

**ENVIRONMENTAL EDUCATION IN RETROSPECT: GENESIS AND
DEVELOPMENT OF AN EDUCATIONAL MOVEMENT**

**EDUCAÇÃO AMBIENTAL EM RETROSPETIVA: GÊNESE E
DESENVOLVIMENTO DE UM MOVIMENTO EDUCATIVO**

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Abstract

Environmental Education finds its roots in the second half of the 20th century when environmental degradation and sustainability issues, associated with social contestation, gained visibility. The aim of this paper is to present an historical context of the genesis of

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this educational movement, discussing how moments associated with international politics led to the development of a form of education and an educational intentionality that was evolved so as to address the advances of a global problem such as environmental degradation.

Keywords: environmental education, education, environmentalism.

Resumo: A Educação Ambiental encontra as suas raízes na segunda metade do século XX quando a degradação do meio ambiente e as questões da sustentabilidade, associadas à contestação social, ganharam visibilidade. O objetivo deste artigo é o de contextualizar historicamente a génese deste movimento educativo, discutindo como momentos associados à política internacional levaram ao desenvolvimento de uma forma de educação e de uma intencionalidade educativa que se desenvolveu para enfrentar os avanços de um problema global como é a degradação ambiental.

Palavras-chave: educação ambiental, educação, ambientalismo.

Introduction

When we become aware of our surroundings, we face what is natural, on the one hand, and what is transformed on the other. What is natural has been subjected to a disproportionate transformation over the last centuries due to economic activities and sociocultural practices. Since ancient times, human beings did not fully adapt to the environment in which they live, but rather have always been impelled by their inventive nature to transform the environment, and shape it to their needs.

The expansion of humanity, the increased exploitation of the planet's resources *per capita*, as well as urbanisation and so many other human-driven processes have had a profound impact on the planet since the beginning of the Industrial Revolution. As a consequence, this growing and accelerated impact of human action on the planet and its atmosphere has prompted the Anthropocene (Stoermer & Crutzen, 2000) as the current geological period. However, the first chemical analyses of the air have shown that, at least since the end of the 18th century, there has been an increase in the global concentration of carbon dioxide and methane (Crutzen, 2002). The shaping of the environment and its exploitation has resulted in increasing environmental degradation, which has peaked in the 20th century. Paradoxically, this long and so-called 'Century of Science' was unable to solve the environmental problems that beset the planet.

British historian Paul Kennedy noted in his book *Preparing for the Twenty-First Century* (1993: 119) that "[...] *the environmental crisis we now confront is quantitatively and qualitatively different from anything before, simply because so many people have been inflicting damage on the world's ecosystem during the present century that the system as a whole - not simply its various parts - may be in danger*". Environmental conditions alone in Portugal suffice to understand the scope of these words: recurrent droughts and floods, rivers polluted by chemicals and human waste, coastal erosion, Summer-like weather in the middle of Autumn, cases of cancer caused by contaminated water, or forest fires are issues resulting from environmental degradation, but also from human intervention at various levels, or lack thereof, including deficient environmental policies.

While part of the problem may lie with the successive governments that have neglected to comply with environmental legislation, another part of the problem also lies in the inaction of the population and civil society in raising awareness about the problems and motivating people to intervene. On the other hand, most of the research done on the subject of Environmental Education (EE) focuses on school issues, curricula or eco-schools and related activities.

The main aim of this study is to provide an historical contextualisation of the issues inherent to EE, beginning in the mid-20th century, and addresses the international and Portuguese contexts. We will explore the genesis of this educational movement as well as the development of actions related to EE that have taken on a true green culture, as well as a culture of *environmental sustainability* in recent decades.

1. Environmental education: the genesis of a movement

The relationship between humanity and nature has been constant throughout its existence. In the course of humanity's transformation from hunter-gatherers to builders of civilisations, the relationship with nature and the environment was direct and umbilical. Humans made their living from the land, forests, and mountains; they hunted, planted and gathered food and fuel; they collected stones and minerals for their activities. From the rivers and marine environments, where the great civilisations were born, Man could get what was indispensable to life. Water was used for drinking, for irrigating crops and for evacuating waste. Water was also a source of food, providing fish to eat, and made it possible to wash clothes and bodies, to travel, to play, to practise religious ceremonies. Nature was the source of inspiration for the great mono or polytheistic religions. Abraham met God on the mountain, Christ was baptised in the river, Buddha found enlightenment under the tree... The sun, the moon, mountains, rivers and forests were natural elements, sacred to people of all continents, creeds, and ethnicities.

From the Renaissance onwards, European man has been immersed in a process of appropriation of nature: drawing, painting, mapping, discovering new geographies, colonising new lands, transforming plants into medicines and paper, chemicals into gunpowder, dyes, and perfumes. The sea and the rivers were the highways of that period, allowing for trade, travel and warfare in distant territories to take place. But European expansion was the precursor of a new environmentalist mentality that began to take shape, of which Darwin is a good example. During his voyages around the world aboard the *Beagle*, Darwin not only recorded unknown territories, animals and plants, but he also developed the famous theory of the evolution of species, according to which living beings evolved from their primitive and simple forms in relation with the environment (Casino, 1999, p. 20-22). Darwin was probably one of the last naturalists to observe and record large intact natural sites, areas with no human transformation. Around the same time, an industrial process was developing in Europe and North America, one which rapidly transformed mankind's relationship with the environment.

Nature was used as a resource to be exploited, allowing for the extraction of mineral, vegetable and animal resources. However, nature was also seen as an educational resource to be enhanced (Novo, 1998, p. 23) as a learning enabler. In Jean-Jacques Rousseau's *Émile, ou De l'éducation* (1882, p. 12) one can read, at a certain point, that

"Tout ce que nous n'avons pas à notre naissance, et dont nous ayons besoin étant grands, nous est donné par l'éducation. Cette éducation nous vient de la nature, ou des hommes, ou des choses" (All that we have not at our birth, but which we need when we are grown, is given us by education. We derive this education from nature, from men, or from things). Thus, not only nature provides learning that is indispensable for the survival of humans, but it is also one of the three elements considered by Rousseau as a resource capable of providing educational experiences.

During the 19th and 20th centuries, various demographic, economic, social and cultural transformations have radically changed the relationship between societies and nature. The population boom, advances in science and technology that made the industrial revolutions possible, progress in transport, communication routes, the economy, and two world wars entailed the exploitation of natural resources on a scale which had never been seen before by humanity. The search for and exploitation of natural resources to sustain the way of life of industrialised societies has brought about ecological changes with serious and unforeseen consequences. It causes contamination problems, drains non-renewable resources (Novo, 1998, p. 24), and it also pollutes the air, land and water, causes genetic modifications in plant crops, etc., which are the cause of enormous uncertainty about the continuity of human life on planet Earth.

When, in the early 20th century, Albert Kahn, a French banker, traveller and philanthropist, realised that human practices and ways of life in their relationship with the natural world were doomed to a fatal demise, he initiated a programme of grants, a rare thing to do at the time, to create a photographic collection that would leave a testimony of the effects of industrialisation and the urbanisation of societies for posterity. Between 1909 and 1930, he sent photographers to over 50 countries, resulting in the creation of the Archives of the Planet (*les Archives de la Planète*), with over 100 hours of videos and 72,000 photographs (Perlès, 2002). This documentary fund, epistemologically situated between human geography and ethnology, was possibly the first initiative to document the profound societal and environmental transformations since the beginning of the Anthropocene.

Aware of a series of environmental problems, especially those linked to the marine world, Jacques-Yves Cousteau undertook a series of oceanographic explorations around the globe during the 1950s. These explorations resulted in the 1956 documentary *The World of Silence* which was awarded with the Palme d'Or at the Cannes Film Festival. In the film, Cousteau showed the general public, for the first time, the fragility of the oceans

and marine resources in the face of human pollution. Later, in an interview given to *The UNESCO Courier* (Elnadi & Rifaat, 1991), Cousteau drew attention to the great dangers of the future such as global warming and the scarcity of drinking water.

Some have seen in Rachel Carson's *Silent Spring*, first published in 1962, a true treatise on the problems caused by pesticides and synthetic insecticides, by the unbridled exploitation of natural resources, by radioactivity, etc. (Cascino, 1999, p. 36). This document was able to bring major environmental problems to the attention of the general public. Recognising that man had acquired a significant capacity to alter nature, Rachel Carson found it alarming that assaults on the environment by dangerous and lethal materials were resulting in the contamination of air, land, rivers and seas, with irreversible effects (Carson, 1969, p. 16). Realising that time was of the essence for life and the environment to achieve a balance, Carson considered the unbridled pace of modern man, the fast changes, and the speed of new emerging situations to be the great problem in the relationship between humans and nature: the lack of time (Carson, 1969, pp.16-17). Not only was this book a publishing success, remaining in the *New York Times bestseller* list for 31 weeks, it also led to the creation of a US presidential advisory group on pesticides (McCormick, 1992, p. 63).

The 1960s brought major changes to the international scene. It was a decade marked by social and cultural events, which also coined the emerging environmentalism. Protest movements against the violent regional episodes of the Cold War and mass consumerism on a planetary scale gave birth to “the hippie movement, rock-and-roll, sexual liberation and drugs, feminism, the black and gay movements, the fight for a greener, anti-nuclear and pacifist planet” (“movimento *hippie*, o *rock-and-roll*, a libertação sexual e as drogas, o feminismo, o movimento dos negros e homossexuais, a luta ‘por um planeta mais azul’, antinuclear e pacifista”) (Cascino, 1999, p. 34).

An environmentalist awareness starts to blossom within these social and cultural movements. McCormick (1992, pp. 64-77) says that the emergence of a new environmentalism in the late 1960s and early ‘70s was due to a myriad of factors, which include: the reaction to the post-war society of abundance and consumerism; the era of atomic testing; the start of nuclear programmes in the United States, the Soviet Union, England and France and subsequent experiments and explosions (a total of 426 atomic detonations between 1945 and 1962); the book *Silent Spring* by Rachel Carson; a series of high-profile environmental disasters such as the sulphurous mists of Pennsylvania, the London smog, the fire at the Windscale nuclear power station in Great Britain, or the

disasters involving oil tankers and oil rigs; advances in scientific knowledge and the influence of other social movements. Despite all the factors that contributed to the affirmation of environmentalism, the influence of other social movements for civil rights and other forms of protest allowed for environmentalism to place itself on the protest agenda that characterised this era (McCormick, 1992, p. 77).

Towards the end of the 1960s, May 68 broke out in France, which came to represent the environmental movement more than a workers' and students' movement: it was also the beginning of the struggle *Pour une planète plus bleue* (Matos, 1989, pp. 13 and 17). It also became a date associated with environmentalism, as environmental education began to be defined and to appear as an innovative cultural movement that was soon to reach institutions and impose changes (Novo, 1998, p. 27).

The environment has become part of the agendas of nations and international bodies. In the United Kingdom, in 1968, the *Council for Environmental Education* was set up to coordinate a range of organisations involved in environmental and educational issues. Also in Sweden, the Board of Primary and Secondary Education initiated a review of school curricula, methods, and educational materials, with an emphasis on environmental education, which should be integrated into the curriculum (Novo, 1998, pp. 26-28). In France, ministerial measures were taken, advocating an opening of human questions in multiple fields. In 1968, the Conference of the Biosphere (McCormick, 1992, p. 97) – on scientific aspects of biosphere conservation – was held in Paris, in 1972, an International Colloquium on Environmental Education took place in Aix-en-Provence and the integration of EE in school *curricula* occurred.

1968 also witnessed the birth of the Club of Rome, made up of scientists, industrialists, and politicians, which aimed to discuss the problems of economic growth and the increasing exploitation of natural resources. This resulted in the 1972 Report of the Club of Rome, entitled *The Limits to Growth*, which had a marked influence on the Stockholm Conference that same year.

Lastly, UNESCO developed a comparative study on the environment at school – which was actually an extension of a study conducted in 1949 on environmental problems and their educational implications – which served as the basis for a dossier advocating the integration of EE into school *curricula*, the possible relationship with youth movements, objectives and definition, programmes, teaching methods, teacher training, etc. (Novo, 1998, p. 29).

2. The development of an environmental education culture

In 1968, on the initiative of Aurelio Peccei, industrialist and chairman of NATO's Economic Committee, about 30 influential people from ten countries met at the *Accademia dei Lincei* in Rome, including scientists, educators, economists, industrialists and international policy-makers, forming the Club of Rome (Meadows, Meadows, Randers, & Behrens, 1972). The Club of Rome aimed to analyse complex problems such as poverty amidst wealth, environmental degradation, loss of confidence in institutions, uncontrolled urban sprawl, job insecurity, etc. (Meadows et al., 1972). As a result of the discussions, a report of the findings in these areas was produced by the *Massachusetts Institute of Technology* at the request of the Club of Rome (McCormick, 1992). *The Limits to Growth* (1972) was written in a strikingly pessimistic and catastrophic tone, a kind of prophecy of environmental apocalypse (Oliveira, 2012).

The book suggested stopping economic growth as a way of alleviating environmental problems, which were caused by factors such as pollution, population growth and industrial technology (Oliveira, 2012). This book was of great value, mostly because of the influence it had on the Stockholm Conference debates, and not least because Maurice Strong, a Canadian businessman and oil millionaire, was a member of the Club of Rome, was a founder of the United Nations Environment Programme (UNEP) in 1972 and also sat as secretary-general at the 1972 Stockholm Conference and at the 1992 Rio de Janeiro Conference.

In 1972, the United Nations Conference on the Human Environment was held in Stockholm, where 113 member states and over 400 intergovernmental and non-governmental organisations were present (Novo, 1998, p. 36). As McCormick notes (1992, p. 97), it was the first time that the political, social and economic problems of the global environment were discussed in an intergovernmental forum, which resulted in the creation of UNEP. The Stockholm Conference marked a transition from the emotional environmentalism of the 1960s to a global, rationalist, and political perspective. Not only did it bring scientific and technical aspects into the discussion, as the Biosphere Conference had done in Paris, but it also integrated social, economic, and political issues (McCormick, 1992, p. 99), thus allowing for developed and developing countries to engage in dialogue on issues such as economic growth, pollution and people's well-being for the first time (Cascino, 1999, p. 37). Moreover, the *Declaration of Stockholm* (or

Declaration on the Human Environment) recognised that aspects of the human (both natural and transformed) environment were fundamental to people's well-being.

The Stockholm Declaration resulted in a set of 26 principles. Principle 19 of the Declaration, which concerned environmental education, considered having an education that contributes to enlightened opinion and responsible behaviour on the part of individuals to be crucial (ONU, 1972). On the other hand, Recommendation 96 mentioned the need to establish international interdisciplinary environmental education programmes for young people and adults. It also highlighted the recommendation for the exchange of information on environmental education among educational systems, the training of professionals in various disciplines, including teachers, and the establishment of groups of experts in environmental disciplines and activities, as well as the development of new materials and methods for environmental education (United Nations, 1972).

To some extent, the Stockholm Conference also boosted the creation of numerous NGOs, which gradually allowed for environmentalism to become entrenched in various areas and organisational dynamics, stimulating civil society, particularly socio-environmental groups, social movements, the business community, and scientific research groups, to become involved in the cause of environmental protection (Farias, 2013).

In addition to the Declaration and Principles, UNEP was also created in 1973 with the aim of systematically monitoring environmental policies and promoting coordination between national and international organisations. According to Maria Novo (1998, p. 40), UNEP differentiated the concepts of environmental training, as a specialised environmental education for professionals involved in general decision making, from environmental education *tout court* for the general public in a formal or non-formal way.

The International Program for Environmental Education (IEEP) was also created following the recommendation of the Stockholm Conference to focus on the promotion of EE. According to Novo (1998, p. 41), IEEP would be a reference point for regional and national work on a three-year basis. IEEP's first three-year project had an interdisciplinary focus, drawing on contributions from professionals in natural sciences, social sciences and humanities, while its main objectives were to promote the exchange of ideas, information and experience in the field of environmental education; to develop research; to develop and evaluate new materials, study plans, teaching materials and programmes; to train and update key persons in the development of environmental

education, such as teachers, planners, researchers, administrators, etc.; and to provide technical assistance to member states for the development of environmental education programmes (Novo, 1998, pp. 41-42).

The implementation of the IEEP involved holding international seminars and training workshops. The first was the International Seminar on Environmental Education, held in Belgrade in October 1975, which discussed trends and new issues facing environmental education, and formulated guidelines and recommendations for promoting EE in the international context. This seminar resulted in the *Belgrade Charter* (1975), which recognised the problems caused by the unprecedented economic and technological growth that society was experiencing, especially environmental degradation. The document considered EE to be a crucial element to react to the global environmental crisis, starting with EE programmes capable of developing new knowledge, skills, values, and attitudes of environmental promotion (United Nations, 1975, p. 3).

From these documents, one can highlight the latent concern not only with theoretical objectives, such as the development of awareness, knowledge, and attitudes, but also a concern with the capacities for evaluating environmental measures and educational programmes, and with promoting the participation of individuals and groups in actions aimed at solving effective environmental problems. At the same time, it emphasised EE as a lifelong learning process, in and out of school, of an interdisciplinary nature, looking at global problems and promoting local, national, and international cooperation to solve pressing environmental problems (United Nations, 1975, p. 4). But, as McCormick (1992, pp. 115-116) emphasised, education was fundamentally a national issue, as national ENGOs were more productive and did more in the field of EE than the UN bodies set up for this purpose.

Following these initiatives, the Intergovernmental Conference on Environmental Education was held in October 1977 in the city of Tbilisi (Georgia) in the former Soviet Union. This conference, sponsored by UNESCO, was one of the most important in the field of EE because it established criteria and guidelines that inspired the development of this educational movement (Novo, 1998, p. 48).

The final report of the conference (UNESCO, 1977) contained several objectives, of which we highlight two: i) the main environmental problems of contemporary society and ii) the role of education in tackling environmental problems. The issue of environmental problems was slightly touched upon, without ever mentioning in concrete terms which problems should be combated or mitigated. The discourse fundamentally

highlighted the problems arising from scientific advances and technological and social changes. Vague and imprecise, the text emphasised the future problems of humanity (UNESCO, 1977, pp. 11-12).

With regard to the role of education as a way to address environmental problems, the document gave particular emphasis to the role of EE, as it can be integrated into the formal education system at all school levels, being a privileged means to reach a large number of people. Non-formal environmental education was thought of from the point of view of the mass media as capable of helping to create environmental awareness and understanding of large-scale problems (UNESCO, 1977, p. 12). The greatest contribution, however, seems to be the holistic perspective of environmental education, putting into perspective the ecological, social, economic, and cultural aspects of environmental problems in an interdisciplinary way. The report defended the adoption of content, methods and materials and the exchange of ideas at an international level, which looked at educational issues on a more comprehensive level and across borders (vd. points 14 and 15 in UNESCO, 1977, p. 13).

The cascade of issues arising from environmental problems, such as the ozone layer problem, acid pollution, sea pollution, and forest destruction, joined, in 1986, by the Chernobyl nuclear accident in Ukraine, stimulated other international congresses to discuss the situation and find solutions. In 1983, Norwegian Prime Minister at the time, Gro Herlem Brundtland, and a group of international experts created the World Commission on Environment and Development, which prepared a report, known as the *Brundtland Report*, which analysed the main issues on environment and development (Cascino, 1999, p. 39; Novo, 1998, p. 52). This report, entitled *Our Common Future* (United Nations, 1987), looked at both development and environmental problems, especially those relating to population and human resources, food security, energy and industry, urban problems, species and ecosystems. This last point was emphasised because the destruction of plant and animal species, as well as that of ecosystems with deforestation, came up as a threat both to populations and to the global economy. The issue of weapons of mass destruction and the possibilities of a nuclear war were very much in focus because they were causing environmental stress, but this environmental stress was both cause and effect of the political and military tensions of the time. Chapter 11 of the report highlights wars related to the exploitation and control of raw materials, land ownership, access to rivers, to the sea, energy, and other environmental resources (United Nations, 1987).

In the same year that the report was published, the International Congress on Environmental Education was held in Moscow before 250 experts in natural, human and social sciences, as well as in education and information. These experts consisted mostly of university professors, officials from the education and environment sectors, researchers and educational planning professionals (Novo, 1998, p. 53). As Maria Novo points out (1998), influenced by the *Brundtland Report*, the conclusions of the congress were that it is not possible to define EE without taking into account the economic, social, and ecological realities of each society. The conclusions of the congress were in line with those of previous congresses, i.e., they drew attention to the availability of access to information, data and experiences of the IEEP, to the strengthening of research on the contents and educational methods of EE, to the promotion of study programmes and teaching materials in EE, to technical and vocational education, to public education and information, to the integration of the environmental dimension in university education, and to international and regional cooperation for the development of EE (Novo, 1998: 56-57).

As Francisco Teixeira (2012, p. 101) notes, the environmental education advocated in the 1970s-1980s aimed at training citizens to understand the biophysical environment and the problems associated with it, so that if they were aware of the problems they would be motivated to solve them. In other words, the big ideas, as Teixeira says (2012, p. 101), that were linked to later approaches are those of information, awareness and motivation. However, as González-Gaudio states (2006, p. 40), “international recommendations were mere reference documents, which were only cited to identify the projects in a set of supposedly valuable purposes but that were somewhat distant and unrelated” (“as recomendações internacionais eram simples referências documentais que apenas se citavam para assinalar os projetos num conjunto de propósitos supostamente valiosos as distantes e um tanto alheios”). Theories, knowledge, and motivation existed, but the transition to practice was lacking.

In the last decade of the 20th century, two other major international events took place: the Rio Conference in 1992, and the Thessaloniki Conference in 1997. The 1990s were a particularly problematic period in environmental terms: the deforestation of large green areas, the climate changes that were felt, famine in different parts of the world, wars with environmental implications, mass migrations and population imbalance in various regions of the planet (Novo, 1998, pp. 39-40). It was urgent to reflect on these problems. So, a group of personalities interested in environmental issues began the preparatory work

for ECO-92, which was held in Rio de Janeiro in June 1992. The event included two *fora*, one for heads of state and political leaders, the Earth Council, and another, the Global Citizen Forum, for civil society, NGOs and other personalities interested in environmental issues (González-Gaudiano, 2006, p. 40; Novo, 1998, p. 58).

The United Nations Conference on Environment and Development, also known as the Earth Council, brought together representatives from 160 countries and dealt with a dossier that put into perspective, for the first time, the need to achieve an integrated environmental and development policy, or rather, tried to integrate development and environmental protection when approaching and adopting economic decisions in the governmental, industrial and national spheres.

The most visible outcome of ECO-92 was *Agenda 21*, a document that stressed the importance of countries in reflecting on how to solve socio-environmental problems (United Nations, 1995). The document devotes its entire Section II to the topic of 'Resource Conservation and Management for Development' in a total of 14 chapters dealing with a wide range of topics related to environmental protection: protection of the atmosphere, planning and management of land resources, tackling deforestation, desertification and drought, conservation of biological diversity, protection of oceans, coastal zones and water supply, management of toxic and hazardous products, solid waste, sewage and radioactive waste (United Nations, 1995). Thus, the concept of environment was associated to sustainable development in order to contemplate the questions of resource use, attending to questions of redistribution equity of natural resources and their durability (Sauvé, 1996, p. 9).

From the Rio Declaration we can also highlight, in the field of environmental education, Principle 10, which considered that,

Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided. (United Nations, 1992).

The Global Forum, which was held in parallel with the Earth Summit, allowed for the organisation of the International Day of Environmental Education, from which the *Treaty on Environmental Education for Sustainable Societies and Global Responsibility* was elaborated (*Tratado de Educação Ambiental para Sociedades Sustentáveis e Responsabilidade Global*, 1992), and which expressed both ecological and ethical, social and cultural concerns. The Treaty reaffirmed EE as a critical and innovative process, as being able to help transform and build society. It argued that EE was not neutral, but rather ideological, because it was a political act, which should address global issues and it had an interdisciplinary interest (*Tratado de Educação Ambiental para Sociedades Sustentáveis e Responsabilidade Global*, 1992). The Treaty brings a new and broadened conception of the scope of action of EE, in which issues of political, economic, social and cultural scope (amongst others) are evident. This conception will have the educational issue as the unifying element. The educational issue is seen from a different perspective from the previous ones, as it is not only a matter of providing citizens with the knowledge to prevent environmental pollution. This is a global, citizen, democratic, equitable, and ethical education.

By the end of the century, UNESCO and the Greek government promoted yet another conference in Thessaloniki. Held in December 1997, the *International Conference on Environment and Society: Education and public awareness for sustainability* had simultaneous activities such as the debate thematic forum, the innovative practices forum and a set of seminars on specific topics. This conference resulted in another declaration, which reaffirmed a new position towards EE, in line with what had already been seen at ECO-92. According to paragraph 11 of the Thessaloniki Declaration (UNESCO & Governo da Grécia, 1997), EE, as set out in the Tbilisi recommendations and *Agenda 21*, has turned to a new concept of Education for Sustainability, to include both environmental and sustainable development concerns. This concept of education for sustainability, broader than EE, included not only concerns for the environment, but also for poverty, population, health, food security, democracy, human rights, and peace.

3. From Environmentalism to Environmental Education in Portugal

Environmentalism and EE in Portugal are relevant issues from both a socio-environmental and an educational point of view.

In the Contemporary History of Portugal, it is possible to point out some occasional and limited initiatives, at least since the 19th century, regarding environmental issues. The Portuguese Constitution of 1822, the oldest constitutional text in Portugal, already showed some concern with the issue of nature preservation, especially when in Point 5 of Article 223 it assigned municipalities the task of promoting the planting of trees in wastelands and municipal lands. According to Tavares (2013, p. 7), there was later a succession of laws and regulations regarding the environment: a Decree that addressed the issue of water pollution under the sanctions regime of the Water Services Regulation, followed in 1919 by the Law of the Waters (Decree with the force of Law no. 5787-III, of 10 May 1919), and in 1939 a Forestry Plan that established the decisive role that the forestation of the territory would play in the safety of the land, in the correction of rainfall and water courses, in the improvement of public health, and as a source of labour (Branco 1998; Devy-Vareta, 2003). At the time, a large sum of money was spent on the afforestation of mountains, the creation of woods and forests, plus conservation costs.

The problem that arose in Serra da Arrábida with the cutting of trees for the use of wood in a lime kiln in the 1940s led to the creation of the Nature Protection League in 1948 on the initiative of Professor Carlos Baeta das Neves, from the Higher Institute of Agronomy (LPN, 2012) and several other personalities such as Carlos Tavares, Carlos Teixeira, Pinto da Silva, Germano Sacarrão, Mário Myre and Miguel Neves (Tavares, 2013, p. 6).

From that date onwards, little was achieved in environmental terms until the 25th of April 1974. At a time when the world had already woken up to environmental problems, as shown in the previous chapter, in Portugal environmental issues went somewhat unnoticed by the general public. This was due to the fact that Portugal was essentially a rural country, with an incipient industry, so it did not show the problems arising from massive industrialisation such as *smog*, industrial pollution, the dangers of nuclear power or mega urbanism, as stated by Schmidt (2008, p. 287). On the other hand, “the country had no reason to be nostalgic about rurality [...] the fields meant hunger, misery and cold; the sea was where fishermen died. European environmental reasoning had little expression in Portugal” (“o país não tinha razões para estar nostálgico da ruralidade [...] os campos significavam fome, miséria e frio; o mar era o sítio onde morriam os pescadores. A razão ambiental europeia tinha uma fraquíssima leitura em Portugal”)

(Schmidt, 2008, p. 287). The same author also considers that some problems that affected the Portuguese society, such as high illiteracy, censorship and even media mediocrity kept the Portuguese uninterested in environmental problems, even those that affected the country, such as the 1967 floods, the 1975 Leixões oil spill and the 1975 fires (Schmidt, 2008, p. 288).

It was only in the 1970s that environmentalism gained expression and importance in Portugal, much on the impulse of the work that was being prepared abroad. Stimulated by the preparation of the Stockholm Conference in 1972, an *ad hoc* group was charged with preparing a document to support the Portuguese participation in the International Conference on the Human Environment, the *National Monograph on Environmental Problems (Monografia nacional sobre problemas relativos aos Ambiente)* (Pinto, 2004, pp. 152-153). As a result of the preparations for the Portuguese participation in the Stockholm Conference, one can highlight the creation of the first protected area, the National Park of Peneda-Gerês, and the establishment of the National Environment Commission (Comissão Nacional do Ambiente – CNA), which carried out tasks and activities in the field of environmental information and awareness, both in 1971 (Pinto, 2004, p. 153). The CNA, composed of representatives of public and private entities and people involved in environmental and nature conservation issues, should, at the level of EE, conduct information campaigns, encourage the participation of society in the enhancement of the environment, and stimulate the creation of associations (Pinto, 2004, p. 153).

With the outbreak of the 25th of April 1974, news concerning the environment followed upon the other. The Under-Secretary of State for the Environment was created by the still Provisional Government (Decree-Law No. 206/74, of May 15), and the office was given to Gonçalo Ribeiro Telles, a well-known landscape architect who became notable on television for identifying the problems relating to the 1967 Lisbon floods (Madeira, 2016, p. 40). On the 27th of July that year, the Portuguese Ecologic Movement (Movimento Ecológico Português) was founded, including several pioneers of Portuguese environmentalism – Jacinto Vieira, Domingos Janeiro, Taciano Duarte, Paulino Magalhães, José Gomes Ribeiro and Afonso Cautela – and with the presence of Unimave, Vegetarian Association (Associação Vegetariana), the Portuguese Society of Nature (Sociedade Portuguesa de Naturologia), and Consumer Protection (Defesa do Consumidor) (Madeira, 2016, p. 40). In 1975, the National Service of Parks, Reserves and Landscape Heritage was created within the Under-Secretariat of State for the

Environment, as well as a Study Service which carried out the first projects, articulating nature conservation with socio-economic development (Schmidt, 2008, p. 291).

Also in 1975, the Secretariat of State for the Environment was created, integrated in the Ministry of Social Equipment and Environment; CNA was restructured, with a National Service for the Participation of Populations: this service was responsible for promoting campaigns for the dissemination, participation and training of the population with the aim of nature preservation and the implementation of a regional and local environmental policy (Pinto, 2006, p. 78).

Within this Service, the programme *Man and the Environment* (O Homem e o Ambiente) was created for teachers, where EE was approached in an integrated and interdisciplinary way in its ecological, social and historical-cultural aspects. However, environmental education was not formally integrated into the education system, because the aims, objectives and principles were not fully established, at least until the Belgrade Conference in 1975. But it is in this period and context that environmental issues began to be integrated into various disciplines or subject areas (Pinto, 2006, p. 78-79), although for Schmidt and Guerra (2013, p. 207) environmental education has been restricted, essentially, to the school environment and much less to the community. Even within schools, EE has always been characterised as being somewhat childish, because it overemphasised a playful and recreational tendency, without ever entering consistently into the curricula (Schmidt & Guerra, 2013, p. 208).

In April 1976, a new Constitution of the Republic was approved, which reflected the environmental concerns of the time. Article 66 of the 1976 Constitution on *Environment and quality of life* stated in paragraph 1 that "Everyone has the right to a human, healthy and ecologically balanced living environment and the duty to defend it" ("Todos têm direito a um ambiente de vida humano, sadio e ecologicamente equilibrado e o dever de o defender"). In the 4th constitutional revision of 1997 (Constitutional Law no. 1/97 of 20 September), a new legislative provision concerning EE was established, and paragraph 2(g) stated that the State should "Promote environmental education and respect for environmental values" (Promover a educação ambiental e o respeito pelos valores do ambiente).

The following decade brought about some changes. In 1981, the Ecologist Party The Greens (Os verdes) was created, in a time when green parties were appearing all throughout Europe, but according to Schmidt (2008, p. 294) its alliance with the Portuguese Communist Party led to a decline in environmental issues. In 1983, the CNA

was extinguished and the National Service of Parks, Reserves and Nature Preservation (Serviço Nacional de Parques, Reservas e Conservação da Natureza) was created. This department maintained the same functions as the CNA until 1987, essentially adopting a conservationist logic.

1986, the year in which Portugal joined the European Union, was the year the Directorate of Interpretation, Information and Environmental Education (Direção de Interpretação, Informação e Educação Ambiental) was created: the objectives of this institution were to raise awareness, to inform and educate on environmental matters. The following year, in 1987, the Environment Framework Law and the Law for Environmental Protection Associations were created (Pinto, 2004, p. 155). The Environment Framework Law would lead to various laws on the most diverse environmental problems, from waste management, water, air, and noise pollution to coastal defence and protection of the species. The Law on Associations for the Defence of the Environment allowed the consolidation of two national NGOs, GEOTA (1981) and Quercus (1985), as well as the renewal of the LPN (Schmidt, 2008, p. 295).

In 1986, the Basic Law of the Educational System was approved, which according to Pinto (2006, p. 81) both the organisational principles and the objectives of pre-school education and basic and secondary education gave the opportunity for EE to be integrated in the training processes through non-disciplinary curricular areas such as “Área Escola”.

The 1980s were also marked by the start of initiatives related to the environment, such as congresses, seminars and conferences, as well as the proliferation of several periodicals on the subject, which shows the importance that environmentalism was assuming in Portuguese society, such as *Correio da Natureza* in 1986, *Joaninha*, *Teixo* and *Liberne* in 1987, and *O Biólogo* in 1989 (Schmidt, 2008, p. 296).

The 1990s were characterised both by the creation of new initiatives and by the reinforcement of existing ones. The Ministry of Environment and Natural Resources was created in the early times of the decade (1990), catapulting both the environment to a political dimension unknown in Portugal until then, and the Portuguese Association of Environmental Education (Associação Portuguesa de Educação Ambiental), an ENGO that emerged with a very specific purpose to develop EE at the national level both from the point of view of formal and informal education (Pinto, 2004, p. 156).

In 1992, in the aftermath of the *Rio Conference*, the Ministry of Education, with the support of the Ministry of Environment, organised the VI International Conference on Environmental Education. This was the first joint action in a series of others, which

despite the fact that the ministries were close, never fully worked. According to Schmidt and Guerra (2013, pp. 208-209) the difficulty that EE had in entering the curriculum was proof of the lack of articulation between ministries. The diverging views between the Ministry of Education, which envisaged environmental education from a curricular point of view, and the Ministry of the Environment, which looked at it as a more recreational and playful practice, prevented serious implementation of environmental education. While on the one hand the Ministry of Education sought to insert environmental and ecological programme elements into the curricula, the Ministry of the Environment had a peripheral role in this field.

In 1993 the National Institute of Statistics published the first statistics concerning the environment (Tavares, 2013, p. 33), and, in the Ministry of the Environment and Natural Resources, the National Institute for the Environment was restructured to become the Institute for Environmental Promotion (IPAMB), with responsibilities in the field of training and information for citizens and support for environmental associations. Within the scope of IPAMB's work, some periodical publications stand out, such as *Informar Ambiente*, the journal *Revista do Ambiente*, and the issue *Cadernos de Educação Ambiental*, integrated in the publication *Fórum Ambiente*. In the same year, a colloquium on environmental education was promoted by the National Council of Education and IPAMB (Pinto, 2006, p. 83). The years 1993 and 1994 were marked by the two Open Presidencies held by Mário Soares on urban and environmental problems. Travelling around the country for 18 days, Mário Soares promoted an important environmental debate in Portugal, focusing on issues such as land use disorder, pollution, endangered species and habitats, which were all over the newspapers and other media (Schmidt, 2008, p. 301).

In 1995, the National Environmental Policy Plan was published, with the participation of the National Association of Portuguese Municipalities, the Environmental Promotion Institute, the Confederations of Industry and Agriculture, the Economic and Social Council, and other professional and environmental associations. In this plan, EE appeared in a separate chapter and with concerns to coincide the promotion of EE with the participation of civil society (Pinto, 2006, p. 84). In that year the attacks against nature were criminalised, and the Penal Code (Decree-Law no. 48/95 of 15 March) established that the legal asset of the environment was now protected from a legal point of view, stipulating the existence of ecological crimes (Tavares, 2013, pp. 35-36).

In 1996, a cooperation protocol was signed between the ministries of Education and Environment to frame common actions for EE, namely its introduction in curricula and teacher training. In 1997, the Portuguese Ecotheque Network (Rede Nacional de Ecotecas⁴) was launched with a dual purpose of decentralising IPAMB's action and providing support to schools and the local community in order to broaden the participation of citizens in the scope of EE, thus complying with the guidelines of *Agenda 21*. In 2001, the merger of IPAMB and the Directorate-General for the Environment originated the Environment Institute and, in 2007, it became the Portuguese Environment Agency (Pinto, 2004, p. 159; Tavares, 2013, p. 34).

Final Notes

The concerns with the environment, and especially the issue of Environmental Education, are historically recent. The visibility of environmental issues began in the middle of the last century, associated with awareness of environmental degradation and at the epicentre of cultural and social manifestations.

The analysis of the brief history of EE leads us to the assumption that it is a movement committed to economic and political guidelines. The attention drawn by several personalities was not enough to bring about an *education* for the environment, especially since the concept of education refers to an intentionality that is often only achieved through institutional means.

This seems to have been the path taken by EE. Being promoted by international high politics as a way to fight the problems that plagued the planet, EE did not find a truly strong and robust space in national and regional policies. There are problems that are global by nature and, as such, have to be solved globally. However, until now, the narrative of economic, and why not say social development, has hindered serious measures to combat environmental problems and climate change. Let us take, for example, the frail Paris Agreement, which showed shy commitments from the adhering countries. Even though it has been agreed to keep global warming below 1.5°C, national contributions were meagre, and the United States of America pulled out of the agreement in 2017. A global carbon tax, which could have incentivised countries to abandon the use

⁴ An *Ecoteca (Ecotheque)* is a space that is dedicated to the promotion of natural values, where resources and documents on the environment are made available. It is also a space where environmental protection awareness activities take place, namely classes, exhibitions, lectures, and others.

of fossil fuels, was not set. Also, no sanctioning mechanisms were established for those who failed to comply with the agreement. Adding to this, the fact remains that reaching such an agreement is a historic event, providing people with a false sense that they don't need to do anything, as States will resolve the issue. Not only was it not resolved, but in the recent COP27 in Egypt, in November 2022, countries struggled to make serious commitments in this area, with Secretary-General António Guterres concluding that there is *much homework still to be done and little time in which to do it* (United Nations, 2022)

Paradoxically, the intentionality that should be vested in EE is countered by the ineffectiveness of concrete actions in this field. From the 1960s and 1970s onwards, bureaucratic solutions, such as declarations and documents, proliferated and have little contributed to the construction of a policy-action by national governments to implement environmental education.

It is worth noting the initiatives of civil society which, organised in associations or NGOs, have undertaken work worthy of social and educational recognition. This has been done by promoting periodical publications on the subject, organising debates and educational actions in order to make the population aware of the importance of different habits, a different culture of sustainability, a new mentality in the management of the planet's resources. The path from environmentalism to environmental education has been a tortuous one, marked by the will to do more for the environment, but also by corporate and state *lobbies* that have hindered serious progress in this field.

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