

# Environmental Education in Brazil: Socio-Historical Perspectives in Formal Teaching for Sustainability

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## Abstract

Environmental Education has promoted to reflexive and intervening actions about productive processes in society. This term is quite comprehensive and its epistemological basis involves sustainability ideal achieving. So, in the search for new values about respect for life as a whole, formal education has offered great contributions. In this sense, the school is one of its biggest supporters. Forming citizens requires postures that stimulate thought and not a mere reproduction of content. The Brazilian policies foment and treat with compulsory the practice of environmental education in all its ambits. In this way, the objective of this work was to discuss such problems through a qualitative approach with an emphasis on content analysis and documentary research. As the main results, we believe that large international corporations, governments, and other entities must be more active and to suppress the practice of environmental education is to accelerate the scarcity of natural resources.

## Keywords

Environmental Education, Formal Education and Sustainability, Human Ecology

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## 1. Introduction

The environmental issue, Environmental Education and the school have led man to a reflexive and intervening action in relation to the productive processes in force. According to Verdalone, Campbell, & Alexandrino (2019), they are motivated by a model of current, unequal, exclusionary development that has sought

to treat natural resources as finite in much of the international community. Thus, there has been for decades an educational rethinking about the environmental problem, and how formal education should fulfill its function as an awareness element. This is true both on a local, regional and global scale, according to [Verdelone, Campbell, & Alexandrino \(2019\)](#), in addition, an important part of the environmental problems will be effectively solved if the local population wishes.

Governments have sought much dialogue in order to develop new production methods with a view to the sustainable issue and Environmental Education. In Brazil, it has been no different in terms of laws, decrees and discussions. But it is one of the great villains of pollution. Actions that so little come off paper. The issue of sustainability should be a common asset, where all nations need to support and raise this flag. What we see, in large part, are measures bumping into bureaucracy, where they often overvalue the economy to the detriment of urgent causes, the environment.

Faced with such complexities, the work aims at an analysis of the historical process and the importance that Environmental and formal Education, thus School Education, has been adhering to achieve a healthy, balanced environment. In another brief analysis will be some legal provisions and their introduction in Brazil, as well as the need for a critical Environmental Education and the issue of sustainability and environmental management, all of which are issues that are linked and that lead to various controversies on the subject, Finally, the Human Ecology and its space facing the historicity of Environmental and School Education.

So, from the moment that man sees himself as an inseparable part of the May environment, not only as a transforming element, but as part of a food web in which the imbalance in any of the components, puts everyone's survival in check, he tries to transform the productive means into less impacting processes. These are very significant, positive reasons that lead to various conjectures.

Such actions are made effective at a time when both political and economic anthropocentrism is losing ground to the various environmental disasters that have occurred, and even more so when NGOs and scientific communities, where the peak of environmentalist actions occurred in the 1960s with the publication of Rachel Carson's book "Silent Spring", warned of the disorderly consequences of economic exploitation.

In an almost intrinsic and natural way, the scientific and technological evolution associated to neo capitalism and globalization, as it happened, generated countless socio-environmental crises throughout the planet, negative externalities. In recent years the concern with socio-environmental reality has been distributed among governments, scientists and society in general, although environmental movements and international agendas have followed a trend in view of sustainable development UNBR, (2015).

The notion of externality conveys the idea that human interactions, or the in-

terdependencies of production processes, extend beyond formal markets characterized by price and consumption. In this sense, the presence of an externality means that someone is dependent on factors that are not under their responsibility or control (victim), but these are decided by other human beings or organizations (polluters) Eshet et al. (2005); Santiago-Brown et al. (2015). Conceptually, the externalities already refer to the possible connection with sustainability, being an expression of systemic thinking, emphasizing the dynamic and contextual nature of the economic environment combined with the environmental and social reflexes van den Bergh (2010).

The unprecedented use of natural resources mobilized environmental movements for a healthier natural environment. Therefore, it is possible to have a harmonious coexistence between man and the environment. Since then, the first attempts to raise environmental awareness have been made. This is possible through one, according to Reigota (2017).

According to Verdelone, Campbell, & Alexandrino (2019) education, whether formal, informal, family or environmental, making it equal in each perspective, thus school and Environmental Education complement the fundamental bases for the formation of a citizenship focused on healthy environmental practices.

Thus, as it is written in Article 1 of Law No. 9.795/99 Brazil (1999) in which: Environmental Education is understood as the processes through which the individual and the community build social values, knowledge, skills, attitudes and competencies aimed at the conservation of the environment, as well as the common use of the people, essential to a healthy quality of life and its sustainability.

Therefore, it encompasses everyone in an indistinct way, all the more so because it is implicit in action on the economy, on politics. Inseparable elements in post-modern society where consumerism is one of the regulators of the production process and an obstacle to sustainability. This work is structured, in Introduction, Methodology, and the discussion about Environmental Education, and its reflexes in the educational, economic, social and sustainable scope, as well as Human Ecology.

## 2. Methodology

The qualitative and descriptive research was gathered from bibliographic data, books and articles related to the theme and through information obtained from websites of governmental and non-governmental organizations.

A brief survey of the work of some of the main theoreticians who problematize the issue of Environmental Education as well as the issue of sustainability and formal education, Human Ecology and Socio-Environmental Management and their correlations was conducted. As well as other pages were also accessed as virtual magazines.

Because it was a broad discussion, it was necessary to start from the general to the particular, from the historical aspects to the aspects for the imbrications of the content of the local discussion in Brazil and the formal education and legal

frameworks. The laws were catalogued on the assumption that, in the proportion that there are treaties and forums worldwide, there are those of local scope.

From the structural point of view, the work highlights, in the introductory part, some questions about the constituent elements of the research; what it is about; purpose, clearly; cogitations that will be corroborated, during the questions developed in the research.

Its emphasis is on development, in which it has moved from a macro view to historical and socioeconomic approaches to the micro approach, in the case of Brazil, with the same criteria. Here, he sought to understand the type of posture that formal education should have in facing environmental problems, in addition to discussing some legal mechanisms. Mechanisms that try to align with the guidelines of the various conferences that have taken place, as well as Human Ecology and Socio-environmental Management in their introduction into school education.

A parallel has also been developed between Environmental Education and sustainability, as it understands the intrinsic relationship that exists. It concludes by stating that Environmental and Human Education is essential, transversal, multidisciplinary and requires coparticipation of all peoples and that the model of technical and scientific development is not appropriate.

### 3. Environmental Education (EA)

In the face of the strong and anthropocentric advance of the technical-scientific productive model, strengthened in the post-war period, from the 1970s onwards, the Earth becomes a global village, because everything and any process connect and local problems reach global spheres. Soon, the need arose to promote an educational process that reaches all social spheres, according to [Oliveira et al. \(2019\)](#) that today discusses more than a reality, Environmental Education has become a great necessity.

The more technical progress, the more diversity to exploit natural resources and make more scarce and impacted, like the two August explosions in Hiroshima and Nagasaki<sup>1</sup> 1945, whose event affected the entire local ecosystem and had repercussions on a global scale. Several other episodes came to light. Therefore, the environment is not rebuilt with the same speed that it has and the technical and scientific progress is constantly reinvented. However, it is possible to obtain mechanisms so that the same advance that degrades the environment can create technical mechanisms for its conservation.

To the extent that everyone needs to be engaged: communities, governments. From the local to the global, because then it is possible to involve more social dimensions: Environmental Education is a tool to raise awareness and empower the general population about environmental problems and their management. Thus in its association it seeks to develop techniques and methods that facili-

<sup>1</sup>The atomic bombing of the cities of Hiroshima and Nagasaki by the United States against the Empire of Japan during World War II in August 1945. It was the first and only time in history that nuclear weapons were used at war and against civilian targets.

tate the process of becoming aware of the importance and seriousness of environmental problems and the urgent need to address them seriously [Marcatto \(2002\)](#).

The awareness that man is not the centre and that nature and its natural resources are not objects is gradually becoming stronger and Environmental Education (EA) is gaining definitions, through a meeting of the International Union for Conservation of Nature (IUCN), which took place in France in 1948. However, the expression is used for the first time, in March 1965, in Great Britain. However, in 1972, the Club of Rome already advocated with the publication of the report “The Limits of Growth”. In other words, from the moment when the capitalism grew stronger at the end of the 17<sup>th</sup> century and beginning of the 18<sup>th</sup> century, in England, with a very significant increase of atmospheric pollutants, originated from coal as propellant of the capital.

This makes the industrial practice diversified and embraces other countries, because it grows decade by decade. One of its facets and forms of this continuous process, was in the imperialist form and therefore that of neoimperialism. International capital subjugate the other countries and take possession of their natural resources.

The stumbling block of the imperialist policy of these countries was accentuated with the 1972 Stockholm Conference, the capital of Sweden, which is responsible for bringing the issue to the light of international discussions. However, the conference did not bring any significant progress, it only bumped into the antagonism between developed and underdeveloped countries and the endless economic question, the policy of zero development and development at all costs.

Later, in 1975, in Yugoslavia (extinct), the Belgrade Conference gave rise to the Belgrade Charter whose passage corroborates an Environmental Education (EA).

Establishing the idea of developing a citizen who is aware of the total environment, concerned with the problems associated with that environment, and who has the knowledge, attitudes, motivations, involvement and skills to work individually on the issues arising from it, as [Santiago-Brown et al. \(2015\)](#), the need to develop values in all citizens to environmental issues and stimulate significant attitudes whose definitions and proposals are not restricted to the dynamics: economy versus nature.

Only in Tbilisi, 1977, in Georgia (former Soviet Union), among actions of the United Nations Educational, Scientific and Cultural Organization (UNESCO<sup>2</sup>) and the United Nations Environment Program (UNEP) were definitions, objectives and principles outlined, highlighting formal education as a basic principle.

Humanity, from then on, gives a great advance in the attempt of educational policies and actions aimed at raising awareness of the need for an environment

<sup>2</sup>*United Nations Educational, Scientific and Cultural Organization (UNESCO) United Nations Educational, Scientific and Cultural Organization* is a specialized agency of the United Nations (UN) based in Paris, founded on November 4, 1945 with the objective of contributing to peace and security in the world through education, natural sciences, social sciences, humanities, communications and information.

where the quality of life embraces all forms of life. Thus, according to the National Curricular Parameters (PCN) of Environment (Brazil, 1997: p. 229) for primary education, when it transcribes an excerpt about the objectives of formal education, from the Tbilisi Conference. Thus the Environmental Education in this conference is outlined as a dimension given to the content and practice of education, oriented to the resolution of concrete problems of the environment through interdisciplinary approaches and an active and responsible participation of each individual and the community.

According to [ONUBR \(2015\)](#) there is the existence of transversality, in which the other sciences assume relevant prominence. It assumes that transversality and not the exclusive delegation of a discipline. All have equal value, appropriate the problems arising from the environment as a support for teaching learning. Thus, it warns, in relation to the problem, [Verdelone, Campbell, & Alexandrino, \(2019\)](#) where the environmental crisis is seen as a global crisis and disciplinary science must accompany the process. This Environmental Education is seen as a way to prepare every citizen to participate in the defense of the environment.

The ECO 92/RIO 92<sup>3</sup> also contributed a great deal through the development of an important management tool, Agenda 21. In addition to the theme reserved for chapter 36, which deals, among others, with teaching on environmental issues. In this perspective, [Marcatto \(2002\)](#) affirms the importance of this set of measures because it is a true world action plan to guide the transformation of our society. It constitutes an important document and set of measures to guide mechanisms of environmental-educational practices.

Another major event for Environmental Education was the Conference Environment and Society: Education and Public Awareness for Sustainability, held by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 1997 in Thessaloniki, Greece, which culminated in the Thessaloniki Declaration. As several goals were agreed upon and among them the need for governments and world leaders to honor the commitments already made during the UN Conferences and institute to Education the means necessary for it to fulfill its role in search of future sustainability. This fact is a highlight where all the world meetings and documents issued and referenced by governments, entities and various social sectors.

At all conferences, the most common thing is the search for a change of attitude on a planetary level, hence the need to agree, as the Intergovernmental Conference of Tbilisi 1977 reiterates. According to [Verdelone, Campbell, & Alexandrino \(2019\)](#), Environmental Education is a process of recognition of values and clarification of concepts, aimed at developing skills and changing attitudes towards the environment, to understand and appreciate the interrelationships between human beings, their cultures and their biophysical means.

<sup>3</sup>The United Nations Conference on Environment and Development, held under the name Eco-92, Earth Summit, Summer Summit, Rio de Janeiro Conference and Rio 92, was a conference of heads of state organized by the United Nations and held from 3 to 14 June 1992 in the city of Rio de Janeiro, Brazil. Its objective was to debate the world's environmental problems.

Environmental Education is also related to the practice of decision making and the ethics that lead to the improvement of quality of life. According to Berté (2012), the search for attitudinal changes in the perspective of biocentric actions with an emphasis on consciential change and change in productive means. Thus, humanity and nature must be placed in a relationship of equality.

### 3.1. Legal Bases for Environmental Education in Brazil

Brazil has legal mechanisms to promote Environmental Education. Such actions occurred in the middle of the 20<sup>th</sup> century, with the action of several social organizations. Another factor that reinforces this was the emergence of several specialization courses in this period. The process of implementation began in 1973, when the Special Secretariat for the Environment (SEMA), an agency linked to the Presidency of the Republic, emerged.

The understanding advanced and in 1981, with the National Environmental Policy, Law N°. 6.938/81, Brazil (1981) by instituting in Article 2, item X, “Environmental Education at all levels of education,” where in its Article 1, bases the understanding and creation of the National Environmental System (Sisnama), being an important advance, given the historical social context in which the country passed according to Berté (2012).

Among so many other Constitutions that Brazil has already had, the 1988 Constitution of the Federative Republic of Brazil, the apex of the objective legal order, in article 225, item VI, “to promote Environmental Education at all levels of education and public awareness for the preservation of the environment. The legal text highlights the school’s action in this process, however, it also implies that this belongs to the whole society. The creation of the Ministry of Environment (MMA), in 1992, represented an important step, as it was delegated to develop educational actions and mechanisms to preserve the environment.

Law No. 9,795/99 which deals with the National Policy on Environmental Education (PNEA) is composed, as manager, of the Ministry of the Environment (MMA) and the Ministry of Education (MEC), in which the purpose is to manage the National Environmental Education Program (ProNEA), established in 1999. Another important landmark is coming from the Law of Guidelines and Bases of Education (LDB), Law No. 9.394/96, popularly known as Law Darcy Ribeiro, however does not discuss about Environmental Education with so many minors.

According to Brazil, (1996), as the understanding of article 32, item II, with emphasis on Elementary School a perspective that educational practice reaches where the understanding of the natural and social environment, the political system, technology, arts and values on which society is based. In this sense, more progress and more foundations are needed to deal with this subject. LDB does not disagree with such emphasis.

In relation to Law No. 10.172/01, which institutes the National Education Plan PNE, it is unanimous the consideration that, on this legal basis, Environmental

Education should be held in Elementary, Middle School and reiterates as a transversal practice. Similar guidelines given to the National Policy of Environmental Education. The set of these laws, represents important measures of the Brazilian public policies to the environmental theme and its setbacks.

The Decree No. 4.281, of June of 2002, when regulating the Law 9.795/99, came to unify the responsibilities, organs and to make clear the managers responsible for the Environmental Education, when it corroborates in its article 1° that institutes the National Policy of Environmental Education will be executed by the organs and entities integrating the National System of Environment—SISNAMA, by the public and private educational institutions of the education systems, by the public organs of the Union, States, Federal District and Cities, involving non-governmental entities, class entities, means of communication and other segments of the society.

Therefore, the country has very coherent technical support to join forces with international society regarding environmental sustainability, which is one of the major objectives of Environmental Education (EE) in all its dimensions.

In educational terms, the National Policy for Environmental Education, emphasizes the importance of including Environmental Education as a curricular subject in the formation of teachers and emphasizes in its caput 1°, article 10, according to Santos, Silva, & Oliveira (2018), that Environmental Education should not be implemented as a specific subject in the curriculum of teaching, thus this measure has contributed to the transversal character both in practice and in the actions of socio-environmental management with education in schools in Brazil, with the purpose of benefiting all and all implies in various proportions.

### 3.2. Formal Education and Environmental Education (EA)

The school becomes an essential resort in the promotion of behaviors that the conferences have highlighted so much. Many guidelines were drawn for an Environmental Education sensitized, especially critical and active, in the face of the accelerated and degrading development imposed on the environment, according to Santos, Silva, & Oliveira (2018).

Schools need to get out of their walls, analyze the location and correlate environmental issues on a planetary level so that the school community becomes its multipliers in other social sectors. The contents should not be merely contrived and out of context.

Thus Guimarães (2004), presents understanding about Environmental Education as a field of knowledge in construction and that develops in the daily practice of those who carry out the educational process. Making up the educational process is a comprehensive practice, because all are sowers of this process. However, schools must stimulate the formation of values.

According to Viesba-Garcia, Viesba, & Rosalen (2019), the concern to relate the student with the bad weather of the environment, facing the process of allo-



cation of natural resources to meet their evolving needs, has grown in Brazil because of the environmental emancipation that occurred from the 60 s, motivated, among other factors, by the Green Revolution insertion of new techniques in agricultural production, motivated by the use of chemicals through pesticides.

So as [Verdelone, Campbell, & Alexandrino \(2019\)](#), it can be said that Environmental Education has grown parallel to economic issues, even if in the background, without priority, impacting on the teaching-learning process as one of its minimizers. Therefore, the National Curricular Parameters (PCN) of Environment, has the great task of the school is to provide a healthy school environment and consistent with what it wants its students to learn, so that it can, in fact, contribute to the formation of identity as citizens aware of their responsibilities with the environment and capable of attitudes of protection and improvement in relation to it.

An alternative to this realization is to develop projects at school. All teachers need to be engaged with the proposal, emphasizing that all productive processes cause damage to the environment. Therefore, [Fonseca \(2009\)](#), understands that the environment must be seen as the great stage where the educational process takes place and, as such, it is not a new object of science investigation, but an effective instrument for reflection and interweaving of knowledge and unification of content.

The school community needs to be aware of such educational possibilities. According to [Viesba-Garcia, Viesba, & Rosalen \(2019\)](#), however, teachers need to be trained through continuing education courses. And the public power, to be acting in a legal way, needs to subsidize formal education, from the pedagogical point of view, and demand the fulfillment of its legal framework, the National Policy for Environmental Education (PNEA). According, Measures that generate attitudes beyond the lines of concepts, objectives, principles and articles.

Thus the Secretariat of Continuing Education, Literacy, Diversity and Inclusion, of the Ministry of Education, according to publication of these notebooks, brings some classifications and definitions discussed by [Sauvé \(2005\)](#), on Environmental Education:

1) Education about the environment: it is the acquisition of knowledge and skills related to the interaction with the environment, which is based on the transmission of facts, contents and concepts, where the environment becomes a learning object;

2) Education in the environment: also known as outdoor education, it corresponds to a pedagogical strategy where one seeks to learn through contact with nature or with the biophysical and socio-cultural context of the school or community environment. The environment provides experimental learning, becoming a means of learning;

3) Education for the environment: a process through which one seeks the active engagement of the learner who learns how to solve and prevent environmental problems. The environment becomes a goal of learning.

In these concepts, the author establishes a tripod in this teaching and learning process, but with an interventionist and transformative character. These three aspects are not practiced in schools, following their order, from a methodological point of view. Discussing Environmental Education, is often restricted to banking knowledge, the teacher is the agent in the cognitive process or in an Education about the environment.

A critical Environmental Education is necessary, capable of forming active, provocative subjects. Politicized subjects that understand the need to promote a balanced environment, with quality of life for both abiotic and biotic beings. It is this type of education that should be implemented in schools. Students need to act as intellectualized beings against the exploratory action of nature, the process of accumulation of capital. Thus, according to [Fonseca \(2009\)](#) that it is necessary to see man as a subject of full interaction with nature, understanding that it is an object and also a subject, since the Earth is a living, dynamic set on which interacts a set of forces and anthropic action is one of them.

To understand this relationship between man and the environment is to act as critical subjects and that any change in one of its environments, which includes the biosphere, produces effects on human technological development and the extinction of non-renewable natural resources. Contextualizes [Viesba-Garcia, Viesba, & Rosalen \(2019\)](#), as another aspect of Environmental Education is the conservative, more imbued with the transmission of content. It is understood that the understanding of its epistemology is necessary, however it should not focus only on the individual. So, as one of the pillars of Environmental Education (EE) is the change of patterns and values so that together, man and nature can develop harmoniously, such a thinking posture does not obtain the same results as in critical (EE).

From the point of view of formal education, it is necessary to work both teachers and students in activities that wake up in both and that impact on the society subjects concerned with environmental issues, in view of a more active public policy.

### **3.3. Environmental Education (EA) and the Issue of Sustainability**

The economy of the countries of the capitalist system is an obstacle to a sustainable global society, in which the world clashes began with Stockholm in 1972, evidenced by the divergences between developed and underdeveloped capitalist countries. However, when the environment and the economy are interrelated, there has been an advance towards more sustainable policies because the way in which societies are constituted is unsustainable and Environmental Education can minimize this process.

Sustainability implies the relationship between the dimensions: economy, society and environment. On the social side, it is up to Environmental Education to raise awareness among current generations with perspectives for future generations because “a new era is beginning under our eyes” [Loures \(2009\)](#). A mo-

ment of resignification established between man and the environment. Values that must be obtained through common respect. Balance generates balance.

The term sustainability came into being in the 1980s, but only gained global proportions with the publication of the document “Our Common Future” or Brundtland Report<sup>4</sup>, prepared by Gro Harlem Brundtland and Mansour Khalid, during the UN World Commission on Environment and Development. The report conceptualizes sustainable development as meeting the needs of the present without compromising the ability of future generations to meet their own needs.

Balance in the resource allocation process, balance in the production process, balance in consumption patterns. Such processes generate environmental impacts and cause the scarcity, gradually, of non-renewable natural resources. It is necessary to change the energy matrix. This is possible, through a conscious society, with profound changes in consumption patterns. Demand from companies products with environmental certification. These are guarantees that the products are processed in order to reduce the impact on the environment.

It is necessary not only thinking subjects, but also ecological subjects, because this is one of the proposals of Environmental Education. Subject that is also thinking, active and that transcends the result of the dimensions of sustainability, eco-efficiency and socioeconomic. Therefore, Loures (2009) reiterates that the most important thing is still to take care of, which is the formation of new skills in sustainable development, being an objective that will be achieved through education with meaning. It leaves implicit the need to work in the socioeconomic sphere, in a permanent and emancipatory way. The school disseminates knowledge and provokes critical postures. However, the school itself cannot reach such a proportion.

The work should be together, according to Viesba-Garcia, Viesba, & Rosalen (2019), with the other social aspects. In relation to the ecological subject, a corporate member that also emerged from the interconnection between sustainability and Environmental Education, as a definition, being ideal capable of embodying the societal, ethical and aesthetic dilemmas configured by the societal crisis in its contractual translation, tributary of a socially emancipated and environmentally sustainable society project.

Thus the needs that are configured, according to the perspectives between the social and environmental field. This subject, according to the authors, is the result of the proposals of Environmental Education and the sustainable crisis, as well as the action of the environmental educator. It is not a type of professional as such, but an element with necessary knowledge and attitudinal values very important to sustainable practices. A multiplier subject with extensive environmental knowledge.

Education for sustainability is the great goal of Environmental Education, in

<sup>4</sup>The Brundtland Report, prepared by the World Commission on Environment and Development, is the document entitled *Our Common Future*, published in 1987. In this document, sustainable development is conceived as: Development that meets present needs without compromising the ability of future generations to meet their own needs.

other words Environmental Education, one can say, has become the rhizomatic root of education for sustainability, according to [Tristan \(2004\)](#). School curricula need to pay attention to encouraging students to environmental practices. Environmental themes are important tools that can be used for dialogue of knowledge between the various disciplines, being used as a cross-cutting theme, which can open up the range of possibilities for educators to move forward, in order to build their critical and global vision on the various knowledge studied by [Fonseca \(2009\)](#).

The ways and models of introducing sustainable practices, because the possibilities of educational actions are transversal and must cover all modes of teaching, respecting at each stage the cognitive processes of the learner. The relationship between students and teachers must be decentralized because it is a socio-educational, democratic posture and, in turn, knowledge does not belong to any of the agents. Nature must be the focus of actions and the model of production of technological input, the support to understand the issue of sustainability.

### 3.4. The Study of Human Ecology (EH) and Socio-Environmental Management

The study of Human Ecology and its historical vision goes through the understanding of the relations of human processes in the globe from its creation to the present day, according to [Silva & Bomfim \(2019\)](#), has as its object of study the relationship of the human being with his natural environment, according to [Alvim & Marques \(Org.\), \(2017\)](#). Having as focus the human relationship with and environment, ecosystems and their various external reflections, which translates the desire to incorporate to its concept understandings of related areas of knowledge, with anthropology, sociology, philosophy, education, biology, ecology, psychology society, religions, government, economy, environmental management, law and medicine, among others, which help in building a path and look differentiated for the Human Being. Thus identify the social, economic and academic role, because it has been at many times a link between the powers and competencies of multidisciplinary knowledge, as well as actions in relation to the modern world.

In Brazil, Human Ecology was born in the field of human sciences, in the department of social sciences, and is an emerging science, being considered a paradigm, by numerous authors [Bomfim \(2016\)](#), The Human Ecology since its origin in the Chicago School<sup>5</sup>, in 1910, until today has been developing studies on the relationship of man with the environment and its

The biggest representatives of this school are William I. Thomas, Robert E.

<sup>5</sup>The SCHOOL OF CHICAGO, given this name to a group of professors and researchers at the University of Chicago, University of Chicago was inaugurated in 1892, appearing in the United States in the 1920's and during some decades of the beginning of the 20th century, bringing a series of contributions to Sociology, Social Psychology and Communication Sciences. It stands out in Psychology, in Urban Sociology, in Human Ecology, producing relevant contributions until our days, analyzing the relationship between individual and community through interpretation and explanation as a method and the study of language as factors that intervene in communication.

Park, Louis Wirth, Ernest Burgess, and Robert McKenzie. Consequences, and the interrelationships of the numerous externalities existing between the various fields of knowledge. Often associated with studies of traditional peoples and communities as well as historical populations and their relationship with the environment. According to [Verdelone, Campbell, & Alexandrino \(2019\)](#).

The need to correlate society, economy, and environment, marks the multidisciplinary vision of Human Ecology, thus being important to understand the place of man inserted in the environment where he occupies and lives. According to [Verdelone, Campbell, & Alexandrino \(2019\)](#), the elements of the original environment, have been throughout human history merging with the environment of humans and other elements subject to the effects of ecosystem integration. The human environment thus combines both natural organic and inorganic elements, as well as socio-cultural elements across the globe. So according to [Alvim, Badilu, & Marques \(2014\)](#), we can define that the healthy human environment is one that allows the indefinite survival of the human species and, at the same time, satisfies, to the greatest possible degree, the needs of each human individual.

The discussion on studies and their relationship with environmental or ecological education and their correlation with Human Ecology, in a school environment, although relevant, is not related to the multidisciplinary studies and impacts of the various theoretical components that are interrelated in academic and professional environment, which will bring greater breadth and visibility to the studies on the subject, in the field of social sciences and humanities, according to [Silva & Bomfim \(2019\)](#).

This relationship with socio-environmental management education, according to [Boff \(2012\)](#), is associated with modern education, which directly reflects the aspects of sustainability and management of resource consumption in modern society, bringing in itself the content of several alerts with educators and educational managers at all levels of basic, middle and higher education, introduced in the National Curricular Parameters—NCP.

#### **4. Final Considerations and Future Works**

The mechanization of processes and computerization of tasks in the globalized world is indelibly and irrefutably alarming. New techniques in production processes are created. This phenomenon is motivated by international corporations as they place economic issues above environmental problems. Environmental Education has mechanisms, the awareness, to reverse and minimize such situation.

The dimension of the process is planetary; however, the development of ethics has been global. Sustainable measures are being demanded, pressured by several governments and world associations. These are positive trends since the countries that are imbued with the cause, change, modify, adapt their legal frameworks and pressure other countries to do the same in the world meetings and forums that deal with the subject.

However, development centered on the economic model is not only unsustainable, but the prevailing values according to Berté (2012). Even if there is a change in the entire world production network, if there is not also a change in values, Environmental Education is not fully developed. It is necessary to have subjects committed to environmental causes.

The concept of limiting natural resources has brought out the need to seek a balance between the use of the environment as a source of wealth and economic and social development. Sustainability emerges as a fundamental condition for the management of resources and the maintenance of life itself on Earth, and education permeates the identification and conscious exposure of this content, which according to Viesba-Garcia, Viesba, & Rosalen (2019), has as its basic idea to ensure, this dynamic must be rethought, in order to ensure the existence of future generations with concrete possibilities to maintain themselves and live in harmony with the environment, while guaranteeing present educational development, where human practices should be aligned with the limited potential of each biome and with the needs of present and future generations, should be disciplines that participate in the educational content in each and every curriculum.

Formal education has mechanisms in this search for new values, with teachers who stimulate their students and a pedagogical part that works with projects as well as a curricular proposal aligned to environmental causes. Even so, it is not enough, but necessary according to Fonseca (2009) with the awareness, by many people in the world about the importance of preserving the environment.

The human environment may be more or less favorable to the maintenance of human health, where the intergenerational issue imposes, however, an upper limit on the comfort enjoyed by a given human generation, and on the way in which environmental resources are used, since this cannot be achieved at the expense of the means necessary to maintain a healthy environment for future generations.

The awareness that certainly the work of teachers has helped to spread throughout society has not been enough to reverse the growing process of environmental degradation caused by modern, urban and industrial society. According to Abreu & Bussinger (2013) where to the extent that we no longer see it as simple, the fact that it is necessary to adequately condition our rejects, a consequence of the consumerism of humanity will be taking harmonious steps within the relationship man versus the environment. It is necessary to use more the disciplinary contents of Human Ecology, to a purposeful and motivating Environmental education to change the negative externalities, on the other hand, that the present work serves as discussions on the proposed theme.

This research serves as a basis for in-depth studies on Brazilian environmental policy and its effects on environmental education in all its areas, as well as the participation of all civil society and its economic, social and environmental effects.

### **Conflicts of Interest**

The authors declare no conflicts of interest regarding the publication of this paper.

## References

- Abreu, I., & Bussinger, E. (2013). Anthropocentrism, Ecocentrism and Holism: A Brief Analysis of Schools of Environmental Thought. *Revista Derecho y Cambio Social*, 34, 1-11. [https://www.derechoycambiosocial.com/Revista034/escolas\\_de\\_pensamento\\_ambiental.pdf](https://www.derechoycambiosocial.com/Revista034/escolas_de_pensamento_ambiental.pdf)
- Alvim, R. G., & Marques, J. (Org.) (2017). *Roots of Human Ecology, Brazilian Society of Human Ecology*. Paulo Afonso: Oxente. <http://sabeh.org.br/wp-content/uploads/2017/10/As-Ra%C3%ADzes-da-Ecologia-Humana-E-BOOK.pdf>
- Alvim, R., Badilu, A., & Marques, J. (2014). *Human Ecology: An Overview*. Feira de Santana: UEFS Editora.
- Berté, R. (2012). *Socio-Environmental Management in Brazil*. Curitiba: Ibpx.
- Boff, L. (2012). *Sustainability: What It Is, What It's Not*. Rio de Janeiro, Petrópolis: Voices.
- Bomfim, L. S. V. (2016). In Brazil, Is Human Ecology a Scientific Paradigm or Another Kind of Emerging Science? *Revista Ecologias Humanas*, 2, 99-122. [http://sabeh.org.br/?mbdb\\_book=revista-ecologias-humanas-no-2](http://sabeh.org.br/?mbdb_book=revista-ecologias-humanas-no-2)
- Brazil (1987). *Law N°. 6,938 of August 31, 1981*. [http://www.planalto.gov.br/ccivil\\_03/leis/l6938.htm](http://www.planalto.gov.br/ccivil_03/leis/l6938.htm)
- Brazil (1999). *Law N°. 9,795, of April 27, 1999*. [http://www.planalto.gov.br/ccivil\\_03/leis/l9795.htm](http://www.planalto.gov.br/ccivil_03/leis/l9795.htm)
- Eshet, T., Ayalon, O., & Shechter, M. (2005). A Critical Review of Economic Valuation Studies of Externalities from Incineration and Landfilling. *Waste Management & Research*, 23, 487-504. <https://www.ncbi.nlm.nih.gov/pubmed/16379118>
- Fonseca, V. M. (2009). *Environmental Education in Public School: Interlacing Knowledge, Unifying Contents*. São Paulo: 24-hour Library.
- Garcia, E. V., Viesba, L. M., & Rosalen, M. (2019). Environmental Education for Sustainability: Continuing Education in Focus. *Humanities & Technology*, 1, 467-482. [http://revistas.icesp.br/index.php/FINOM\\_Humanidade\\_Tecnologia/article/download/651/467](http://revistas.icesp.br/index.php/FINOM_Humanidade_Tecnologia/article/download/651/467)
- Guimarães, M. A. (2004). *Formação de Educadores Ambientais*. Campinas, SP: Papirus.
- Loures, R. C. da R. (2009). *Sustentabilidade XXI: Educar e Inovar Sob uma Nova Consciência*. São Paulo: Editora Gente.
- Marcatto, C. (2002). *Environmental Education: Concepts and Principles*. Belo Horizonte: FEAM.
- Oliveira, S. et al. (2019). Minicompostagem Ecológica: Uma Estratégia de Educação Ambiental Em Escolas de Educação Básica No Município De Lages (SC). *Revista Brasileira de Educação Ambiental (RevBEA)*, 14, 102-118.
- ONUBR (Brazil) (2015). *Transforming Our World: The 2030 Agenda for Sustainable Development*. Brasília: UN Brazil.
- Reigota, M. (2017). *What Is Environmental Education* (1st ed.). São Paulo, SP: Editora Brasiliense.
- Santiago-Brown, I. et al. (2015). Sustainability Assessment in Wine-Grape Growing in the New World: Economic, Environmental, and Social Indicators for Agricultural Businesses. *Sustainability*, 7, 8178-8204. [https://www.researchgate.net/publication/283023414\\_Sustainability\\_Assessment\\_in\\_Wine-Grape\\_Growing\\_in\\_the\\_New\\_World\\_Economic\\_Environmental\\_and\\_Social\\_Indicators\\_for\\_Agricultural\\_Businesses](https://www.researchgate.net/publication/283023414_Sustainability_Assessment_in_Wine-Grape_Growing_in_the_New_World_Economic_Environmental_and_Social_Indicators_for_Agricultural_Businesses)

- Santos, C. A. B., Silva, E. H. E., & Oliveira, E. G. S. (Org.) (2018). *Environmental History, Indigenous History and Socio-Environmental Relations in the Brazilian Semiarid*. Paulo Afonso: SABEH.  
<http://sabeh.org.br/wp-content/uploads/2018/03/Hist%C3%B3ria-Ambiental-e-hist%C3%B3ria-indigena-E-BOOK-13-03-18-final-1.pdf>
- Sauvé, L. (2005). Environmental Education: Possibilities and Limitations. *Education and Research, São Paulo, 31*, 317-322.  
<https://www.foar.unesp.br/Home/projetoviverbem/sauve-ea-possibilidades-limitacoes-meio-ambiente---tipos.pdf>
- Silva, I. P., & Bomfim, L. S. V. (2019). The telos of Human Ecology in Brazil and Its Interface with Traditional Populations. *Acta Brasiliensis, 3*, 35-39.  
<http://www.revistas.ufcg.edu.br/ActaBra/index.php/actabra/article/view/151>
- Tristan, M. (2004). *Environmental Education in Teacher Training: Networks of Knowledge*. São Paulo: Annablume; Vitória: Facitec.
- van den Bergh, J. C. J. M. (2010). Externality or Sustainability Economics? *Ecological Economics, 69*, 2047-2052.  
<https://www.sciencedirect.com/science/article/abs/pii/S0921800910000467>
- Verdelone, T. H., Campbell, G., & Alexandrino, C. R. (2019). Working Environmental Education with Classes of Elementary Education I. *Brazilian Journal of Development, 5*, 4675-4687. <http://brjd.com.br/index.php/BRJD/article/view/1666/1587>