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ENVIRONMENTAL EDUCATION FROM THE PERSPECTIVE OF CLIMATE POLICIES

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Climate education is a component of environmental education, essential for understanding the practical aspects of a sustainable lifestyle, as well as for managing changes, learning how to adapt to them, and how to prevent their worsening. Education is a key tool in counteracting climate change. Climate and environmental education refers to an educational process that promotes a sustainable lifestyle by developing ecosocial competencies.

This type of education focuses on familiarizing young people with the natural and socio-economic issues caused by climate change, as well as with ways to improve the response to these challenges. In this context, education plays a crucial role in shaping public policies and implementing measures for environmental protection and combating climate change.

Education represents much more than simply teaching knowledge and principles; in a broader sense, it is education for social change-raising public awareness and encouraging concrete actions with the aim of creating a sustainable future.

Keywords: *environmental education, climate education, climate change, environmental policy, European perspective.*

EDUCAȚIA PENTRU MEDIU ABORDATĂ PRIN PRISMA POLITICILOR CLIMATICE

Educația despre climă reprezintă o componentă a educației ecologice, esențială pentru înțelegerea aspectelor practice ale unui stil de viață sustenabil, dar și pentru a gestiona schimbările, a învăța cum să ne adaptăm la acestea și cum să prevenim agravarea lor. Educația este un instrument esențial care contribuie la contracararea schimbărilor climatice. Prin educația climatică și ecologică se înțelege un proces educațional care promovează un stil de viață sustenabil prin dezvoltarea competențelor ecosociale. Acest tip de educație se axează pe familiarizarea tinerilor cu problemele naturale și socio-economice cauzate de schimbările climatice, dar și cu modalitățile de a îmbunătăți răspunsul la acestea. În acest context, educația are un rol primordial în elaborarea politicilor publice și în implementarea măsurilor pentru protecția mediului și combaterea schimbărilor climatice. Educația reprezintă mult mai mult decât simpla predare de cunoștințe și principii, fiind, în sens larg, educația pentru schimbarea socială, prin sensibilizarea publicului și prin acțiuni concrete, în scopul de a crea un viitor durabil.

Cuvinte-cheie: *educația pentru mediu, educația climatică, schimbări climatice, politica de mediu, perspectiva europeană.*

Introduction

Environmental and climate change education, in the context of the global climate crisis, emphasizes the importance of developing ecological and climate awareness among citizens. This research addresses one of the most pressing global challenges: climate change. This educational approach is closely linked to environmental policies developed at both national and international levels, aiming to reduce the negative impact of human activities on the environment and to ensure sustainable development.

Climate change and environmental degradation are issues we face both nationally and globally. Climate change represents major challenges that will shape future generations. Addressing these challenges requires fundamental transformations at both economic and social levels. Education is one of the key pillars in improving the response to climate change, by influencing human behavior to protect nature and resources. It is widely recognized that climate education plays a fundamental role in the behavioral and mental adaptation of society to climate change [1].

Moreover, the goal of climate change and environmental education is to contribute to the achievement

of long-term sustainability objectives, to support relevant stakeholders (including central and local public authorities) in tackling the serious effects of pollution, environmental degradation, and climate change, and to enhance their capacity to intervene.

Climate change and environmental education plays an important role in preparing younger generations to understand and address the challenges posed by climate change, and to become responsible citizens in this regard.

This study contributes to shaping a new generation of young people who are aware of the importance of environmental protection and the need to take action against climate change [5]. Climate change education can be influenced by several factors: international commitments, national commitments made by authorities, the urgency of addressing climate and environmental issues, public pressure, and the demand from young people [4].

Policy Framework

At the international level, there are numerous agreements aimed at combating the effects of climate change. In 2012, in Doha, during the Conference of the Parties on Climate Change, the Work Programme for the implementation of Article 6 of the United Nations Framework Convention on Climate Change was adopted. This article refers to education, training, and public awareness regarding climate change. The programme outlines the responsibilities of the parties and the implementation timelines.

The long-term objective of the European Union is to achieve air quality levels that do not pose risks to human health or the environment and that are free of unacceptable risks. The EU acts on several levels to reduce exposure to air pollution, namely: through legislation; through cooperation with sectors responsible for air pollution, as well as with international, national, and regional authorities, non-governmental organizations, and through research activities [2].

European Union Policies

The policies of the European Union aim to reduce exposure to air pollution by lowering emissions and by setting limits and target values for air quality. At the end of 2013, the European Commission adopted the Air Quality Package, which includes new measures to reduce air pollution.

In 2014, the Lima Ministerial Declaration on Education and Awareness in Climate Action (Action for Climate Empowerment/ACE) was adopted, and in 2015, it was incorporated into Article 12 of the Paris Agreement. Action for Climate Empowerment (ACE) targets six key elements: education, training, public awareness, public access to information, public participation, and international cooperation [8].

One of the most important documents in this regard is the Paris Agreement, signed in 2015, which aims to limit global warming to well below 2°C, preferably to 1.5°C, compared to pre-industrial levels. To date, 193 countries have ratified the agreement, committing to contribute to this common effort through national measures.

Over time, the international community has adopted a series of other cooperation instruments to combat climate change, protect the environment, and promote sustainable development models, such as the 2030 Agenda for Sustainable Development of the United Nations (UN, 2015) or the Sendai Framework for Disaster Risk Reduction 2015-2030, and the European Commission’s 2019 Communication [2].

Environmental policy has recently begun to take a central role in the European Union’s policy-making process. In 2019, the European Commission launched the European Green Deal as the main driver of its economic growth strategy. This initiative is based on the principles of precaution, prevention, and pollution reduction at the source, as well as on the “polluter pays” principle.

In this regard, a number of new legislative strategies and documents—either sectoral or integrated-as well as projects addressing climate change issues can be mentioned. In May 2021, UNESCO adopted the Berlin Declaration on Education for Sustainable Development, through which over 80 ministers and deputy ministers, along with thousands of stakeholders in the fields of education and the environment, committed to taking concrete actions to transform education in support of our planet’s survival.

Romania participated as an observer in the working group that drafted the Declaration, represented by Presidential Adviser Ligia Deca.

Through this document, UNESCO declares that environmental education must become a core component of school curricula by 2025. According to UNESCO Director-General Audrey Azoulay, "education can be a powerful tool in transforming our relationship with nature. We must invest in this area to preserve the planet."

Recently, at the European level, the Coalition for Climate Education was formed, and the Council adopted a Recommendation on Key Competences for Lifelong Learning [2]. In the following section, we aim to highlight EU-funded documents or projects aimed at improving environmental quality.

EU4Environment is a project funded by the European Union for the period 2019–2024, with the aim of ensuring the sustainable use of natural capital, improving environmental quality and public well-being, and stimulating economic growth in the six Eastern Partnership countries. EU4Environment supports policy and legislative changes by promoting innovative technologies, the adoption of new green business models, and is backed by other international organizations such as: the United Nations Economic Commission for Europe (UNECE), the United Nations Environment Programme (UNEP), the United Nations Industrial Development Organization (UNIDO), the OECD, and the World Bank.

The European Research Strategy for 2020–2024, launched in 2020, places research and innovation at the heart of Europe's ambitions to achieve full climate neutrality and resilience by 2050 [7, p. 10].

Another category of EU-level documents includes the 2030 Climate Target Plan, signed in 2020, which proposes to reduce greenhouse gas emissions by 55% by 2030 compared to 1990 levels. The plan outlines a set of necessary actions across all economic sectors, focusing on transforming the energy system—including buildings, transport, and industry—through decarbonization.

The Circular Economy Action Plan (2020) includes a series of actions to ensure that products are suitable for a climate-neutral, resource-efficient, and circular economy. The plan aims to reduce waste and the carbon footprint of products, while ensuring that the EU has a functioning internal market for high-quality secondary raw materials.

The Sustainable and Smart Mobility Strategy aims to put European transport on the path to the future (2020), with a central objective of reducing emissions in the transport sector by 90% by 2050 through the large-scale adoption of sustainable transport solutions. This approach is part of the broader effort by the European Union to transform key sectors toward sustainability and reduced environmental impact.

Within the same strategic framework is the "Farm to Fork Strategy" (2020), which aims to reduce the ecological and climate footprint of the EU's food system, ensure food security under conditions of climate change and biodiversity loss, and promote fair trade throughout the food supply chain.

This strategy is supported by other complementary initiatives, such as the European Climate Law, adopted in 2021, which legally enshrines the objective of climate neutrality, as well as the intermediate target of reducing greenhouse gas emissions by at least 55% by 2030, compared to 1990 levels.

In parallel with emissions reductions, another major priority is pollution control. This is reflected in the Zero Pollution Action Plan for Air, Water and Soil (2021), which outlines Europe's 2050 vision for a pollution-free environment. It aims to reduce pollution to levels that are no longer harmful to human health and ecosystems, by respecting planetary boundaries, creating a toxic-free environment, and integrating pollution prevention into all relevant EU policies.

The EU Strategy for Energy System Integration sets out a vision for accelerating the transition to an integrated energy system that supports a climate-neutral economy, where all sectors contribute to decarbonization.

Additionally, the New EU Forest Strategy for 2030, adopted in 2021, acknowledges the vital role of forests in achieving emission reduction targets and mitigating climate change. It emphasizes the socio-economic functions of forests, their protection, restoration, expansion, sustainable management, and strategic monitoring to enhance their resilience and adaptation to climate change. Together, these two strategies contribute to a sustainable future by aligning efforts in the energy and forestry sectors in the fight against climate change.

The EU Biodiversity Strategy for 2030 seeks to place Europe's biodiversity on the path to recovery by 2030, for the benefit of people, climate, and the planet. The biodiversity crisis and the climate crisis are

intrinsically linked—and so are their solutions. Nature regulates the climate, and Nature-based Solutions (NbS) are essential for both reducing emissions and adapting to climate change [5].

In this context, soil plays a fundamental role, serving as a vital source for maintaining biodiversity, climate regulation, and supporting ecosystem services. The EU Soil Strategy for 2030 (2021) proposes measures for the protection, sustainable use, and restoration of soil, recognizing that healthy soils contribute to achieving climate neutrality and resilience, developing a clean and circular (bio)economy, reversing biodiversity loss, protecting human health, halting desertification, and reversing land degradation.

The New European Bauhaus Initiative (2021) translates the European Green Deal into a cultural and creative dimension, aiming to accelerate the transformation of various economic sectors—such as construction and the textile industry—by ensuring that all citizens have access to low-carbon, circular products.

The EU Strategy for Sustainable Tourism (2021) integrates the principles of the circular economy to support the sustainable development of the tourism sector.

The legislative package “Fit for 55: Delivering the EU’s 2030 Climate Target on the way to climate neutrality” (2021), as part of Europe’s green transition plan, aims to align EU legislation with the 2030 objective of reducing net greenhouse gas emissions by at least 55% by 2030.

The European Union Climate Project (EU4Climate), implemented in the six countries of the Eastern Partnership (EaP): Armenia, Azerbaijan, Belarus, Georgia, the Republic of Moldova, and Ukraine, is focused on supporting measures to increase resilience to climate change. The project’s goal is to contribute to climate change mitigation and adaptation, as well as to the development of low-emission and climate-resilient economies in all six Eastern Partnership countries, in accordance with the 2015 Paris Agreement on climate change. Among the project partners are OSCE, GIZ, and the International Energy Agency.

The Water Supply and Sanitation Security Project in the Republic of Moldova, implemented during 2022-2027 by the International Development Association (part of the World Bank Group), has the Austrian Development Agency as a project partner. The implementation of this project aims to increase access to water for the population, representing an important step towards enhancing resilience to climate change.

The new European Union Strategy on Climate Adaptation, adopted in 2021, has as its main objectives improving knowledge on the impacts of climate change, intensifying adaptation planning and climate risk assessment, accelerating adaptation measures, and increasing the continent’s resilience to climate change.

The multiannual environmental action programs establish the framework for future actions in all areas of environmental policy. These programs are integrated into horizontal strategies and are taken into account in international environmental negotiations [6].

For example, environmental policy in the Republic of Moldova is reflected in the Environmental Policy Concept of the Republic of Moldova. The foundations of environmental policy during the transition to a market economy were laid by the Law on Environmental Protection (1993), the Environmental Protection Concept of the Republic of Moldova (1995), the National Strategic Program of Actions in Environmental Protection (1995), the National Action Plan for Environmental Protection (1996), and the National Health Action Plan in Relation to the Environment (2001) [7].

In the Republic of Moldova, strategies for environmental measurement and monitoring are regulated by the Environmental Protection Agency (EPA). The EPA is responsible for developing and implementing policies and programs for the protection and monitoring of the environment in the country. Regarding environmental measurement and monitoring, key strategies and actions focus on the following aspects: air quality monitoring; water quality monitoring; soil quality monitoring; biodiversity monitoring; geographic information systems (GIS) (the EPA uses GIS to collect, store, and analyze spatial data related to the environment). In addition to these aspects, the EPA collaborates with other institutions, non-governmental organizations, and international partners to develop and implement environmental monitoring programs as well as to promote education and awareness among the population.

Through proper environmental monitoring, the Republic of Moldova aims to identify environmental problems, develop effective environmental protection policies, and ensure a sustainable future for future generations [6].

Conclusions

Environmental education is a process aimed at improving the quality of life by providing people with the "tools" they need to solve and prevent environmental problems. Environmental education can help people develop critical thinking, enrich their knowledge, develop practical skills, find motivating guidelines, consider ecosystem values, and be responsible by assessing the commitment needed to efficiently manage the earth's resources and take responsibility for maintaining environmental quality [3]. Education for the environment and climate change represents a process of learning and raising awareness about the importance of protecting the environment and understanding the impact of climate change on the planet and our lives. It is essential for promoting a sustainable future. This includes both informing people and developing skills and civic responsibility to encourage positive actions in response to the climate crisis.

There are certain key aspects that should be considered regarding environmental and climate change education, including public awareness, behavior change, promotion of action at local and global levels, development of responsible behavior, and international collaboration through concrete actions. The study presented reflects an integrated vision of the role of education in the context of climate change, supporting the idea that without effective environmental education, environmental policies cannot be fully effective or sustainable in the long term.

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