

## ENVIRONMENTAL AND CLIMATE CHANGE EDUCATION IN ROMANIA FROM THE PERSPECTIVE OF INTERNATIONAL AND NATIONAL STRATEGIES IN THE FIELD

Gabriela-Alina MUREȘAN<sup>1</sup> , Magdalena DRĂGAN<sup>2</sup> 

**ABSTRACT.** – Environmental and climate change education in Romania from the perspective of international and national strategies in the field. On any society's way towards sustainable development education plays a fundamental role, by providing knowledge and shaping attitudes. Over the last decades, the education for sustainable development has been increasingly addressed by specific policies at different levels – international, European, national. In this context, this paper aims to briefly review strategies/programs/plans regarding the education for sustainable development at all these levels, with a focus on those in Romania. In order to do this, we surveyed the websites of the UN, the EU, the Ministry of Education and Research of Romania, and read the representative documents on the subject, with the aim of situating developments in the field in Romania in a more general framework, and identifying specific national elements. If internationally, concerns and policies in this field are well-established, in Romania they only date back to the year 2018, as a response to the UN's 2030 Agenda for Sustainable Development, culminating in 2022 in the development of a strategy for environmental and climate change education. As a way to implement this strategy, the "Green Week" program was introduced in all primary and secondary schools in the country.

**Keywords:** *education for sustainable development, environmental education, climate change, education for environmental sustainability, Romania.*

---

<sup>1</sup> Babeș-Bolyai University, Faculty of Geography, 5-7 Clinicilor Street, Cluj-Napoca, Romania, [alina.muresan@ubbcluj.ro](mailto:alina.muresan@ubbcluj.ro)

<sup>2</sup> Center for Geographical Research, Cluj-Napoca Branch of the Romanian Academy, 42 Treboniu Laurean Street, room 205, Cluj-Napoca, Romania, [magdalena.dragan@acad-cj.ro](mailto:magdalena.dragan@acad-cj.ro)



## 1. Introduction

Sustainable development has become an increasingly present topic in international and national development policies in recent decades, since this concept had been presented in the Brundtland report “Our Common Future” in 1987. In achieving its main goal (to meet the needs of the present without compromising the needs of the future generations), education plays a crucial role, as it can provide knowledge and shape attitudes. At the same time, in order to produce lasting changes, education for sustainable development (ESD) needs to address every member of the society and must be embedded in all levels of the formal education – early childhood education and care, primary/secondary school, higher education – and become an important topic in the lifelong learning programs.

Since the 1990s, Romania has undertaken a sustainable development path by developing a series of specific strategies (*Romania. National Strategy for Sustainable Development* (1999), *National Strategy for Sustainable Development of Romania. Horizons 2013-2020-2030* (2008), *National Strategy for Sustainable Development of Romania 2030* (2018)) and creating a Department for Sustainable Development within the government (<https://dezvoltaredurabila.gov.ro/>) responsible for their implementation. However, the education for sustainable development was addressed more directly only recently, in a strategy for environmental education (a basic component of the education for sustainable development) that was implemented starting with the 2022-2023 school year.

In this context, our study aims to briefly review the main actions undertaken and documents developed regarding the education for sustainable development at different levels – global, European and national. The purpose of this approach is to situate the developments in the field in Romania within a more general framework, and to identify specific national elements. In this regard, our research was based on reviewing official documents on ESD in order to get an overview of the policies and actions in the field. We collected the documents (listed into the reference section of the paper) from the websites of the following institutions: United Nations (UN), UNESCO, the European Commission, the Council of Europe, the Presidential Administration of Romania (PA), and the Ministry of Education of Romania (ME).

## **2. ESD at the international level**

Environmental education (under various names such as: environmental education, education for sustainable development, climate change education, risk adaptation education, etc.) has been a constant of all UN comprehensive sustainable development policies (Agenda 21, the 2030 Agenda) and considered an important element within the consecutive sectoral policies. For instance, the UN Framework Convention on Climate Change (UNFCCC) (UN, 1992) emphasizes, in Article 6, the need for “education, training and public awareness”, at national and regional levels, for addressing climate change and its effects, while Art. 13 of the Convention on Biological Diversity supports the creation of educational programs contributing to raising awareness on the sustainable use of biodiversity resources.

The concept of “environmental education”, as it was originally called, was first used in Recommendation 96 of the United Nations Conference on the Human Environment in Stockholm in 1972. Agenda 21 of the United Nations Conference on Environment and Development (the Rio Summit) of 1992 underlined, in Chapter 36, the essential role education, training and public awareness could play in achieving all sustainable development goals (UNESCO, 2020). On that occasion, the more comprehensive term of “education for sustainable development” (ESD) was chosen, including not only issues related to environmental protection, but also those regarding population, economic development, etc. (UNESCO, 2018). ESD requires the inclusion of key sustainable development issues in teaching and learning: climate change, biodiversity, disaster risk reduction, reduction of poverty, and sustainable consumption and production. Climate change is a crucial area for sustainable development (UNESCO, 2014); therefore, it can be considered one of the priority themes of ESD.

The importance given to the education for sustainable development has gradually increased to the point of declaring the period 2005-2014 the Decade of Education for Sustainable Development (DESD), with the aim of orienting education towards learning how “to live and work sustainably” (UNESCO, 2014, p. 3). The United Nations Conference on Sustainable Development (Rio+20) continued this direction by supporting the integration of knowledge and behaviors related to sustainable development in education even after the DESD ended. These initiatives were followed by action plans such as GAP 2015-2019 (Global Action Programme on ESD 2015-2019) and ESD for 2030 aimed at expanding the actions initiated within the DESD on a global scale. Through the

UN Decade for ESD and the GAPs on ESD, efforts have been made to integrate ESD into educational policies, curricula and teacher training all over the world (UNESCO, 2018).

In the UN documents on ESD, the role of Member States in the environmental education / education for sustainable development has been described more and more specifically, to the point of emphasizing, in the UN General Assembly Resolution 74/223 (2019), that it “encourages governments to increase efforts to systematically integrate and institutionalize education for sustainable development in the education sector and other relevant sectors” (UN, 2019, p. 4).

The 2030 Agenda adopted at the 2015 UN Sustainable Development Summit presents the 17 Sustainable Development Goals (SDGs), which aim to eradicate poverty, fight social and other inequalities, including by ensuring access to education, and protect nature (Benedek et al, 2021). In this agenda, education is considered a fundamental element, essential for the sustainable future of any society. Consequently, *Goal 4. Quality Education* was dedicated to it, also taking into account the fact that the right to education is one of the fundamental human rights. Target 4.7 of Goal 4 aims to ensure that, by 2030, all students acquire „the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles [...]” (UN, 2015, p. 19). Besides that, environmental education contributes to achieving the targets of many other goals, such as Goal 13 Climate Action, Goal 12 Responsible Consumption and Production, Goals 14 and 15 on the protection of aquatic and terrestrial life, etc. Therefore, ESD is recognized as a key element of quality education, and as a key enabler for all 17 SDGs (UN General Assembly, 2017, p. 3).

### **3. ESD at the European level**

An important step taken at EU level regarding ESD is the 3046th Education, Youth, Culture and Sport Council meeting (within the Council of Europe), Brussels, 18 and 19 November 2010, where for the first time the Council tackled the issue of ESD, integrating economic, social and environmental perspectives. The conclusions adopted at this meeting emphasize the key role of education in achieving a sustainable society, in developing the knowledge, skills and attitudes needed to achieve this goal, and promoting these elements

to individuals and groups. Member States are therefore encouraged to support the development and implementation of ESD in the education and training systems at all levels, in formal, non-formal and informal education. This involves, among others, integrating ESD into curricula, implementing interdisciplinary and cross-curricular approaches at all educational levels to address sustainability challenges, creating training programs for teachers that give them the knowledge and skills necessary to promote ESD, etc. Collaboration networks among the institutions that provide education and among them and NGOs also need to be promoted, aiming to strengthening citizens' ability to cope with imminent problems that may arise unexpectedly and to find long-term solutions to them (Council of the European Union, 2010).

In response to the current worsening climate crisis, the European Commission launched The European Green Deal in 2019, through which it aims to achieve a climate-neutral Europe by 2050 (European Commission, 2019). The Green Deal highlights the role of environmental and climate education in implementing the green transition and achieving climate neutrality. Noting that, despite the obvious progress in bringing environmental issues to the attention of the public and decision-makers, education for environmental sustainability (a term used interchangeably with ESD) is not an important element in EU educational policies, a framework for its implementation at the level of all Member States has been proposed.

In this context, the **EUROPEAN EDUCATION AREA (EEA)** Portal and **GreenComp** - The European Sustainability Competence Framework were launched in January 2022. The EEA addresses five areas of interest, including environmental education (under the name of "green education"). Within it, two main directions are addressed: *Education for Climate Coalition* (a large education community where students, teachers and organizations can exchange ideas, share examples of good practices, participate in events on climate change and sustainability issues) and *Learning for the green transition* (<https://education.ec.europa.eu/focus-topics/green-education>).

To support this latter direction, in June 2022 a Council Recommendation on learning for the green transition and sustainable development (2022/C243/01 of 16 June 2022) and an accompanying document (Staff Working Document accompanying the Proposal for a Council Recommendation on Learning for Environmental Sustainability) were issued (Council of the European Union, 2022, European Commission, 2022). This latter document details the aspects presented in the official document and presents examples of good practices in

the field. The Recommendation suggests measures related to aligning education and training strategies and programs with the green transition and sustainable development, training the human resources in education systems to provide education for the green transition and sustainable development, investing in green and sustainable equipment, resources and infrastructure of the schools, creating learning environments for sustainability adapted to local contexts that allow for interdisciplinary approaches, supporting partnerships creation with stakeholders from the civil society, the business sector, academic institutions, etc. in order to develop educational programs.

**The European competence framework on sustainability (“GreenComp”)** is a reference framework for competences that aims to integrate topics and values related to environmental sustainability into all education systems and school curricula in the Member States, in order for all learners to improve and develop knowledge, skills and attitudes enabling them to live, think and act sustainably, both collectively and individually. “GreenComp” includes 12 competencies (valuing sustainability, supporting fairness, promoting nature, systems thinking, critical thinking, problem framing, futures literacy, adaptability, exploratory thinking, political agency, collective action, individual initiative) organized into four interconnected areas: embodying sustainability values, embracing complexity in sustainability, envisioning sustainable futures, acting for sustainability (Bianchi et al, 2022). The document is not prescriptive and the use of the exact framework in education is not mandatory, but it proposes a conceptual reference model that can be used by all those interested and involved (educators and learners) in lifelong learning.

#### **4. ESD at the national level**

As part of several international conventions and agreements on Sustainable Development and in order to align with the international and European policies in the field of Sustainable Development and implement SDG 4 and SDG 13, Romania has recently begun to pay increasing attention to the environmental and climate change education. Within the latest National Strategy for Sustainable Development, published in 2018, the education for sustainable development was approached tangentially, through several references to environmental education linked to the transposition of SDG 4, Quality Education. Thus, for the 2020-time horizon, the recommendation was “to support the educational process through extra-curricular educational programs in order to ensure health education, civic

education, cultural-artistic education, scientific education, ecological education, and education through sports” (Guvernul României, 2018, p. 40). The targets for 2030 were: “Ensuring that all learners acquire the knowledge and skills necessary to promote sustainable development, including through education for sustainable development and sustainable lifestyles, human rights, gender equality, the promotion of a culture of peace and non-violence, appreciation of cultural diversity and of culture’s contribution to sustainable development” (Guvernul României, 2018, p. 41), and “Within the educational process, increasing the role of the civic education, of the concepts and principles of a sustainable, peaceful and inclusive society, of the gender equality, of the values of democracy and pluralism, of the values of multiculturalism, of preventing the discrimination and understanding the perception of the “other”, of the importance of eradication of all forms of violence with an emphasis on the school violence phenomenon” (Guvernul României, 2018, p. 41). Based on these measures, one can note that the education for sustainable development was expected to be carried out more systematically within extracurricular activities. A suitable framework for including themes related to EDS in every school’s learning schedule was “A different kind of school” (in Romanian: “Școala Altfel”) program (ongoing since the 2011-2012 school year) consisting of five consecutive days dedicated to cultural activities, sports, civic education, health education, traffic education and education for environmental protection.

In the context of the most recent European policies on environmental education / sustainability, Romania adopted a **National Strategy on Environmental Education and Climate Change 2023-2030** in 2022. This document was based on a previous report by the Presidential Administration (AP, n.d.) and addresses primary and secondary education (Ministerul Educației, n.d.). The strategy was transposed into school curricula starting with the 2022-2023 school year and refers to both formal, informal and non-formal education.

Its strategic objectives pursue four directions of action:

1. Implementing an Educational Program for Climate and Environment - in terms of students’ knowledge, skills and behaviors, which would allow them not only to understand and use concepts related to the environment and climate change, but also to explore the environment, to be aware of the importance of protecting it and to act in this regard, etc.

2. Educational resources - including, among others, digital tools for environmental and climate change education (integrated web platforms/applications with educational resources, access to virtual libraries, databases), interactive activities, and outdoor education programs (taking place in the

proximity of the school, in the local area, in protected natural areas, in geoparks, in sustainable urban or rural communities).

3. Infrastructure for sustainable schools – involving rehabilitation of the school buildings (aiming for a network of “green schools”), the provision of sustainable means for school transportation, etc.

4. Measures targeting the human resource involved in climate change and environmental education (teachers and other education actors) - training and other professional development programs in the field of sustainable development, especially on environment and climate change, training programs for learning in nature, etc.

The National Strategy uses a comprehensive definition for the climate change and environmental education, reaching the main areas proposed by the European framework on environmental competences (GreenComp). “By ‘climate change and environmental education’ we mean an education that promotes a sustainable lifestyle through the development of eco-social skills” (Ministerul Educației, n.d., p. 5), aiming to increase young people’s awareness of the natural and socioeconomic problems caused by climate change. The main goal is to provide them with the knowledge, skills, attitudes and values necessary to act and make informed decisions regarding the environment and sustainable development, but also to influence other people in the communities in which they live to respect and protect the environment, to stop the actions producing environmental degradation and combat climate change (Ministerul Educației, n.d.).

The eco-social competences are described in Annex 2 of the Strategy (Ministerul Educației, n.d., p. 42-44) in terms of knowledge, skills and behaviors that students should learn. For example, in the field of Climate change, students are expected to acquire knowledge about the anthropogenic causes of climate change, the impact of climate change on nature, economy and society, as well as about strategies and measures for prevention, mitigation and adaptation to climate change at international, national and individual levels. Among the pursued behaviors are, for example, reducing the student’s personal impact and the impact of the family and the community in which one lives on climate change, as well as supporting public policies on climate protection. In the case of the Life on land field, special emphasis is placed on students’ knowledge of natural ecosystems and biodiversity, of the threats to them, of ecosystem services, but also of the impact of people and their activities on biodiversity loss, along with measures to protect and restore the natural environment. Students must also act to preserve and protect the environment and be able and willing to engage in such actions.



In terms of implementing the Strategy, “amendments were made to the National Education Law no. 1/2011, in order to include environmental competences among the key competences mentioned in the law” (Ministerul Educației, n.d., p. 4). Also, through “The National Recovery and Resilience Plan (PNRR) funds were reserved for the support and development of a network of “Green Schools”, the purchase of electric school minibuses, and the renovation of a significant proportion of existing school buildings, with the aim of increasing their energy efficiency” (Ministerul Educației, n.d., p. 4-5, AP, n.d., p. 4). Another measure that was taken to support the green transition, especially towards “green” buildings, was the development and approval, by an order of the Ministry of Education, of the framework methodology regarding the organization and operation of the “green schools” (MO, 2022).

Given the interdisciplinary and transdisciplinary nature of ESD, in the Romanian education system elements of environmental education are included, usually, in the core curriculum or the optional curriculum for various learning activities/modules in the fields of Geography, Biology, History, Natural Sciences, Sociology, Entrepreneurship Education, Intercultural Education, European Education, etc. However, starting with the year 2023, this type of education received greater attention in the school curriculum in the form of the **Green Week** program. This new approach proposed by the Ministry of Education comes, as already mentioned, in the context of the increased attention paid to environmental education at the level of the European Union and the UN.

Therefore, starting with the 2022-2023 school year, the “Green Week” program was introduced in all schools in Romania, as a way to more effectively implement environmental and climate change education (AP, n.d.). The Green Week is organized according to the methodology issued by the Ministry of Education (OM 3629 of February 2023) (Ministerul Educației, 2023) and involves a period of five consecutive working days dedicated to specific ESD activities such as lessons in nature, debates, role-playing games, building future scenarios, photo exhibitions, documentaries viewing, experiments, living libraries, community service projects, volunteer activities, expeditions and trips into protected areas, etc. (Lesenciuc, 2023).

To support the schools with the implementation of the program, the Ministry of Education launched a digital platform with materials and examples of activities in seven major subjects, partially overlapping with the sustainable development goals (Climate Change, Waste Management, Sustainable Consumption and Production, Biodiversity, Forests and Terrestrial Life, Water and Aquatic Life, and a section dedicated to Exploring Protected Areas in Romania). Some examples of teaching resources in the field of Climate Change for students of different ages are: explanatory videos with examples from Romania regarding

the “desertification” / expansion of sandy soil surfaces in southern Oltenia and green energy and wind farms, comics that address sustainable development goals and climate action, worksheets on meteorology and climate change aspects, etc.

## 5. Conclusion

ESD must be understood as a part of the “quality education” goal, “as a form of holistic and transformational education” (European Commission, 2021, p. 14) with significant potential to produce bottom-up changes at the societal level by changing values and attitudes.

Its increasing importance for the present and future global society has been highlighted by UN specific action programs since 2015 (Programme on ESD 2015-2019 and ESD for 2030), and by the EU launching in 2022 the European competence framework on sustainability (“GreenComp”) with a focus on knowledge, skills, behaviors and attitudes promoting a sustainable human-environment relationship.

Policies in the field in Romania are gradually aligning with these evolutions by at first introducing recommendations and measures regarding the education for sustainable development and the environmental education into the national strategies for sustainable development, and then culminating in a specific strategy on environmental and climate change education for the pre-tertiary education level.

## REFERENCES

1. Administrația Prezidențială (AP) (n.d.), *Educația privind schimbările climatice și mediul în școli sustenabile*. Raport lansat în dezbatere publică, <https://www.presidency.ro/ro/media/clima-si-sustenabilitate/raportul-educatia-privind-schimbarile-climatice-si-mediul-in-scoli-sustenabile>
2. Benedek J., Ivan K., Török I., Temerde A., Holobacă I.-H. (2021), *Indicator-based assessment of local and regional progress toward the Sustainable Development Goals (SDGs): An integrated approach from Romania*, Sustainable Development, pp. 1–16. DOI: 10.1002/sd.2180.

3. Bianchi G., Pisiotis U., Cabrera Giraldez M., (2022), *GreenComp The European sustainability competence framework*, Punie Y. and Bacigalupo M. editor(s), EUR 30955 EN, Publications Office of the European Union, Luxembourg, doi:10.2760/13286, JRC128040.  
<https://publications.jrc.ec.europa.eu/repository/handle/JRC128040>
4. Council of the European Union (2022), *Council Recommendation of 16 June 2022 on learning for the green transition and sustainable development 2022/C 243/01 (Text with EEA relevance)*, Official Journal C 243, 1-9. [https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32022H0627\(01\)](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32022H0627(01))
5. Council of the European Union (2010), *Council conclusions on education for sustainable development*, 3046th Education, Youth, Culture and Sport Council meeting, Brussels, 18 and 19 November 2010, [https://www.consilium.europa.eu/uedocs/cms\\_data/docs/pressdata/en/educ/117855.pdf](https://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/educ/117855.pdf)
6. European Commission (2022), *Commission Staff Working Document accompanying the document Proposal for a Council Recommendation on Learning for Environmental Sustainability*, Brussels, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52022SC0003>
7. European Commission (2019), *Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions. The European Green Deal*, Brussels, [https://eur-lex.europa.eu/resource.html?uri=cellar:b828d165-1c22-11ea-8c1f-01aa75ed71a1.0002.02/DOC\\_1&format=PDF](https://eur-lex.europa.eu/resource.html?uri=cellar:b828d165-1c22-11ea-8c1f-01aa75ed71a1.0002.02/DOC_1&format=PDF)
8. Guvernul României (2018), *Strategia Națională pentru Dezvoltarea Durabilă a României 2030*, București, Paideia, <http://romania-durabila.gov.ro/wp-content/uploads/2020/05/strategia-nationala-pentru-dezvoltarea-durabila-a-romaniei-2030.pdf>
9. Lesenciuc M. (coord.) (2023), *Săptămâna Verde. Modele de activități practice în județul Iași*, Ed. Spiru Haret, Iași.
10. Ministerul Educației (n.d.), *Strategia Națională privind Educația pentru mediu și schimbări climatice 2023 – 2030*, <https://www.edu.ro/sites/default/files/SNEM.pdf>
11. Ministerul Educației (2023), *ORDIN privind aprobarea Metodologiei de organizare a Programului „Săptămâna verde”*, [https://www.edu.ro/sites/default/files/\\_fi%C8%99iere/Legislatie/2023/OM\\_3629\\_2023\\_Saptamana\\_Verde.pdf](https://www.edu.ro/sites/default/files/_fi%C8%99iere/Legislatie/2023/OM_3629_2023_Saptamana_Verde.pdf)
12. Monitorul Oficial al României (MO), partea I, Nr. 705/14.VII.2022 (2022), *ORDIN pentru aprobarea Metodologiei-cadru privind organizarea și funcționarea „școlilor verzi”*, [https://cdn.edupedu.ro/wp-content/uploads/2022/07/ordin\\_metodologie\\_scoli-verzi.pdf](https://cdn.edupedu.ro/wp-content/uploads/2022/07/ordin_metodologie_scoli-verzi.pdf)
13. UNESCO (2020). *Education for Sustainable Development. A roadmap*, Paris, <https://unesdoc.unesco.org/ark:/48223/pf0000374802>

14. UNESCO (2018), *Issues and Trends in Education for Sustainable Development*, A. Leicht, J. Heiss and W. J. Byun (eds), Paris, <https://unesdoc.unesco.org/ark:/48223/pf0000261445>
15. UNESCO (2014), *Shaping the Future We Want. UN Decade of Education for Sustainable Development (2005-2014). FINAL REPORT*, Paris, <https://sustainabledevelopment.un.org/content/documents/1682Shaping%20the%20future%20we%20want.pdf>
16. United Nations (UN) General Assembly Resolution 74/223 (2019), *Education for sustainable development in the framework of the 2030 Agenda for Sustainable Development* <https://documents.un.org/doc/undoc/gen/n19/436/40/pdf/n1943640.pdf?fe=true>
17. United Nations (UN) General Assembly Resolution 72/222 (2017), *Education for sustainable development in the framework of the 2030 Agenda for Sustainable Development*. <https://documents.un.org/doc/undoc/gen/n17/466/61/pdf/n1746661.pdf>
18. United Nations (2015), *Transforming our world: The 2030 Agenda for Sustainable Development*. <https://sdgs.un.org/sites/default/files/publications/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf>
19. United Nations (1992), *United Nations Framework Convention on Climate Change*, New York, <https://unfccc.int/resource/docs/convkp/conveng.pdf>