it places the seed in the keeping of the forces of growth and watches over its increase. Meanwhile, even [today's] cultivation of the field has come under the grip of another kind of setting in order which sets upon nature. It sets upon in the sense of challenging it. The field is now a motorized food industry [in the service of capital] (IBÍDEM, p.123).

For the peasant, the land is not just a means or a resource for production. Land is to a certain extent "the mother", land is part of his being, his identity. The peasant loves the land and that is why he cares for it and cries and feels helpless when he loses it. The peasant places the seed in the furrow, using only the energy of his own hands, so it can come alive. He demands nothing. By contrast, the entrepreneur plants seeds mechanically and using the energy from fossil fuels, forces the land, with the assistance of substances foreign to its nature, to produce more and more. This is the logic of production that is at the root of all environmental problems associated to modern agricultural production, including soil degradation.

Through technical-scientific development, the causal power of man, as a moral subject, has grown dramatically. The fantasies of yesterday's man, such as reaching the depths of the earth, its lofty heights or the remotest of places, conquering space and visiting other planets have moved from the realm of fiction into reality. The new power of man, as a moral subject, requires greater responsibility. In particular, in terms of the earth and agriculture which require from him an ethical-affective commitment.

What is agriculture if not a means to enable us to strengthen our ties with the earth? This is the type of agriculture practiced by traditional peoples, to cultivate plants

and to raise animals, hoping to see life flourish: two expressions of care professed by peasants when provided with food to satisfy their hunger, skins and wool to withstand the cold, and wood and fibres to protect themselves. Through time, peasants have learnt that the supporting surface in which seeds are germinated - the soil - requires care, without which its vital functions to promote life will be affected. That is why they feed it waste, they return to it the manure of their animals, give it shelter with their trees and protect it from the wind, embrace it with their caring eyes and caress it with their feet. Through these daily practices, peasants express their ethical-affective commitment to the land: caring for it as if for their own mother.

In synthesis, when caring for the land, it is crucial to imbue it also with the perception and values which the communities inhabiting it hold, in particular peasants, indigenous and afro-descendant populations and not only with the analytical determination and quantification of scientists who research and study it as a field of knowledge. That is, it is important to incorporate the ethical-affective conception of land husbandry to the researcher's version of soil conservation. It is essential to consider how Latin American peasants see the land from the perspective of their particular culture; how they deal with the first symptoms of its illness; how they believe that they can alleviate its pain and how their daily practices, their production systems maintain its vital ecosystemic functions.

Note

i Some degradation processes are: acidification, contamination, desertification, erosion and salinization.

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Submitted on: 27/08/2013

Accepted on: 11/08/2014

http://dx.doi.org/10.1590/1809-4422ASOC802V1832015

FROM SOIL CONSERVATION TO LAND HUSBANDRY: AN ETHICAL-AFFECTIVE PROPOSAL OF SOIL USE

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***Abstract*:** Since humans have become conscious of their actions they have had various types of relationships with the land. At the beginning, land was a free good, available to all living creatures. Over time, land acquired a utilitarian productive value and man became its insatiable conqueror. Nevertheless, for farmers and indigenous communities, land has had and still has a sentimental and sacred value. Indeed for some, land is the mother or "Pacha Mama". In this logic, land husbandry constitutes an ethical-emotional imperative, as it becomes one more subject within the ethical community. In this conceptual framework, this article discusses land husbandry in tropical hillside agro-ecosystems. In order to do so, the views of farmers and preservationists are contrasted and reconciled with the knowledge of soil scientists. From an ethnopedological perspective, among others, soil is understood in relation to cultures and beliefs.

***Key-words*:**Conservation agriculture, soil quality, land use and management, ethnopedology.

***Resumen*:** Desde que los humanos adquirieron conciencia de sus actos han generado relaciones de diverso orden con la tierra. En principio, la tierra fue un bien libre, disponible para todas las criaturas vivientes. Con el tiempo, la tierra adquirió un valor utilitario, para la producción, y el hombre se hizo su conquistador insaciable. No obstante, para los campesinos y pueblos indígenas la tierra ha tenido y aún tiene un valor afectivo y sagrado. Incluso, para algunos, es La Madre o "Pacha Mama". En esta lógica, su cuidado se constituye en un imperativo ético-afectivo, en tanto es uno más de los sujetos de la comunidad ética. En este orden de ideas, este artículo discute el cuidado de la tierra en agroecosistemas tropicales en zonas de ladera. Para ello, se contrastan y concilian las visiones de los productores rurales

y preservacionistas con los conocimientos técnico-científicos de los investigadores de la ciencia del suelo, que entre otras concepciones, perciben, desde la etnopedología, el suelo en su relación con las creencias y la cultura.

***Palabras clave*:** Agricultura de conservación; calidad del suelo; uso y manejo del suelo; etnopedología.

***Resumo*:** Desde que o ser humano tornou-se consciente das suas ações têm gerado relações de diversa orden com a terra. No princípio, a terra foi um bem livre, disponívela todas as criaturas vivas. Com o tempo, a terra adquiriu um valor utilitário para a produção, e o homem fez-se o seu conquistador insaciável. No entanto, para os camponeses e povos indígenas, a terra tem tido e aida tem um valor afetivo e sagrado. Inclusivel, para alguns, é a Mãe ou "Pacha Mama". Nessa lógica, o seu cuidado constitui-se num imperativo ético--afetivo, na medida que é um o mais dos sujetos da comunidade ética. Neste ordem de ideias, este artigo discute o cuidado da terra em agroecosistemas tropicais nas zonas de ladeira. Para isto, contraste-se e reconcilia-se os pontos as visões dos productores rurais e preservacionistas com os conhecimentos técnicos-científicos dos pesquisadores da ciência do solo, entre outros conceitos, perceber a partir da etnopedologia, do solo em relação às crenças e cultura.

***Palavras-chave*:** Agricultura de conservação, qualidade do solo, uso e gestão do solo; etnopedologia.