

Eco-Education: A Required Element of Public Policies for Sustainable Social and Economic Development

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Abstract

In this article, the author analyzes eco-education from a transdisciplinary perspective, as part of the “new education”, referring to its current dimensions, its goals and its utility in shaping the attitudes and behaviors of contemporary humans towards their environment and towards sustainable living. The goals and content of eco-education are dependent on a new philosophy, on a new axiological and ethical orientation that is, opposed to rationalistic philosophy, which guided the age of machinism and industrialization. The new view regarding humans’ (anthroposphere) relations with nature (biosphere and geosphere), is inspired from the fundamental rights of the human being, as part of nature, from universal values which harmonize sociosphere and biosphere, the ecological awareness of contemporary society with regard to the objective laws of nature, biodiversity conservation and environmental protection by juridical laws.

These goals are meant for the entire population, especially children and young people, with the aid of schools and other educational factors (church, mass – media, cultural foundations, non-governmental organizations etc.), an ecological awareness, positive feelings and attitudes with respect to the environment, skills, abilities and capacities for efficient action in the sense of protecting nature and conserving ecological circuits. The author lays an emphasis on the idea that ecological education, in all its forms, will not yield the results expected by experts and future generations if it is undertaken randomly, fragmentarily, incoherently – regardless of how diversified and quantitatively extended it might be. As a global issue of today’s society – the efficiency of eco-education is dependent on the philosophy of nature and life, materialized in a global strategy, such as that of durable and knowledge-based development, which will facilitate the harmonization of various public policies launched by contemporary organizations and authorities. Generally speaking, any public policy has an ecological component, and the obtainment of performance in ecological policies necessarily involves an adequate ecological education.

Keywords: Eco-education; environmental awareness and behavior; goals of ecological education; the new philosophy of education; sustainable development

Introduction

Over the last few decades, numerous and qualitatively diverse alarm signals (Prestipino, 1980; Gough, 2008; Orr, et al., 2005) have been drawn regarding the dimensions of an ecological crisis, the perspectives of deteriorating certain components of biosphere and sociosphere, as a result of uncontrolled population growth, urbanization, industrialization, arms races, increased transportation, climate changing, etc. Thus, water, the atmosphere, soil, natural deposits, vegetation, fauna and even climate are being increasingly menaced. At the same time, a part of the essential ecological processes are subject to alteration, the genetic conservation of the entire diversity of plants and animals is threatened by extinction of species, the antroposphere is in continual expansion, against the backdrop of a soaring tendency of ecological imbalance.

The fears of Italian philosopher Giuseppe Prestipino that, although science now progresses at an unprecedented rate, although the discovery of new sources of power is an everyday fact, the increase in humanized nature now causes a reduction in the humanizable one and may trigger the disappearance of primordially friendly nature (Prestipino, 1980), are more topical than ever. All these occur in a context where the vast majority of the inhabitants of our planet have no knowledge whatsoever of ecological issues and practices, are unaware of the truth that resources and capacities of ecosystems are limited and that human intervention in the natural environment must comply with objective laws, with an entire axiomatic system of environmental protection.

For such reasons, concerns have risen among experts that include biologists, geographers, geologists, sociologists, anthropologists, economists, chemists, pedagogues, political scientists, historians, and others and among philosophers and politicians. Consequently, international bodies for example: the International Union for Conservation of Nature, the United Nations Environment Program, the World Wide Fund for Nature, the European Foundation for Ecological Education and Culture, the Convention on Biological Diversity, ratified in Rio de Janeiro in 1992, the Global Environmental Management System and others were created, and all countries adopted legislative measures enforcing nature protection strategies, in order to stop ongoing destructive excesses, and nature imbalances.

Another attitude in the world of today, principally derived from the realm of businesspeople and technocrats, is expressed in the idea that it is normal for the price of enhanced economic efficiency, increased level of consumption, the greater amount of luxury by a fragment of the population, to be paid by nature. All variants of environment pollution, chemical, thermal, sonic, radioactive, air, water, soil, etc., the changes in the planet's ozone layer, the destruction of forests, the expansion

of deserts, the disappearance of a large number of living creatures etc. constitute the natural result of economic development and demographic pressure. But the disastrous consequences of the impact between technocracy and the ecosphere were clearly argued by biologist Barry Commoner, who evidenced the chain of effects that might reach the point where the Earth could no longer sustain life (Commoner, 1980). The lack of ecological awareness and culture in the majority of managers in all fields and in the majority of the planet's inhabitants is one of the causes which started and have supported the global environmental crisis, threatening the Earth with a possible collapse.

For such reasons, ecology as a science, applicative research in this field gains new meanings and importance in the system of values orienting the actions of governments and, especially, the educative action. "Ecology", C. Pârvu wrote, "has the purpose of knowing the organization, the functional and health state of nature. Provide environmental information and education for people, showing them what nature means and what each one of us stands for within it!" (Pârvu, 1999: 5). Today, it is more necessary than ever to secure, as part of a national system of instruction or education not only for the young, but for the entire population, a broad access to the knowledge of environmental realities which will have to be taken into account and the development of a motivation required for a value-oriented, environmentally aware behavior. Meeting the desiderata of eco-development and sustainable development will be achieved by what we might call an eco-education.

Ecological education – an objectively necessary side to shaping the contemporary human being

The *Declaration of the United Nations Conference on Human Environment* (Stockholm, June 1972) contains the idea according to which "nature conservation will become efficient and real only when it is made an integral part of the philosophy and behavior of all". In order to attain such a level of civilization, an essential component of the strategy for long-term economic and social development is ecological education, in a large sense.

A few contemporary pedagogues, programs authors and ecological policymakers of the last decades have inserted eco-education into the category of "new educations", situating it along the education for peace, education for democracy and human rights, education for durable development, economic education, demographic education, etc. These "educations" were formed as responses of educational systems to the political, economic, sociological, demographic, and health-related imperatives of the contemporary world. (Cristea, 1998: 315).

Eco-education, as an organic part of the contemporary personality-shaping system is an imperious necessity generated by the myriad effects of civilizational progress: some are beneficial for human existence and its historical development, others are detrimental – causing pollution, ecological crises, mental and somatic illnesses, elements of artificial environment that are hostile to life in general and humans in particular, which pose a serious threat to biodiversity and human life. In such a global situation there is a need not only for technical, administrative, medical and political intervention in order to put an end to pollution and threats against life on Earth, but also for eco-educational measures which would “prepare people, from an informational and actional (practical) point of view, in a creative spirit, for the prevention and elimination of pollution, for the ecological improvement of the environment (Botaş, 2008: 97). This way, eco-education is also an education for “green”, durable development and an education for the higher cultural and spiritual values of contemporary people, it is an education put to the service of future generations. It is indubitable that eco-education is the key to durable development; as a multi- and transdisciplinary field, it gives much-needed meaning to preserving balance in the global dynamic of technologies, economy, society and the environment. Consequently, it is “the education of today’s humans for the world of tomorrow” (Marcu & Marinescu, 2009: 9). The inhabitants of planet Earth must know today that they can no longer live, as they did a decade ago, by wastefully consuming the resources of the planet and eliminating toxic substances, wastes, industrial residues etc. into the environment. What we need is a generalized and constant attitude of caring for the nature, in order to leave our descendants with sufficient resources meant to ensure their future development, a clean environment, a healthy planet. Reconnecting humans to nature, re-naturalizing life as a perpetual process bring extraordinary benefits for all of us (Louv, 2012).

The objectives and contents of eco-education, the people’s attitudes and behaviors with respect to nature are organically correlated to their philosophical and ethical outlook, as well as to their axiological orientation regarding the relations between humans and nature, between sociosphere, biosphere and geosphere. The winding road of evolution in eco-education, its successes or failures at a local, national, regional or planetary level are dependent on the system of values and the philosophical justifications regarding the content and the direction of man-nature and society-biosphere relations, which orient ecological policies and eco-education makers. Ecological imbalances, the ecological crisis which contemporary society is confronting are, to a great extent, in the opinion of many researchers and essayists, the effect of applying an orientation or a philosophical creed referring to the position of humans within nature that contradicts the laws of nature, causing fissures and inadequacies within ecological instruction and education (Saylan and Blumstein, 2011).

Beliefs, explanations, justifications, philosophical outlooks on man-nature relations have strongly influenced the entire history of educational theories and practices, i.e. the attitude of humans towards the environment. During the historical period immediately preceding the ecological crisis, which started to acutely manifest itself in the middle of the 1960s, two philosophical positions were confronted: an anthropocentric one, glorifying the powers of man with respect to nature, marginalizing the environment and the laws of nature by reference to the greatness of man and the latter's rights on nature, as the crown of divine creation. On this doctrinal standpoint, of a Cartesian, rationalistic origin, regarding man-nature relations, the Western industrial civilization was built. At the opposite pole was the view that overestimated nature, the beauty of the environment's wild state, the "golden age" of society's long-lost origins. For followers of this position, the beauty of pristine nature places industrial civilization on a peripheral, gloomy plane.

Starting in the second half of the 20th century, the real ecological issues have required an ample and responsible human intervention, not only through practical actions, but also through a change in attitudes and outlooks, by promoting "a theoretical approach to ecological, economic and cultural interrelations between man (society) and his environment, in the sense of reevaluating his status within the ecological system, restructuring and harmonizing his two fundamental natures: the physical/biotic one, on the one hand, and the human/cultural one, on the other hand" (Duțu, 1999: 164).

Theories on education and modern educational practices were integrated into the same philosophical paradigm, whereas the constellation of undesired effects was amplified, re-bringing the topic of man-nature, society-biosphere relations to the foreground of concerns, as one of the global issues of the contemporary age.

Alarm signals regarding the deterioration of man-environment relations have been amplified and diversified over the last decades, drawn by various expert teams: economists, sociologists, physicians, biologists, chemists and, of late, even pedagogues who vigorously argued the necessity for ecological education in shaping the personality of modern humans, especially, that of postindustrial society (Commoner, 1980; Bodzin et al., 2010; Louv, 2012). Future societies will have to attain the people's ecological aspirations in order to achieve a human *modus vivendi* between biosphere and human society, between nature and economy, between efficient action and the quality of man-nature relations, and between the human condition and bio-geosphere.

Indeed, eco-education assumes important tasks in attaining these objectives, which should result in solving one of the most acute global issues of humanity: the environmental crisis. Eco-education is guided by the values of human rights philosophy, ethics, ecology and pedagogy; it is an education by and for values, targeting all ages, through diverse disciplinary contents (social sciences, humanities, biology,

chemistry, physics, theoretical and applicative sciences etc.), having an essentially transdisciplinary and ethical character. Its efficiency is ensured by the use of principles and prescriptions of pedagogy, as a theory and as an art, by apprehending collective benefits, *healthy, durable, resilient, just, and prosperous* (Orr, 2004: 3).

There are a few axiomatic truths, which underlie the ecological education, particularly for children and young persons in the educational system, as follows:

- The conservation of the entire qualitative diversity of plants and animals on Earth is the basis for preserving all properties of the environment. The entire gene pool of the biosphere has a potential value for man, and the loss of some of its elements would be irrecoverable;
- The assurance of all conditions for compatibility and harmony in economic and social development, for civilization and culture, while protecting and conserving biosphere and the environment as a whole;
- Society-biosphere relations are maintained by human beings, through their behavior. Consequently, ecological issues do not pertain only to governments or specialized institutions, but to all people as individuals and personalities. For this reason, environmental protection, health, rationality and esthetics of human action with respect to nature, are fundamental ethical and juridical values of the contemporary man. Eco-education is dedicated to the promotion of these values in efforts to shape personality, starting with preschool and school education, continuing with the lifelong education and self-education of grown-up persons, and ending with old-age education. Thus, eco-education represents a logic and immense step, focused on the achievement of the common society goals oriented towards reducing humans destructive impact on the ecological system (Saylan and Blumstein, 2011: 5).

The need for introducing ecological education in national educational systems, for practicing it across all ages and extending it to the entire population, was emphasized in the ecological enthusiasm during the last third of the 20th century, which was gradually extended to a planetary scale, justified by the agenda and actions of environmental movements. At the same time, it was vigorously sustained at various worldwide congresses and conferences, starting with the UN Conference on Human Environment, held in Stockholm, June 1972. Subsequently, governments and public authorities from various countries on all continents, several international organization and non-governmental organizations have adopted and implemented strategies for nature conservation, starting with the World Conservation Strategy - launched by the International Union for Conservation of Nature in 1980 and continuing, on a larger scale, with the Programme of Action for Sustainable Development, entitled "Agenda 21", adopted by the World Conference on Environment and Development, held in Rio de Janeiro - June 1992. Those involved in the elaboration of programs and ecological

strategies began to evaluate the necessity for and importance of ecological education, information and exposure in the media, for carrying out public policies in this field. Their arguments and pleadings have been, of late, added new argumentations developed within the framework of eco-sociology and the science of environmental protection law.

Ecological education essentially targets the formation of awareness, feelings and a responsible attitude in man for his interrelations with the abiotic and biotic environment. It involves various intellectual and scientific components (knowledge of anatomy, physiology, economy, geography, sociology, psychology, botany, zoology, physics, chemistry, mathematics, demography, medicine, law, public policies, the management of durable development etc.), but its main vocation is the formation of attitudes and behaviors stemming from the individual's affective attachment to ecological values and, in general, to the human condition, so as to respect and guard the principle of unadulterated conservation of the biosphere and ecological balance – components of a dignified ethical conduct. To this end, the content of ecological education features, apart from scientific/ecological information, philosophical, ethical and axiological argumentations, as well as artistic ideas (Goleman et al., 2012). All these contribute to the repositioning of man within society, civilization and the ecosphere – as a conscious and responsible being, capable of creative thought and innovative action in environmental matters.

The objectives of eco-education

The cultivation and stimulation of initiatives and a person's intellectual and moral autonomy, in terms of his/her ecological conduct, entail the steering of eco-education towards clear objectives, according to which the selection of educational-informational contents will be made in respect of ages, cycles, profiles, for lifelong learning purposes, and the appropriate teaching methods, procedures and techniques will be adopted. The main groups of *eco-educational objectives* may be stated as follows:

a) Assimilation, by the recipients of ecological education, of an amount of knowledge, information, theories, paradigms and the formation of intellectual capacities that would allow them to understand the unity and diversity of the biosphere, the laws governing living matter, the need for conserving and protecting nature; the knowledge of man-nature, civilization-environment relations, of the causes that led to the deterioration of the environment, of the fact that it is in man's power to recklessly interfere with nature, in order to dominate and control nature, but that so is the opposite alternative, which is the only one acceptable if avoidance of an ecological disaster is sought; knowledge on polluting and nonpolluting techniques, on how to achieve ecological balance, keep the environment clean and embellished etc. Such knowledge must be focused on concrete, direct relations between people and

their immediate environment and, then, more distant ones, reaching as far as those environments that are situated at the brims of knowledge. The attainment of this objective is materialized in the formation of ecological intelligence and awareness in individuals, groups and communities.

b) The development of feelings, motivations, convictions, attitudes on man's biosocial situation, on the dependence of the future of the human condition on the evolution of man-biosphere, society-nature relations, on the necessity to harmonize individual behavior with the environmental requirements, on the advance of civilization in agreement to natural circuits, on the harmonization of natural objectives for increasing workforce productivity and economic efficiency with the respect for the objective requirements of ecological balance, on the fact that the rationality of human action is compatible with environmental protection regulations only when man's initiatives, choices and practical measures, the liberties assumed by the human being can be fitted into the scope of ecological values. In this context, Goleman et al. (2012: 3) argue for the necessity of *cultivating the new ecological sensibility, the emotional, social, and ecological intelligence by educators.*

c) The development of abilities, skills, habits, behaviors in the subjects of ecological education, according to the contents of the first two objectives, this being the objective that is most difficult to attain since it is, in fact, a synthesis of the results of eco-education. The superior product of eco-education is the sensible, well-balanced man, good manager of nature, the man who knows what he can take from nature because he is aware of the obligations he has towards it, if he wishes to maintain its circuits and balance functional and unaltered. The rights of contemporary man in his relations to nature, the dimensions of his behaviors and initiatives are limited by the obligations imposed by the objective laws of natural environment. If the human species wishes to develop and conserve itself from a genetic and biophysical point of view, it is objectively necessary for it to comply with the laws of nature in general, and with those of biodiversity and ecological balance in particular. Only then is it necessary to observe juridical laws on nature, and ecological norms of environmental quality. But positive laws, environmental law, according to the philosophy of natural law, must be continuously adapted to the laws of nature so that man, his institutions and governments would not harmfully interfere with the natural functioning of the latter, lest the effects of their actions should turn against the good march of civilization, and the harmonious development of the human species.

Consequently, the development of ecological abilities, skills and habits is a practical, actional objective of ecological education, meant to facilitate the prevention and elimination of pollution, the creation of a clean natural and artificial environment, the development of socio-economic, cultural and spiritual environment allied to nature and favorable to man, and the promotion of durable peace (Bontaş, 2008: 97).

d) The development of capacities for self-education and self-instruction in the ecological field, for persevering in the enlargement and updating of one's own ecological culture. Or, this entails the understanding of phenomena occurring in ecosystems, the development of critical thought and the capacity for logical argumentation, the capacity to solve everyday ecological issues, starting from those pertaining to the household and continuing with those which appear on one's way to work, in the urban/extra-urban area, and then at work and within the community, the development of communicational and teamwork abilities in order to apply ecological solutions, the formation of an artistic and esthetic sense for perceiving beauty in natural and artificial environments etc. All these are prerequisites for practicing permanent eco-education, in all stages, and in the entire life.

e) The formation and development of a critical and civic spirit, as an essential dimension of the contemporary man's ecological culture. This implies, apart from knowing the ecological issues, covered in the media on a daily basis, and how to solve them, an active, creative intervention by people, in order to carry out practical solutions, to disseminate knowledge, to manage the implementation of solutions to local and regional issues, to impose ecological behaviors, stipulated by laws, regulations and moral norms, upon one's fellow humans. The critical spirit in this area also bears, for an individual, the meaning of intervening, through the media, in organizations, institutions, communities, in order to form public opinion in agreement to contemporary ecological values, knowing that the 21st century started as a period dedicated to the health of the environment, as an antidote to the pollution and environmental crisis caused by the 20th century, which, if they are not stopped, will evolve towards the self-destruction of the planet, implicitly of the human species.

Consequently, the critical, civic spirit, the individual's capacity to complete his/her culture and ecological behaviors, target not so much the personal manifestations of the individual as, especially, the association and attachment of all humans in a community, up to the planetary level, with regard to the great ecological values, so as to develop uninterrupted, coherent attitudes and actions in the sense of protecting nature and unanimously complying with environmental quality norms, in any given place and time. Having a critical spirit means convincing other people that nature is man's ally, that any action directed against nature, infringing upon ecological norms, will sooner or later turn against man and the survival of the human species on Earth.

f) An essential objective of ecological education is trans-individual, namely the formation of an ecological culture at the level of human communities, at the national, regional, international level of the broad public opinion. Ecological culture and education cannot yield the desired results in the field of ensuring environmental protection, conserving biodiversity and existing biological circuits if they are limited to an elitist circle; they will be accomplished if they are transformed into a mass

ecological culture, based on the solidarity of people, institutions, states, international organizations around ecological values, and if they are materialized in concrete, mass actions, focused on solving ecological issues.

g) Public opinion plays a prevailing part in the implementation of ecological policies and programmes. The cultivation of active solidarity feelings among people, by experts, social pedagogues, by mass-media institutions, in general, and public education, in particular, are necessary measures for completing the ecological education of each individual taken separately and for carrying out projects of ecological policies. Possessing such instruments in the structure in their personalities, contemporary and, especially, future generations will be able to externalize a constant responsible attitude, a propensity for the various concrete, practical ecological issues. This involves not only formal, but also informal ecological education, not only the national educational system, but also other factors such as mass-media, the church, non-governmental organizations, environmental organizations, etc. Thus, eco-education represents a solid premise for the sustainable development, for solidarity between generations (Stone, 2009).

Given the inter-, multi-, and transdisciplinary character of ecology as a branch of knowledge, the issue of establishing the contents of eco-education has given rise to disputes, contrary opinions among pedagogues, educational planners, financiers and experts in ecology. Basically, on a worldwide plane, two ways of promoting the contents of this education were shaped. The first would reside in the introduction of specific modules in educational curricula, comprising inter-, multi-, and transdisciplinary knowledge. The other way is the introduction of ecological education contents into the scope of several subjects. The formative effects of the former variant are evident, but it has the disadvantage of entailing change in the economy of the curricula, increased educational costs and an informational overload for children and young people, although it is practiced in numerous countries. It was practiced in Romania, as well, during a period of time when ecology was an integral part of the curriculum for the secondary cycle.

The infusion and interspersing of ecological information into several educational subjects does not always yield the desired formative results. This inconvenient may be counteracted by the introduction of educative topics of inter-, multi-, and transdisciplinary synthesis, which should not be left to spontaneity, but established in the curricula of educational subjects (biology, geography, history, chemistry, physics, economics, literature, sociology, philosophy etc.). Experts in national curriculum and educational planners should intervene in each cycle and year of study to ensure the continuity of the content of ecological education, using intradisciplinary, interdisciplinary, transdisciplinary, thematic – pluridisciplinary and modular approaches (Ionescu, 1996: 328).

The road to the formation of an ecological awareness, culture and civilization is a long and winding one. Humankind has no other choice. This road must cross the educational shaping of human personality. Consequently, eco-education aspires to increase its weight and roles in the educational structures of the European Union and of the other states, in the overall contents of future education, so that the 21st century and the 3rd millennium would be quintessentially ecological.

Policies, Strategies, and Programmes of Eco-education

During the 1970s, ecological culture, accumulated and appropriated by expert circles, started to permeate public opinion by propagating fears regarding a possible ecological catastrophe at the level of humankind, fostered by the exhaustion of natural resources, by the uncontrolled economic and demographic expansion and by pollution. Not only educational institutions of all kinds, but also research institutions, the mass-media, the Catholic church, and, subsequently, the other Christian churches, different international and national organizations, non-governmental organizations started to elaborate projects of ecological education for their public, to express concern about ecological issues and send out messages for awakening the responsibility of all people with regard to the future of the Planet, to inform different segments of public opinion on the solutions to global, sectorial or local issues, targeting nature conservation. At the same time, public authorities, governments everywhere, started to launch strategies and programs of ecological policies, more or less sparse and integrated into a global view on economic – social – demographic development.

The axiomatic truth reached by the governments of developed countries is that the response of states and societies to ecological issues must be materialized in ecological policies, and their implementation requires the interactive shaping of public opinion, the formation of a broad public that would actively support each of their ecological policies. The promotion of eco-development is concretely accomplished through a program of public policy with a clear identity, according to the place, time, area, cultural level of the public involved and, first of all, to the specificities of the ecological issue on the agenda of public authorities. Ecological education introduced and conducted in educational institutions, including universities, proved to be inadequate for the public that benefited from it. The implementation of ecological policies and the attainment of assumed objectives require specific, lifelong education. Ecological knowledge, undergoing uninterrupted development, is to be used in the education of those who participate in the implementation of economic public policies, according to the nature and span of the issues to be solved. Gradually, ecological policies, the expansion of information and ecological education, the enhancement of media-coverage processes corresponding to these policies have led to the formation, over the last decades, of a common awareness and culture of Humankind, of an increased attention, by all people, *vis-à-vis* ecological issues. The higher the degree of involvement by a

number of people, social groups, collectives, communities, organizations, nations and international institutions, in the design, implementation and completion of today's ecological policies, the more relevant and reliable the results of eliminating the effects of the global environmental crisis will be. But all these are possible through systematic and nonsystematic, official and unofficial, formal and informal ecological education, through the education of experts and managers in all fields, of the staff of public policies and the broad public.

A second axiom, which started to be applied in the 1980s (after the publication of the report entitled "Our Common Future" by the United Nations Commission – 1987 and, especially, after the World Conference on Human Environment in Rio de Janeiro – 1992), states that environmental public policies will not succeed if they are launched and carried out in an isolated, accidental manner, in absence of a general vision; a global outlook is required, an integrated long-term perspective and global strategies guiding the harmonization of ecological policies to one another and to economical, social, demographic and health-insurance policies. Thus, the concept of "sustainable development" emerged, which will be accomplished, provided that environmental policies become constitutive parts of all other policies, ranging from those in the field of scientific policies and defense, to those in the field of culture and cults. Or, compliance with these axioms and accomplishment of the objectives of durable development involve not only the scientific knowledge required for solving environmental issues, but also a new philosophy, a new axiological order, inter-, multi-, and transdisciplinary vision, an axiology centered on human rights and natural law (the laws of nature), on universal ecological values.

The success of ecological policies for durable development, the promotion of eco – economy and eco – efficiency requires a different education, on social levels other than those specific to the age of industrialization, machinism and rationalism. Apart from leaders, managers, statespersons with an ecological vision for the 3rd millennium, for achieving ecological programs and strategies adopted by international bodies, by the European Union, by different states, non – governmental organizations, there is also a need for a new political and managerial culture, integrating the knowledge and values of eco-sociology, of the science of environmental law and, principally, of the new philosophical and axiological view on eco-education. All these involve an appropriate projection of the content, levels and forms of ecological education, not only in the national educational system, but also in the post-university period in people's lives. Each ecological policy requires organizing human resources trainings, instructing experts, attracting interested organizations and the public in order for it to support that specific policy. The coordination and integration of environmental policies in elaborating sectorial, regional, international, and even planetary policies, is still in its early phases. Education, media coverage, and educational policies in this field have modest outcomes, compared to the expectations of ecologists.

A third axiom, decanted from the experience of public authorities and environmental experts, resides in the fact that, both on a global scale, and at a national or local level, almost in any human community there is an opaque segment of population, unresponsive to ecological issues and education. A part of this segment is still aggressive towards nature, and the destructive, harmful effects they cause are directly proportional to their social position. It is noteworthy that there are still decision makers, managers, directors, etc. who belong to this category. In relation to these, if specifically applied ecological education does not yield any results, then juridical and civic education should be used for preventive purposes, and environmental norms and sanction systems corresponding to each ecological policy should be applied in order to correct the damaging behaviors of institutions and persons.

Overall, ecological education will not be efficient as long as there is no public policy adopted by relevant authorities (for example: the ministry of education, the ministry of environment, the UNESCO, the UN Commission for durable development, the Council of the European Union etc.), by which the former would be integrated, oriented and dimensioned according to the purposes of other policies. Unfortunately, after analyzing different ecological policies launched by governments or ministries of countries in the European Union, we reached the conclusion that the formative dimension of the human resources involved, as well as the education of the public who will participate in or benefit from the results of those policies, are regarded as being of secondary importance. Or, environmental protection, the health of the Earth, the conservation of biodiversity, implicitly of human health, entails the observance of the fourth axiom: there is a need for permanent ecological education, specifically applied depending on age, social, socio-professional, and ethnical categories, on the people's level of culture and specialization – which implies incurring certain costs. In countries where, apart from universities and schools, different educative factors such as television, the radio, written press, the Church, cultural foundations, diverse non-governmental organizations, have participated in or launched educative ecological programs, integrated into local, national or regional public policies, results in terms of preventing and combating pollution, and environmental protection are evident and measurable.

The European Union has gradually adopted environmental policies since the 1970s, and, from 1986 onwards, an integrated strategy for environmental protection. In 1992, the Treaty on the European Union incorporated in its structure the concept of durable development, which was subsequently reflected in the entire legislation of the European Union and member states. Later on, the Treaty of Amsterdam placed durable development at the forefront of European Union objectives so that environmental issues should be integrated and solved, both in the general strategy, and in sectorial, regional public policies.

It is not only the integration of environmental aspects in all other policies of the European Union that will lead to the assurance of durable development, but also the development and application of European legislation by member states, international cooperation within the UN's "Agenda 21", the promotion of the new philosophy and axiology opposed to that which underlies the civilization of machinism and industrialization, which would orient the mindset of the inhabitants of our planet, the development of a modern, mass ecological culture and awareness, the transition to a knowledge-based society and economy, a radical change in the people's attitude towards nature. Or, the public policies of the European Union and its member states over the following decades, as well as those adopted at international level and on a planetary scale will be, certainly, genuinely "green", and the Earth will be a clean and proper home for man, due to the decisive contribution, a necessary objective of pragmatic and efficient ecological education. As ecological issues infiltrate the broad public opinion, the common awareness of Humanity, as people develop cherishing and protective feelings and attitudes towards nature, their daily interests and concerns for saving the Planet will become permanent and invaluable for future generations. Virtually, these issues require contemporary humans to re-assess their ecological condition in accordance to the paradigm of the philosophy of life, oriented by the ecological values of the 3rd millennium and by the eco-educational sciences.

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